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About the Journal

Overview

Pertanika Journal of Social Sciences & Humanities is the official journal of Universiti Putra Malaysia. It is an open-access online scientific journal. It publishes original scientific outputs. It neither accepts nor commissions third party content.

Recognised internationally as the leading peer-reviewed interdisciplinary journal devoted to the publication of original papers, it serves as a forum for practical approaches to improve quality in issues pertaining to social and behavioural sciences as well as the humanities.

Pertanika Journal of Social Science & Humanities is a **quarterly** (*March, June, September, and December*) periodical that considers for publication original articles as per its scope. The journal publishes in **English** as well as in **Bahasa Malaysia** and it is open for submission by authors from all over the world.

The journal is available world-wide.

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Pertanika Journal of Social Sciences & Humanities was founded in 1993 and focuses on research in social and behavioural sciences as well as the humanities and its related fields.

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Pertanika Journal of Social Sciences & Humanities is now over 27 years old; this accumulated knowledge and experience has resulted the journal being abstracted and indexed in SCOPUS (Elsevier), Clarivate Web of Science (ESCI), EBSCO, DOAJ, Agricola, ASEAN CITATION INDEX, ISC, Microsoft Academic, Google Scholar, and MyCite.

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The abbreviation for Pertanika Journal of Social Sciences & Humanities is *Pertanika J. Soc. Sci. & Hum.*

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The *Introduction* explains the scope and objective of the study in the light of current knowledge on the subject; the *Materials and Methods* describes how the study was conducted; the *Results* section reports what was found in the study; and the *Discussion* section explains meaning and significance of the results and provides suggestions for future directions of research. The manuscript must be prepared according to the journal's **Instruction to Authors** (http://www.pertanika.upm.edu.my/Resources/regular_issues/Regular_Issues_Instructions_to_Authors.pdf).

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Notification of the editorial decision is usually provided within 120 days from the receipt of manuscript. Publication of solicited manuscripts is not guaranteed. In most cases, manuscripts are accepted conditionally, pending an author's revision of the material.

As articles are double-blind reviewed, material that may identify authorship of the paper should be placed only on page 2 as described in the first-4-page format in *Pertanika*'s Instruction to Authors (http://www.pertanika.upm.edu.my/Resources/regular_issues/Regular_Issues_Instructions_to_Authors.pdf).

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2. The Chief Executive Editor sends the article-identifying information having been removed, to 2 to 3 reviewers. They are specialists in the subject matter of the article. The Chief Executive Editor requests that they complete the review within 3 weeks.

Comments to authors are about the appropriateness and adequacy of the theoretical or conceptual framework, literature review, method, results and discussion, and conclusions. Reviewers often include suggestions for strengthening of the manuscript. Comments to the editor are in the nature of the significance of the work and its potential contribution to the research field.

3. The Editor-in-Chief examines the review reports and decides whether to accept or reject the manuscript, invite the authors to revise and resubmit the manuscript, or seek additional review reports. In rare instances, the manuscript is accepted with almost no revision. Almost

without exception, reviewers' comments (to the authors) are forwarded to the authors. If a revision is indicated, the editor provides guidelines to the authors for attending to the reviewers' suggestions and perhaps additional advice about revising the manuscript.

4. The authors decide whether and how to address the reviewers' comments and criticisms and the editor's concerns. The authors return a revised version of the paper to the Chief Executive Editor along with specific information describing how they have addressed the concerns of the reviewers and the editor, usually in a tabular form. The authors may also submit a rebuttal if there is a need especially when the authors disagree with certain comments provided by reviewers.
5. The Chief Executive Editor sends the revised manuscript out for re-review. Typically, at least 1 of the original reviewers will be asked to examine the article.
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Foreword

Welcome to the third issue of 2022 for the *Pertanika Journal of Social Sciences and Humanities (PJSSH)*!

PJSSH is an open-access journal for studies in Social Sciences and Humanities published by Universiti Putra Malaysia Press. It is independently owned and managed by the university for the benefit of the world-wide science community.

This issue contains 26 articles: a review article; a case study; and the rest are regular articles. The authors of these articles come from different countries namely India, Indonesia, Malaysia, Nigeria, Pakistan, Philippines, Thailand and Ukraine.

A regular article titled “Gender, Resistance, and Identity: Women’s Rewriting of the Self in Chitra Banerjee Divakaruni’s *Before We Visit the Goddess*” sought to examine the multiple ways the leading female characters in the novel contest, negotiate and reconstruct pre-existing definitions of gender identities. This study provides a refreshing insight into the Indian female characters in the selected text from the lens of Cixous’ framework. The detailed information of this article is presented on page 1201.

A selected article from the scope of consumer and family economics, “The Effects of Smart Money Kit on the Financial Interest, Financial Management Behavior, and Prosocial Levels of Preschoolers”, aimed to ascertain whether a Smart Money Kit (SMK) can be utilized as an alternative financial education tool as a way of increasing preschoolers’ financial interest, management behavior, and prosocial levels. The study showed that SMK effectively improves children’s interests in financial education, management, and prosocial behavior. Details of this study are available on page 1245.

Kannapa Pongponrat researched how environmental policy can be effective by mobilizing stakeholders into the project in “Stakeholder Engagement Process in Water Saving Initiatives for Sustainable Tourist Destination in Samui, Island, Thailand.” This paper refers to certification for the hotel, which will attract environment-conscious tourists who are also important stakeholders. Results from the SWSS project addressed limiting aspects of the stakeholder engagement processes, including poor information dissemination, small numbers and few stakeholders involved, inconsistency across the project, and unclear incentive strategies for stakeholder engagement. Further details of the study can be found on page 1341.

We anticipate that you will find the evidence presented in this issue to be intriguing, thought-provoking and useful in reaching new milestones in your own research. Please recommend the journal to your colleagues and students to make this endeavour meaningful.

All the papers published in this edition underwent Pertanika's stringent peer-review process involving a minimum of two reviewers comprising internal as well as external referees. This was to ensure that the quality of the papers justified the high ranking of the journal, which is renowned as a heavily-cited journal not only by authors and researchers in Malaysia but by those in other countries around the world as well.

We would also like to express our gratitude to all the contributors, namely the authors, reviewers, Editor-in-Chief and Editorial Board Members of PJSST, who have made this issue possible.

PJSST is currently accepting manuscripts for upcoming issues based on original qualitative or quantitative research that opens new areas of inquiry and investigation.

Chief Executive Editor

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Students' Experience of Empowerment from Multiple Scaffolders in PBL on Facebook

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ABSTRACT

Scholars propose that students should be empowered when using social media in problem-based learning (PBL) as it is expected to provide positive learning experiences. Nonetheless, even though the use of social media has been described as empowering in PBL, not much research has measured students' experiences of the empowerment offered by multiple scaffolders through social media. In this study, 84 final-year undergraduate management students from a private university in Malaysia participated in a simultaneous within-subject experimental design to solve a business decision-making problem on Facebook. For eight weeks, multiple scaffolders, including an instructor, two business experts, and three to four peers, were present in each closed Facebook group. The students then answered a questionnaire following the PBL activity. Anchored on the Structural Empowerment (SE) Theory, this study evaluated the students' perceptions of the SE provided by these scaffolders. Subsequently, the relationships among the scaffolders were measured. The results were analysed descriptively and inferentially. Overall, the students reported positive learning experiences but perceived that the instructor and peers provided more SE than the business experts. However, the business experts' comments on the students' work and discussion points accelerated their problem-solving tasks. Furthermore, the SE provided by peers, instructors, and business experts correlated significantly, suggesting each scaffolder relied on each other when scaffolding. The findings indicate that all scaffolders, including

the more experienced ones, should depend on the SE provided by other scaffolders to enable students to complete the complex business problem-solving tasks in PBL.

Keywords: Management education, problem-based learning (PBL), scaffolding, social media, structural empowerment

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INTRODUCTION

As a result of the precarious economic conditions and uncertainty in global business operations brought on by the Covid-19 pandemic, problem-solving skills have become one of the most prominent employability skills sought after by employers (World Economic Forum, 2020). Notably, the rising importance of problem-solving skills necessitates that business and management students be equipped with these skills before starting their careers. However, it has been reported in several studies that business managers perceive relevant work-readiness skills such as problem-solving among new management graduates are not in tandem with the managers' expectations where many have described the graduates as severely lacking in these skills (Bist et al., 2020; Hossain et al., 2020). Meanwhile, business managers in Malaysia described the quality of problem-solving skills among the local management graduates as deteriorating and showing no sign of improvement (Saibon & Kamis, 2019; Tanius et al., 2019). Moreover, management graduates in Malaysia have been found to make up the highest number of unemployed graduates than those in other fields of study to add to the predicament (Ministry of Higher Education, 2020; Saibon & Kamis, 2019).

Scholars believe problem-based learning (PBL) is a remedy to improve the lack of problem-solving skills and competency among management graduates (Zabit et al., 2017). PBL is an instructional method that aims to promote students'

learning via authentic and ill-structured problems, which act as the central focus of learning (Glazewski & Hmelo-Silver, 2019; Seibert et al., 2021). However, learning in a PBL setting may be difficult for some management students new to PBL since business problems taken from real-life business contexts are usually ill-structured. Moreover, ill-structured problems are often ambiguous and are of multidisciplinary knowledge domains (Kim et al., 2018; Moallem et al., 2019). Additionally, the steps to reach a solution are not straightforward, and the requirements to solve the problem are sometimes vague (Tawfik et al., 2018). Therefore, if the students do not receive enough assistance, they may disengage from the problem-solving tasks (García-Merino et al., 2020). In this respect, scaffolding is expected to help novice students perform unfamiliar tasks such as solving an ill-structured problem.

Scaffolding is a form of assistance delivered to novice students by a more experienced and skilful individual, such as an experienced peer or instructor, to enable the novice students to master the tasks that are otherwise impossible for them to complete on their own. Scaffolding helps simplify tasks according to the students' mastery levels, maintain the students' interests and pinpoint the critical aspects of learning (Wood et al., 1976). Students would also benefit from the interactions with the more experienced individuals during the scaffolding session, as the interactions would help support sense-making, comprehension monitoring, and claims verification (Savery, 2019).

With the proliferation of social media platforms, more experienced scaffolders such as business professionals who are not always readily available in the classroom could complement the skills of other scaffolders such as peers and instructors. Having these experts participate in a PBL activity with the students and instructor could expand the students' learning experience as they would be provided additional scaffolding in their learning. The use of experts outside the classroom for PBL through social media is common among medical students and healthcare practitioners during an internship or clinical attachment where applications such as Telegram, WeChat, and WhatsApp are used (see Dorwal et al., 2016; Raisolsadat et al., 2020; Zeng et al., 2016). Despite the widespread use of social media in PBL, not many studies have reported the use of social media in management education for scaffolding in PBL compared to other fields of study such as sciences (e.g., Bruna et al., 2019; Sunar & Shaari, 2017) and computer courses (Loannou et al., 2016). Moreover, there is a dearth of studies examining the inclusion of other scaffolders apart from peers and instructors in PBL delivered on social media. It has resulted in a limited understanding of having multiple scaffolders, particularly ones from outside the classroom (e.g., business experts), contributing to the management and experiences of student learning in PBL on social media.

The availability of online technology and its richness of resources are beneficial for scaffolding students in PBL. Nonetheless, students should be empowered to learn new

skills effectively (Mohamad, 2013; Wachira et al., 2019) and improve engagement in PBL activities (Choon et al., 2008). Moreover, despite students often describing their experience in PBL as empowering (e.g., English & Kitsantas, 2019; Hallinger et al., 2019), available studies do not validate these findings empirically, and very few studies have attempted to validate the extent to which PBL when used in combination with social media and scaffolding truly provide an empowering experience for the students. Therefore, it is expected that leveraging multiple scaffolders on social media would allow each scaffolder to harness and contribute their unique capabilities when assisting the students in the problem-solving activities.

This study proposed applying the Structural Empowerment (SE) Theory to provide a theoretical explanation of how a student might be empowered on social media through multiple scaffolders in a PBL activity. The notion behind this theory is that granting individuals access to the SE elements of access to critical resources, information, opportunity to learn for personal development, and the availability of support through feedback and guidance would help to empower the individuals and accelerate the completion of the tasks given to them (Laschinger et al., 2002). It is worth noting that granting SE to students resembles the concept of scaffolding (Bradbury-Jones et al., 2010), whereby the scaffolder is more experienced and has better access to SE elements according to their positions and specialty in accessing those elements. For instance, instructors could

provide students with learning resources and procedural guidelines to progress on track. Meanwhile, peers provide emotional support and encouragement, and business experts offer learning opportunities to acquire practical skills from the industry. The unique combinations of the SE elements granted to students via multiple scaffolders in PBL activities on social media would allow each scaffolder to complement the scaffolding limitations. These unique combinations of scaffolding would indirectly help students complete the problem-solving tasks effectively and successfully.

However, previous PBL and SE studies did not deal with students' engagement from the perspective of multiple scaffolders on social media. Kek and Huijser (2017) suggested that validating the effectiveness of social media in PBL on students' learning experiences is crucial. For this reason, scrutiny of students' perceptions of their experiences after receiving SE from multiple scaffolders in PBL on social media is worthwhile.

LITERATURE REVIEW

The Structural Empowerment Theory and its Relevance in PBL

Laschinger et al. (2001) popularised the Structural Empowerment (SE) Theory by advancing the work of Kanter (1977). The SE theory assumes that a proper empowerment structure of resources, information, opportunity, and support should be granted to people to achieve the intended goals and task completions. Seibert et al. (2021) pointed out that millennials are

prone to giving up when facing challenges in PBL activities, such as when dealing with a problem that the students are not familiar with, finding resources and paths to reaching the solutions as well, maintaining their interests to complete the problem-solving tasks. It is thus inferred that offering SE elements to students could help alleviate students' learning issues in PBL.

The first SE element is access to resources which refers to the ability to obtain the required materials or rewards to meet the objectives of a task (Abdullah & Neo, 2019; Laschinger et al., 2001). Resources in social media and the Internet are generally available, for example, by offering academic network services and hyperlinks that can support students' discussions and thus help them reach their goals and development (Ryberg, 2019). However, past studies that applied the SE theory have shown that different settings warrant different forms of resources for students. For example, in PBL, Siu et al. (2005) noted that resources are vital for nursing students who have sufficient time to accomplish their learning objectives and direct access to a library. Similarly, in Ledwell's (2006) study, nursing students described access to resources as getting term papers done and flexible time that helped the students succeed in the online distance education programmes they were enrolled in. These findings suggest that providing relevant resources allows students to meet their learning needs.

Meanwhile, access to information includes the ability for the students to obtain the necessary feedback on their progress and information that is directly needed to

solve the problems on hand (Abdullah & Neo, 2019). However, students may feel lost when identifying relevant information from numerous online resources available (Morgan et al., 2008), and because of this, Ryberg (2019) suggested that students should be empowered when placing them on social media for PBL.

Access to opportunity denotes the ability of an individual to get access to skills and knowledge that strengthen their opportunities for professional growth, improved status, and recognition (Laschinger et al., 2001). Students receive access to knowledge and skills from various sources on online-mediated platforms. Moallem et al. (2019) asserted that these opportunities are particularly enhanced when receiving empowerment from experts in online communities, such as business experts.

Lastly, access to support refers to an individual's ability to receive constructive feedback and moral encouragement on a person's achievement or activities (Moore, 2018). Scaffolding from peers and instructors helps students better address their needs, such as responding to questions more dynamically through interactions on social media (Shin et al., 2020). Therefore, the instructor must ensure constant support is available as this would encourage and enable students to persevere and continue with the PBL activities. Business experts could also provide the necessary empowerment by ensuring the relevancy of the PBL curriculum is in line with actual business needs (Asik-Dizdar, 2015). Moreover, support from experts could help

to guide students in deciphering information by emulating expert reasoning as closely as possible (Barrows, 1986).

The SE theory has been extensively applied in nursing education, and various positive learning outcomes have been reported, including improved assertiveness behaviour (Gamal et al., 2020), critical thinking (Moore, 2018), nursing competency (Liao & Liu, 2016), and reflective thinking (Lethbridge et al., 2011). Additionally, the theory has also been applied extensively in various organisational settings (e.g., Abel et al., 2020; Singh & Sarker, 2019; Ta'an et al., 2021). Literature has also documented various people providing SE simultaneously. For example, Lee and Kim (2020) reported a combination of multisource feedback from different people such as customers, supervisors, subordinates, and peers, allowing the manufacturing employees to reflect on their development and enhance their performance. Meanwhile, Siu et al. (2005) reported that nursing students feel empowered through SE elements provided in a PBL environment compared to a conventional lecture classroom environment, where the empowerment was attributed to the students' engagement in the PBL activities, which peers and health care professionals supported. In another study, Ledwell et al. (2006) revealed that students in an online distance education programme feel empowered by the SE provided by their instructors and co-workers.

Similarly, it is presumed that SE could be provided by more than a single provider of empowerment in PBL using

multiple scaffolders such as instructors, peers, and business experts on social media. Moreover, multiple scaffolders have been found to provide students with different levels of empowerment and experiences. However, previous studies on SE empirically established this assumption were rarely documented or examined the role of multiple agents of empowerment or the contributions of multiple scaffolders in providing SE for students' learning in PBL.

Learning Experiences in PBL Through Social Media

The widespread use of social media platforms has captivated PBL scholars to research the effects of scaffolding on social media and its influence on students' learning experiences. These extant studies mainly reported that students positively perceived their PBL experience on social media. However, these perceptions varied according to the types of social media users. For example, social media messaging or instant messaging is very popular in the medical and science education fields for scaffolding students in PBL; examples include the use of WeChat (e.g., Zhang et al., 2019; Zeng et al., 2016), Telegram (Raisolsadat et al., 2020), and WhatsApp (e.g., Grover et al., 2020; Pimmer et al., 2018). For example, the students in Raiman et al. (2017) viewed WhatsApp in PBL as a medium that could "flatten the hierarchy" in clinical placement. Additionally, the students reported that they could easily communicate with various scaffolders such as peers and clinical consultants and obtain

an instant notification and impromptu learning resources such as patient data.

Meanwhile, students regarded Facebook as bringing benefits, to name a few, that could improve information organisation skills among computer studies students (Loannou et al., 2016) and applying knowledge to real-life situations among health and nutrition students (Bruna et al., 2019). In contrast, the use of Twitter in PBL was seen as cumbersome because of word character limits that hindered complex argument composition, resulting in the students frequently experiencing miscommunication (Kaminishi et al., 2013).

Ledbetter and Finn (2013) cautioned that even though millennials are generally immersed in social media, scholars should refrain from assuming that they are well-versed in using social media technology for formal learning such as PBL. Instead, they must be empowered on social media when these platforms are engaged in formal learning (Wachira et al., 2019). Nonetheless, thus far, little attention has been paid to students' perceptions of their experiences when receiving SE from multiple scaffolders on social media in PBL. When dealing with multiple scaffolders in PBL, it is expected that students could elicit a varying degree of empowerment experiences, and these experiences possibly correlate to one another. Therefore, this study aimed to achieve the following research objectives:

1. To evaluate the students' perceptions of their experiences with multiple scaffolders (peers, an instructor, and business experts) who granted SE to the students on social media in PBL.

2. To examine the relationship of SE among the different scaffolders on social media.

METHODS

Research Participants

This study received ethical research approval from the Research Ethical Committee of Multimedia University (EA2002021). All participants were provided written consent to participate, ensuring that their privacy and confidentiality would be respected and protected. There is a lack of research on scaffolding students using multiple scaffolders, particularly on social media across PBL studies. In this study, 84 Bachelor of Business Administration final year management students who were engaged in a global management course in a private higher education institution in Malaysia were selected as participants in a three-year experiment that involved a total of 23 groups with nine groups formed in 2016, eight groups formed in 2017, and six groups in 2018. Group arrangement using a different cohort of students is common in PBL studies (e.g., Bruna et al., 2019; Loannou et al., 2016). All groups received similar conditions, with each closed Facebook group having three to four students (who acted as peers), one instructor, and two business experts. This arrangement followed the recommendation of Creswell and Creswell (2018), who suggested it to control internal validity from group cross-contamination due to interaction among groups.

The students were given two weeks to search for two business experts that matched their assigned decision-making business problem during the initial stage. In ensuring the selected business experts were credible enough to scaffold the students, the researcher defined the experts' qualifications as follows: holding a managerial position for at least ten years or more, having an active Facebook account, and agreeing to scaffold the students on Facebook at least twice a week. All groups secured the experts from different industries such as banking, telecommunications, and the airline industry. The students searched the experts through sites such as LinkedIn and Google Scholar or by using their networks such as relatives, their parents' acquaintances, as well as former internship supervisors in the company where the students had their internship during their diploma. The mixture of strategies that the students employed in getting the business experts helped them secure the business experts for their group within the scheduled duration.

The Context

In the study, Facebook was utilised since Facebook is commonly used in PBL for various reasons, including supporting social coordination by having spaces for feedback collection and lengthier group discussions than other social media platforms such as Twitter and Instagram (Ryberg, 2019). In addition, Savin-Baden (2020) argued that Facebook is ideal as a mentorship platform for PBL. Although Facebook features have

been updated over the years, the essential functions such as posting, liking, and editing comments, uploading files, pinning the post, and tagging people are relatively stable. They have been available from 2012 until the present. Although more sophisticated functions such as an online marketplace or live video streaming were only made available after 2016 and 2018, respectively, these functions were not utilised in the context of this study. It should be noted that all participants of this study, including the students, the instructor, and the business experts, reported having at least one Facebook account and at least two years of experience in using Facebook, and this implied that all the participants were well-versed with the basic features of Facebook.

In each Facebook group, a shared Google drive that accommodated the necessary materials to support the problem-solving activities, such as the activities timeline, reading materials, and a Google document (to document all problem-solving stages), were pinned on top of the Facebook page. All participants would notice the Google document immediately when entering the Facebook group. Meanwhile, the business experts and the instructor would monitor the students' work on the Google document on average once or twice a week and respond to the students' inquiries when the students tagged the experts and instructors on Facebook. This tagging function on Facebook was apt as students could receive timely feedback before progressing to the next problem-solving step.

Real-world business problems in online newspapers were selected for the PBL

activities in this study. A PBL instructional design expert and a subject-matter expert who teaches the Global Management course vetted the business problems to ensure each group was given a problem with a similar level of difficulty and knowledge domain. The newspaper was selected as the source of the business problems for the PBL activities in this study, following previous PBL researchers who advocated for and practised using newspapers as it provides an authentic problem that could train students to approximate the reasoning process of experts and prepare the management students to see the relevance of the process for their future professional careers (Hung et al., 2019).

Experimental Procedures

In this study, the student participants took part in a simultaneous within-subject experimental design (WSED) in a PBL teaching approach to solve a business decision-making problem for eight weeks. Simultaneous WSED is a form of within-subject experiment design that allows researchers to identify the subtle effects of two or more interventions and determine which intervention works best on the outcome (Creswell, 2014). The primary benefit of using simultaneous WSED is that it prevents the participants from being fatigued by repeating the experimental process, especially when certain conditions need to co-exist together rather than separately (Knijnenburg & Willemsen, 2015). In addition, the use of simultaneous WSED in this study was considered appropriate since

three different scaffolders were investigated, eventually allowing for these scaffolders to be assessed simultaneously.

Hmelo et al. (2019) advised that a briefing session be conducted as students are usually overwhelmed with the in-depth requirement of PBL. As an initial preparation strategy to avoid a chaotic start and ensure the students in this study had a clear direction about the learning goals and requirements, briefing sessions on the requirements and expectations of the problem-solving activities were conducted during the face-to-face classes. Meanwhile, the instructor contacted the business experts personally via email or by messaging the experts on Facebook messenger to brief them on the required expectations and their roles in scaffolding the students. All participants were provided with a description of the scaffolding methods in their respective Facebook groups via a Google shared drive.

To optimally and systematically guide the Facebook discussions, all participants used Ge and Land's (2003) problem-solving stages, which involved identifying the problem, analysing the problem's components, identifying possible solutions, and justifying the selected solution. These problem-solving stages were embedded in Rienties et al.'s (2012) Optima 7 Jump (e-learning) protocol recommended as a guide for online problem-solving discussions, particularly for business education. Steps 1 and 2 in this study began with the participants clarifying difficult terms and brainstorming to identify the

main issue and its components. In Step 3, Ge and Land's problem-solving stages were employed to gear the participants towards solving the learning issues. Various scaffolding techniques could be observed compared to the other steps in the problem-solving stages. The instructor and business experts of all groups gave hints and probing questions more frequently. The latter technique allowed the scaffolders to identify the students' current abilities. Occasionally, the business experts showed work examples by sharing their knowledge and work experiences. At the same time, the students felt inclined to ask questions as they needed to clarify the learning issues with the instructor. They sought help from both the business experts and instructors, particularly directing them to materials that could be used. Although the students shared resources in a limited manner, they encouraged their peers to complete the problem-solving tasks, helped to clear misunderstandings, and shared learning concerns. In Steps 4 and 5, the participants discussed possible solutions and worked toward reaching a consensus on the most viable solution to the problem. In Step 6, the participants examined whether the requirements of the issues and problem-solving stages had been fulfilled. Finally, in Step 7, a group leader or the instructor summarised the pertinent points of each of the stages the groups underwent.

Across all the seven steps, the scaffolding methods shared with the students included but were not limited to providing hints on the possible solutions, probing questions to promote reflective thinking on the current

progress, providing encouragement to maintain interest and boost morale as well as granting feedback to check the accuracy of the students' work (Ertmer & Koehler, 2015). These scaffolding methods mimic the SE element of support and opportunity to learn. Meanwhile, the participants also provided SE elements of resources and information by sharing online newspapers and blueprints.

Post Experiment Questionnaire Survey

All 84 students participated in a post-experience questionnaire survey to solicit their experiences at the end of the experiment. The survey questions were adapted from the Conditions for Work Effectiveness Questionnaire-II (CWEQ-II) (Laschinger et al., 2001). Section A of the questionnaire comprised questions on the students' demographic profiles, assessing the students' level of familiarity and purpose of using Facebook. Meanwhile, Section B assessed the level of structural empowerment the students received from the scaffolders to evaluate the SE elements based on a 5-point Likert scale. The questionnaire items are presented in Table 1. For ease of reference, the structural empowerment provided by peers, the structural empowerment provided by the instructor, and the structural empowerment provided by business experts are henceforth referred to by the abbreviations of SE peers, SE instructor, and SE business experts, respectively. Subsequently, the Statistical Package for the Social Sciences (SPSS) for Windows Version 25.0 software was used to

analyse the descriptive findings and Pearson correlation analysis to answer Research Objectives 1 and 2.

The mean was used to fulfil Research Objective 1, to evaluate students' perceptions of the SE elements granted by SE peers, SE instructors, and SE business experts. Meanwhile, to support the mean analysis findings, Section C of the questionnaire measured the students' overall experience of the problem-solving activities on Facebook. A semantic differential scale of seven points was used, with one being the lowest end reflecting negative experience and seven being the highest reflecting positive experience about their PBL experiences. The learning experiences were described using adjectives such as "dissatisfying ... satisfying" and "uninspiring ... inspiring," placed at both extreme ends of the scale. This scale was adopted by Abdullah et al. (2015) and Musa et al. (2011).

Meanwhile, to answer Research Objective 2, the Pearson correlation analysis was performed to determine the correlation among SE peers, SE instructors, and SE business experts based on the data from Section B of the survey questionnaire.

RESULTS AND DISCUSSION

In terms of Facebook familiarity, all the students in this study had at least one active Facebook account with more than two years of experience in using Facebook. Most of the students (89.3%) used Facebook for socialising. In comparison, 59% used Facebook to communicate with friends, and 33.3% used Facebook to communicate

Table 1
The Pearson's correlation coefficient, mean and standard deviation (SD) of SE provided by peers, instructor, and business experts

| Items | Scaffolders | | | SE Peers | | | SE Instructor | | | SE Business experts | | | |
|---|-------------|--------|------|----------|------|--------|---------------|------|------|---------------------|------|------|------|
| | | r | Mean | SD | CA | r | Mean | SD | CA | r | Mean | SD | CA |
| How much is support for each of these activities is available from these people? | | | | | | | | | | | | | |
| 1. Specific information about the things you do well. | | 0.53** | 3.86 | 0.85 | 0.67 | 0.05** | 4.42 | 0.68 | 0.50 | 0.77** | 3.49 | 1.04 | 0.83 |
| 2. Specific comments about things you could improve. | | 0.48** | | | | 0.28** | | | | 0.69** | | | |
| 3. Helpful hints or problem-solving advice. | | 0.64** | | | | 0.67** | | | | 0.79** | | | |
| How many opportunities for each of these activities are available to these people? | | | | | | | | | | | | | |
| 1. Tasks that use all of your skills and knowledge. | | 0.68** | 3.88 | 0.86 | 0.78 | 0.70** | 4.27 | 0.79 | 0.83 | 0.85** | 3.40 | 1.12 | 0.88 |
| 2. Chance to learn new skills. | | 0.59** | | | | 0.70** | | | | 0.80** | | | |
| 3. Challenging work. | | 0.57** | | | | 0.68** | | | | 0.79** | | | |
| How much information for each of these activities is available from these people? | | | | | | | | | | | | | |
| 1. The values of the assignment. | | 0.73** | 3.91 | 0.83 | 0.79 | 0.64** | 4.40 | 0.68 | 0.58 | 0.78** | 3.45 | 1.09 | 0.88 |
| 2. The goals of the assignment. | | 0.71** | | | | 0.64** | | | | 0.78** | | | |
| 3. The current state of your work. | | 0.59** | | | | 0.61** | | | | 0.78** | | | |
| How many resources for each of these activities is available to these people? | | | | | | | | | | | | | |
| 1. Time available to do the necessary report. | | 0.64** | 3.89 | 0.78 | 0.78 | 0.68** | 4.34 | 0.72 | 0.80 | 0.78** | 3.39 | 1.11 | 0.88 |
| 2. Time available to accomplish task requirements. | | 0.74** | | | | 0.68** | | | | 0.85** | | | |
| 3. Acquiring temporary help when needed. | | 0.70** | | | | 0.63** | | | | 0.77** | | | |
| Average | | | 3.87 | 0.86 | 0.76 | | 4.4 | 0.72 | 0.68 | | 3.4 | 1.09 | 0.71 |

Note. Critical Value for Pearson's correlation coefficient is 0.28 when the degrees of freedom (df) is equal to minus 2 from the number of total subjects (which was 84 students) with df = 82 (N= 84-2) sig. at 0.01. The results showed that all items surpassed the value of 0.28.

and discuss academic and assignment progress with their respective instructors. The students in this study were familiar with using Facebook for formal and informal learning.

The next step was to assess students' perception of SE. Initial screening showed normal data with skewness and kurtosis values within the acceptable range of ± 2 ; thus, no univariate normality issue was detected for all the items. Next, the internal consistency validity was measured to ensure that the items did not correlate by chance, using correlation coefficient (r) (Oktavia et al., 2018). The results are presented in Tables 1 and 2. Using the critical values for Pearson's Correlation Coefficient Table, at a p -value of 0.01 (two-tailed) and the degrees of freedom equal to the number of subjects minus two, i.e., 82 ($N = 84 - 2$), the critical value was calculated at 0.28. As a result, all the datasets in this study obtained a correlation coefficient r surpassing 0.28 for all, with values ranging from 0.65–0.76 for all learning experience items and 0.28–0.85 for all SE items. Finally, using the cut-off

values proposed by Hinton, McMurray, and Brownlow (2014), all data was deemed reliable, with Cronbach Alpha values ranging from 0.51 to 0.90, indicating that the items had moderate to high reliability in both learning experience items and SE items.

Critical Value for Pearson's correlation coefficient is 0.28 when the degrees of freedom (df) is equal to minus 2 from the number of total subjects (which was 84 students) with $df = 82$ ($N = 84 - 2$) sig. at 0.01. The results showed that all items surpassed the value of 0.28.

Concerning Research Objective 1, based on the measurement of the students' perceptions of SE provided by the different scaffolders, SE Instructor recorded the highest total mean score (mean values ranging from 4.27 to 4.42), followed by SE peers (mean values close to 4.00 for all SE items) and SE business experts (mean values ranging from 3.39 to 3.49). Among all the SE items, students appreciated information from the instructor and their peers and rated support and information as the most

Table 2
Summary of the students' learning experience

| Items | Mean | Std. Deviation | CA | r |
|---|------|----------------|------|--------|
| Dissatisfying - Satisfying | 4.86 | 1.12 | | 0.76** |
| Boring - Interesting | 4.77 | 1.26 | | 0.74** |
| Unpleasant - Pleasant | 4.81 | 1.21 | | 0.75** |
| Not Challenging - Challenging | 6.13 | 1.12 | | 0.66** |
| Unmemorable - Memorable | 5.42 | 1.28 | 0.87 | 0.69** |
| Undemanding - Demanding | 5.48 | 1.12 | | 0.64** |
| Intellectually Unstimulating - Intellectually stimulating | 5.61 | 1.21 | | 0.76** |
| Uninspiring - Inspiring | 5.61 | 1.33 | | 0.73** |
| Average | 5.33 | 1.2 | | |

Notes. CA = Cronbach Alpha

important source of empowerment from all the scaffolders. One possible explanation for a moderate perception of scaffolding for all SE items of business experts could be due to the limited participation of the business experts on Facebook as a result of their busy work schedules and work demands. Ideally, the business experts should scaffold the students twice a week. However, the experts scaffolded the students mostly once a week. Despite this limitation, the business experts did review the students' work and commented on the discussion posts on Facebook and Google documents every week. Although the experts were presumed to be busy scaffolding the students frequently, it is believed that if the students were to put in more effort in discussing on Facebook, it might entice the industry experts to participate more frequently in scaffolding the students on Facebook. Furthermore, the students shared a joint agreement that s from all scaffolders was viewed as indispensable. This finding is congruent with Shin et al.'s (2020) view that extending assistance and social support when students utilise technological tools would greatly help students. Social support should be given during the early stages of the PBL to allow students to make full use of and engage in the online PBL (Savin-Baden & Bhakta, 2019).

In supporting the results of the mean analysis, which is presented in Table 2, the students also described their scaffolding experiences with their peers, business experts, and instructor as "hard fun". The students described their experience in

dealing with the problem-solving tasks as challenging and demanding; however, they perceived they still gained substantial benefit from the intellectual stimulation and satisfying, pleasant, and inspiring experience gained from the scaffolding provided by the scaffolders. These findings are consistent with Loannou et al. (2016) and Barrett's (2005) study. They reported that students' experience in PBL, which is embedded with integrative learning elements, is challenging but engaging and empowering at the same time.

A Pearson correlation analysis was performed to answer Research Objective 2. The results revealed that all scaffolders showed a statistically significant correlation. Munro (2005) provided the interpretation of the results of r values as follows: $r = 0 - 0.25$ (very low correlation), $r = 0.26 - 0.49$ (low correlation) $r = 0.5 - 0.69$ (moderate correlation), $r = 0.7-0.89$ (strong correlation) and $r=0.9-1.0$ (very strong correlation). Table 3 shows that at a significance level of $p<0.01$, SE peers correlated moderately with SE instructors but had a low correlation with SE business experts. SE instructors also showed a low correlation with SE business experts. As students may experience various difficulties in PBL, they need reinforcement through different sources of scaffolding because of the differing motivation, interests, levels of knowledge, and learning skills among students (Huang et al., 2019). This study found that different scaffolders correlated with each other, implying that SE items are dependent on other scaffolders and must be

Table 3
Pearson correlation analysis results of SE of the scaffolders

| | SE Instructor | SE Peers | SE Business Experts |
|---------------------|---------------|----------|---------------------|
| SE Instructor | 1 | .519** | .358** |
| SE Peers | .519** | 1 | .341** |
| SE Business Experts | .358** | .341** | 1 |

Note: * $p < 0.01$, N = 84 for all analyses

provided simultaneously. Some possible explanations for such a finding are provided below.

SE Instructor

The finding showed that SE instructors correlated with SE business experts. The results are consistent with Jamiat's (2018) finding that instructors like students sometimes need guidance in validating their thinking processes. Carvalho (2016) opined that since business problems are usually complex and interdisciplinary, a few dialogues with the experts could help alleviate the messiness of learning or teaching issues. Instructors may sometimes rely on the information from experts and then interpret and convey the information in a way that students may easily comprehend (Holton & Clarke, 2006) so that it is aligned with the student's cognitive readiness (Hung, 2019).

SE Peers

This study showed that the availability of SE in the form of support and resources from the instructor was perceived as more important than the ones from peers. Instructors play a more dynamic role in providing SE in the form of cognitive

support, such as removing any unfamiliarity that students may need to deal with in PBL (Hung, 2019), providing access to resources that are difficult for students to obtain on their own as well as modelling and tracking students' performance throughout the learning process (Magana, 2014). SE peers and SE instructors demonstrated a moderately significant correlation based on the findings. Therefore, it could be inferred that the students relied on the immediate people in their learning contexts, such as the instructor and their peers, to provide information about the problem or assist them in the meaning-making process.

SE Business Experts

The use of experts is beneficial in management decision-making because they have a sound and straightforward approach to assessing the appropriateness of a solution and in defining and reviewing the most critical evaluations of a problem, such as key complexities and risks that could affect the solutions (Parnell et al., 2011). These allow the experts to see the big picture of a problem when providing support to students (Kek & Huijser, 2017) and the instructors' teaching practices and development (Nelson et al., 2020). However, a closer inspection

of the correlation analysis showed that there are also possibilities that the experts require scaffolding from others too. Lee et al. (2019) argued that experts rely on prior experience to propose solutions rather than deliberating a more viable option. Boshuizen et al. (2020) asserted that even if the experts are required to solve a problem in a similar domain, task requirement, and knowledge, the experts may not automatically excel and may still require training. Thus, to decipher the unfamiliar problem and its requirement, the business experts in this study may rely on information provided by the students or instructor to allow knowledge to be organised before presenting them to both the students and instructor.

CONCLUSION

This study investigated management students' experiences of empowerment with multiple scaffolders on Facebook to solve a business decision-making problem. The students perceived the instructor as providing more SE than the other scaffolders. In addition, the students were seen to be more comfortable asking questions and gaining feedback from those they are familiar, including peers who are known to be able to offer "emotional learning" in the form of moral support, advice, and encouragement (Savin-Baden, 2020) and from instructors who can facilitate the interaction among students (Cho & Cho, 2014). However, the roles of business experts are still vital and should not be undermined. The presence of business experts allows students to

engage in purposeful thinking relevant to the problem and makes the thought process more visible (Kumar & Kogut, 2006). In this study, the business experts provided the impetus for the students to accelerate their PBL progress.

The correlation results showed that using multiple scaffolders in a business problem-solving activity is required to allow each scaffolder to scaffold each other reciprocally. The knowledge available on a virtual platform is not a mere accumulation of information. Still, it needs to be co-constructed with others, especially when dealing with the complexity of business management problems and their fragility in knowledge development and structure (Boshuizen et al., 2020). These complexities require a meaning-making process involving the engagement of different sources of scaffolding to help students benefit from the varying degrees of maturity, experiences, and expertise that each scaffolder has.

Nevertheless, students need to sustain their self-regulation skills when dealing with problem-solving activities in PBL. It is emphasised by Ge et al. (2016), who argued that for students to gain the utmost benefit from diverse scaffolders' participation on Facebook, they need to sustain their self-regulation skills in dealing with problem-solving activities in PBL. The skills include actively planning, monitoring, and controlling their motivation and cognition (Alt et al., 2020). Moreover, as problem-solving is a goal-oriented activity, students need these self-regulation skills.

Limitations of the Study and Suggestions for Future Research

In this study, the students reported positive learning experiences, and this suggests that online-mediated platforms such as Facebook are viable solutions for HEIs to foster student-industry engagement to improve students' work readiness skills such as problem-solving. The results of this study offer insights to the beneficiaries of this study, such as management educators and PBL researchers, where the findings can be used to identify better the appropriateness of implementing PBL through social media by incorporating multiple scaffolders. Nevertheless, the findings of this study should be evaluated with caution and may only be generalised to research that shares a similar research context, for example, those that examine Facebook use and Google document for PBL in management courses at a private university. The lack of a control group and the small sample size limit one from making broad generalisations. Nevertheless, future research could further investigate the extent to which the business experts, in general, are willing to offer their scaffolding on social media. This study showed significant correlations among SE provided by the scaffolders. The SE provided by peers, the instructor, and the business experts correlated significantly, suggesting each scaffolder relied on each other when scaffolding. The researchers projected that a mediation role could influence the interactions between the business experts, peers, and instructors in

the scaffolding provided, and this could be examined in future studies.

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Goal Orientations, Self-Regulated Learning Strategies and Problem-Solving: A Mediation Analysis

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ABSTRACT

This study investigates goal orientations, and self-regulated learning (SRL) strategies, particularly for differential equations (DEs) based problem-solving. Two adapted self-designed questionnaires for goal orientations, and SRL and an assessment test containing five self-developed DEs tasks were distributed among 430 students studying in inter-colleges. Collected data was further examined through SPSS and Smart PLS software. Initially, direct effects of goal orientations (mastery, performance, and avoidance goal) and SRL (elaboration and critical thinking) were considered. Findings revealed that mastery, avoidance goals, and elaboration had a significant direct effect on DEs' problem-solving. However, no such effect was observed for performance goals and critical thinking. Similarly, it was revealed that only elaboration had the role of mediation for both mastery and performance goals. Likewise, in the case of critical thinking, no significant effects were observed. The current study confirmed that goal orientations and SRL strategies influence

DE problem-solving. Therefore, educators and teachers may structure their classroom activities to review and incorporate these learning strategies, which will enhance students' internal motivation, resulting in significant improvement in their problem-solving ability.

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INTRODUCTION

Differential equations (DEs) have an essential role in mathematics and have been at the center of calculus for centuries. In addition, the concept of DE is used for modeling purposes and to comprehend real-life problems (Bibi et al., 2017, 2018). Therefore, these provide opportunities to formulate the application of phenomena from other disciplines of science and social science fields such as Physics, Astronomy, Biology, and Economics (Bibi et al., 2018).

Five main categories, including algebraic, graphical, numerical, technological, and inquiry-oriented approaches, have been identified for solving DE-based problems. Algebraic approaches are based on the several steps to solve the DEs analytically (Arslan, 2010; Artigue, 1989; Bibi et al., 2017), while graphical methods are qualitative, used to analyze either a graph or direction fields to solve a DE problem (Camacho-Machín et al., 2012). Finally, numerical methods offer the solution of DEs through appropriate approximations. Recently development in technology has integrated these three categories into a single approach (Rowland, 2006). These developments have opened new avenues for assembling the concepts and their connections to real-world situations (West et al., 1997). As a result, various real-world problems were identified, and mechanisms were developed to solve these problems through solving their related DEs (Pollak, 2015).

Apart from these reforms, several researchers proposed that mathematics

beliefs are among the most important mechanisms contributing to successful problem-solving (Kloosterman, 2002). For example, Pintrich (2000) explored students' motivation to learn and emphasized the consequences of motivational factors, for instance, goal achievement. Earlier, goal setting theory, grounded on conscious human behavior, is meaningful and influenced by the individual's goals. It was based on Ryan's (1970) hypothesis that cognitive goals impact behavior. These goals are stimulating because they demand more effort to be fulfilled than common or easy goals. This theory was established inductively within organization psychology, based on over 400 field experiments (Locke & Latham, 2006). These studies found that setting explicit and high goals result in better task performance than setting low goals. Several other researchers applied and explored this theory for different aspects (Locke & Latham, 2012, 2013, 2015, 2019; Lunenburg, 2011). In this respect, goal orientation, a class of self-motivational beliefs, was a significant predictor of the students' performance (Sommet & Elliot, 2017). To implement students' motivation in academic settings, the important role of goal orientation beliefs remained the focus of researchers.

Likewise, regarding students' motivation, it was observed that mathematical problem-solving skills that increase student learning depend upon the attainment of self-regulatory skills in the mathematics learning environment (Stockton, 2010). In addition, it increases

students' self-sufficiency and personal dominance over their problem-solving experiences (Zimmerman, 2002). Therefore, students' ability to utilize self-regulated strategies can best predict their problem-solving success by resolving complicated and challenging problems (Schwartz et al., 1998).

Several mathematics educators endorsed the theory of SRL as an important change and anticipated students to assume control and agency over their knowledge and problem-solving activities (Ahmed et al., 2013; Sahdan et al., 2017). Moreover, these SRL strategies also have an essential role in the inquiry and online learning community framework because of their affective outcomes (Sommet & Elliot, 2017). Previously, Pintrich (1991) conceptualized SRL in three distinct ways. First, refer to the metacognitive strategies (planning, monitoring, and regulating. Second, it views self-regulation as students' potential to use metacognitive and cognitive strategies (rehearsal, elaboration, and organizational strategies) (Pintrich, 1999). Third, it is concerned with emphasizing the worth of integrating motivation, cognitive, and metacognitive aspects of learning (Mattern & Shaw, 2010). Moreover, Rheinberg et al. (2000) suggested that motivation and SRL strategies are interconnected because the former promotes and sustains the latter variable.

Overall, literature shows that SRL strategies and goal orientations strongly affect mathematics achievement and problem-solving (Özcan, 2016; Rokhmat

et al., 2017). However, no study had combined these two important factors (goal orientations and SRL) for DE problem-solving, particularly non-routine-based problems. Non-routine differential equation problems facilitate students to develop higher-order thinking during the exploration, analysis, understanding, and application of mathematical concepts. Therefore, his study focuses on the effects of goal orientations and SRL strategies on non-routine-based DE problem-solving at the pre-university level. Besides this, the potential mediating role of SRL between goal orientations and DE problem-solving was also considered.

CONCEPTUAL FRAMEWORK

SRL strategies and goal orientations are significant predictors of the students' achievement (Jansen et al., 2017; Zhou & Urhahne, 2017). Therefore, to implement students' self-regulated skills and motivation in academic settings, the role of goal orientation is particularly important. In this aspect, goal theorists recognized the most important goal, including mastery goals, performance goal orientations, and avoidance goals (Dweck, 1986).

Mastery goal-oriented students prefer situations where they can develop new skills and expand their intellectual capabilities, whereas performance-oriented students like showing their competencies and comparing them with others (Ames, 1992). Avoidance goal-oriented students get negative beliefs like fear of rejection or failure. Due to these, most students give up in unfamiliar and difficult situations resulting in no effect on

students' mathematics achievement (Elliot et al., 1999; Wolters, 2004). Wolters et al. (1996) studied the relationship between mastery, performance, and avoidance goals and self-regulated learning, focusing on the subject of mathematics. Therefore, these three constructs were considered for this work. Several mathematics educators also suggested that these factors alone are not enough to foster students' mathematics achievement. SRL strategies may mediate the association between motivational factors and mathematics achievement.

Several authors observed that performance and mastery-oriented students show more inclination toward self-regulation. Liem et al. (2008) reported that performance and mastery goals are the best predictors of SRL strategies, which generate positive outcomes. Most SRL strategies are comprised of nine subscales. Literature reveals that among nine subscales, critical thinking and elaboration particularly facilitate a better understanding of knowledge and skill improvement (Phan, 2008). Therefore, these two constructs were considered.

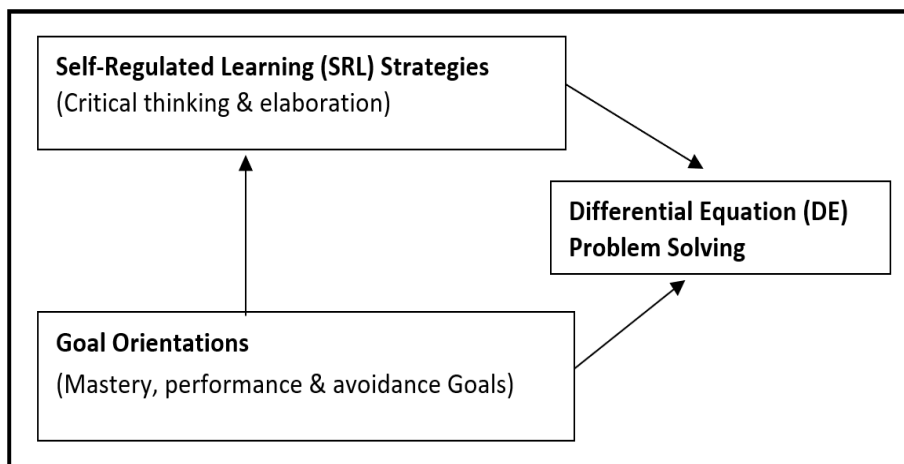


Figure 1. Conceptual model showing goal orientations, SRL strategies, and DE problem-solving

Based on the literature, it may hypothesize that SRL strategies and goal orientations strongly affect mathematics achievement and problem-solving (Muis et al., 2018). However, no study had combined goal orientations and SRL for the DE problem-solving. Therefore, a model (Figure 1) was conceptualized in this study to study the effects of goal orientations and

SRL strategies on DE problem-solving at the pre-university level. Furthermore, through the investigation of direct each factor and the mediating role of SRL, several important implications were anticipated for the curriculum designers and teachers to enhance conceptual understanding of DE problem-solving.

Research Objectives

The main purpose of this work was to explore the effects of goal orientations and SRL strategies on DE Problem solving at the pre-university level. The second aim was to study the potential meditating role of SRL strategies between goal orientations and DE problem-solving. The following research questions are addressed to achieve the desired purpose:

1. Do goal orientations and self-regulated learning (SRL) strategies directly affect DE problem-solving?
2. Does elaboration (a part of SRL strategies) play a mediating role between mastery goal and DE problem-solving?
3. Does elaboration play a mediating role between performance goals and DE problem-solving?
4. Does elaboration play a mediating role between avoidance goal and DE solving?
5. Does critical thinking (a part of SRL strategies) play a mediating role between mastery goal and DE problem-solving?
6. Does critical thinking play a mediating role between performance goals and DE problem-solving?
7. Does critical thinking play a mediating role between avoidance goals and DE problem-solving?

The focus was on student perceptions and learning strategies to solve DE-based tasks.

METHODOLOGY AND RESEARCH DESIGN

Creswell (2013) speculated that correlation research design through non-experimental quantitative data could be employed to explain the relationship among variables. Wolf et al. (2013) explained the role of the sample size in correlation-based design, particularly for structural equation modeling (SEM). Therefore, this correlation approach was used to validate the relationships in the current study model. Details of the population, samples, and instruments have been described in the following sections.

Research Instruments

The current research used two adapted self-reported questionnaires for SRL strategies and goal orientation and an assessment test containing five self-developed differential equation tasks. These tasks were given non-routine nature to assess students' differential equation problem-solving ability and examine the full picture of difficulties faced by the students when they were engaged in solving the assessment test.

A scoring rubric containing three main stages (understanding, planning toward the solution, and getting an answer) was prepared to measure their problem-solving skills and score achievement. Each stage had a maximum of two marks, while each task had six marks. This scoring rubric was based on an analytic scale for problem-solving (Charles et al., 1987). Detail of the score is provided in Table S1. The second instrument, achievement goal orientations, was grouped into mastery goal, performance

goal, and avoidance-goal orientation dimensions and was determined by the adapted scales from the Patterns of Adaptive Learning Survey (Midgley et al., 2000). The mastery goal was assessed through six items. The assessment of performance goal contains five items, while the evaluation of performance-avoidance goal includes six items. All responses were categorized on a 5-point scale ranging from 1 (not at all true) to 5 (very true).

The SRL strategy's third instrument was assessed with a Norwegian adaptation of the motivated strategies for learning questionnaire (MSLQ) (Pintrich, 1991). Further, it is separated into two broad categories: A motivation section with six subscales and a learning strategies section with nine subscales. However, only two dimensions, critical thinking and elaboration, were chosen from the learning strategies for this study. The elaboration strategy has six items, while the measure of critical thinking includes five items. All responses were categorized on a 7-point scale ranging from 1 (not at all true) to 7 (very true).

The current study had used adapted instruments; therefore, there was a need to confirm instrument reliability. The survey and assessment instruments were validated by four experts, including one mathematician, one psychological educator, and two mathematics educators who were teaching at college and university levels to ensure content reliability and validity. As a result, they accomplished an anonymous consensus on the instrument reliability

and content validity. Besides this, a pilot study was also carried out with 70 students who had already attended differential equation lessons. The participants' responses demonstrated that the differential equation tasks and adapted questionnaire were suitable for the data collection and eventually for the study's objective.

Data Collection

The target population for the current study was students studying in their 12th year in Khyber Pakhtunkhwa (a large province of Pakistan). A 12th-year study can be carried out in inter-colleges and higher secondary schools in Pakistan. This study considered the population ratio from six institutes in government and three from the private sector. Overall, 430 questionnaires were distributed and excluded all the responses with missing data. Ultimately, 394 responses were deemed fit for further analysis. The sample size error was below 5% (4.7%) with a 95% confidence level. This margin of error is considered powerful for predicting the accuracy and reliability of the survey results.

The study had major limitations that might influence the collecting and interpretation of data from that context. This research used non-routine differential equation tasks to investigate students' problems, which strongly needed students' special attention, efforts, and learning strategies to solve them. Besides, the assessment test was an informal exam having no short-term incentives for them. Hence, participants' lack of cooperation was possible. The adapted instruments

containing goal orientations and self-regulated learning (MSLQ) questionnaires were based on the theories and findings of developed countries. As Pakistan is a developing country, due to changes in resources and infrastructure, teachers' and students' abilities and findings might not be the same as hypothesized.

The results of this small-scale study were another important limitation. It might not be generalized data for all secondary mathematics students of all provinces in Pakistan. This research was carried out in a limited number of institutes in one province of Pakistan. Results in other provinces or states might differ due to students' learning capacity, teacher training, availability, infrastructure, cultural, and regional constraints. Other major limitations were investigating a limited range of strategies, tasks, and problem-solving approaches. Similarly, five non-routine tasks involving only two problem-solving approaches (algebraic and graphical) were considered here.

Non-routine tasks exhibiting daily life problems were the best option to reduce the limitation of using non-routine differential equation problems to assess the students' problems and overcome participants' lack of cooperation. Daily life-based problems were able to capture the students' attention. In addition, sufficient efforts were carried out to give them the shape of non-routine problems with adequate hidden data to analyze different factors. In addition, reducing the number of tasks up to five helped students solve these tasks without feeling boring.

An additional questionnaire (in addition to the research instrument) was designed for the field experts (educators/teachers) to overcome the adapted instrument's validity for the developing countries. Consents of the experts were assessed concerning different parameters, such as suitability of the country/province, selected factors, their inter-connection in the present study, and clarity of representations. Responses of the experts were also analyzed for the final data collection.

The suitable sample size and random sampling from both public and private sectors and urban and rural areas enabled the generalization of this research to most Pakistani students studying at the secondary level. In addition, comparing and confirming the demographic information with the institutional data about participants may help delimitate the error in self-reporting data.

RESULTS

For this work, an initial pilot study was carried out. The responses collected from the 70 students were used to analyze the reliability coefficient (Cronbach's alpha values) for all constructs of the research instruments. The Cronbach's alpha values for mastery, performance, and avoidance goal orientations were .83, .76, and .76, respectively (Table S2). These values had shown well agreement with the literature reported values. The reported values were .86, .86, and .75 for mastery, performance, and avoidance goals (Midgley et al., 2000).

Similarly, for critical thinking and elaboration strategy, Cronbach's alpha values (α) were .90 and .89, respectively. Again, a good agreement with previously reported values was noticed. The reported reliability coefficient for elaboration strategy was .75 and for critical thinking was .80 (Duncan & McKeachie, 2005). For differential equation-based task solving, Cronbach's alpha value was .66 ($\approx .7$), indicating a good internal consistency of items (George & Mallery, 2003). In the present case, all the values were in an acceptable range, and hence there were no items whose elimination would have improved the coefficient substantially.

Besides this, SRL and goal orientation scales were validated using exploratory factor analysis. Exploratory Factor Analysis (EFA) determined items that belong to a factor in a multiple factor structure. EFA is normally analyzed through two methods, including common factor analysis and Principal component analysis (PCA). Even so, for current research, principal component analysis was employed to reveal the original structure of the preliminary model of the questionnaire. Prior to PCA, a preliminary assessment of inter-item correlation, such as a bivariate correlation matrix, was visually inspected. The bivariate correlation matrix conveys information regarding the scale dimensionality, as it is not influenced by scale length (Briggs & Cheek, 1986). Moreover, Tabachnick and Fidell (2007) recommended that inter-item correlations bigger than .9 indicate a multicollinearity problem. Exploratory results of the item

total correlations are shown in Table S3. The range of all correlation coefficients suggested that subscales were quite independent to be used as independent variables.

The next step was to conduct factor analysis for goal orientation and SRL strategies. However, before carrying out factor analysis, Kaiser-Meyer-Olkin (*KMO*) results, a measure of sampling adequacy, and Bartlett's test of sphericity were explored. Both techniques were used to determine the appropriateness of the factor analysis. The *KMO* results for goal orientation were .92, which had come in a quite acceptable range and is indicative of appropriate factor analysis for the scale. In addition to it, Bartlett's Test of Sphericity results [$\chi^2 = 5328.87$; $p < .001$] were also observed to be significant, which rejected the null hypothesis that the correlation matrix was an identity matrix. Therefore, goal orientations were considered adequate for factor analysis. Initial results from varimax rotation revealed communalities range from .49 to .84 (high range) and showed three factors with eigenvalues greater than 1.00.

Furthermore, the three-factor structure elucidated 73% of the total variance, in which the contribution of factor 1 was 37%, factor 2 contributed 28%, and the involvement of factor 3 was 7%, as shown in Table 1. In addition, the scree plot was also inspected to select the correct number of factors to be extracted. From the scree plot (Figure S1) and the Kaiser-Guttman rule, factor analysis of results on the 17 items indicated that three factors were interpretable.

Table 1

Rotated component matrix of goal orientation

| Construct | Item code | Component | | | Communalities |
|------------------|-----------|-----------|-----|-----|---------------|
| | | 1 | 2 | 3 | |
| Mastery goal | MA1 | | .80 | | .74 |
| | MA2 | | .81 | | .72 |
| | MA3 | | .74 | | .64 |
| | MA4 | | .80 | | .72 |
| | MA5 | | .76 | | .67 |
| | MA6 | | .80 | | .71 |
| Performance goal | PER1 | | | .79 | .72 |
| | PER2 | | | .76 | .69 |
| | PER3 | | | .79 | .71 |
| | PER4 | | | .80 | .74 |
| | PER5 | | | .59 | .49 |
| Avoidance goal | AV1 | .89 | | | .80 |
| | AV2 | .90 | | | .82 |
| | AV3 | .90 | | | .82 |
| | AV4 | .92 | | | .84 |
| | AV5 | .92 | | | .84 |
| | AV6 | .89 | | | .80 |

Table 2

Factor loadings, communalities, eigenvalue, % variances explained by SRL strategies

| Factor | Item code | Component 1 | 2 | Communalities | Eigen values | % Variance |
|-------------------|-----------|-------------|-----|---------------|--------------|------------|
| Critical thinking | CR1 | | .75 | .60 | | |
| | CR2 | | .78 | .63 | | |
| | CR3 | | .71 | .57 | 1.76 | 15.96 |
| | CR4 | | .74 | .58 | | |
| | CR5 | | .75 | .59 | | |
| Elaboration | EL1 | .76 | | .64 | | |
| | EL2 | .82 | | .71 | | |
| | EL3 | .82 | | .70 | 5.36 | 48.73 |
| | EL4 | .82 | | .72 | | |
| | EL5 | .80 | | .67 | | |
| | EL6 | .80 | | .69 | | |

The *KMO* value for SRL strategies was also acceptable at .92, representing an appropriate factor analysis for the scale. In addition to it, Bartlett 's Test of Sphericity results [$\chi^2 = 2,182.75$; $p < .001$] were also significant. SRL strategies were also considered acceptable for the factor analytic method like goal orientations. In this case, initial varimax rotation results showed high communalities ranging from .57 to .72, along with two factors whose eigenvalues were greater than 1.00. Furthermore, the two-factor structure explained 64% of the total variance, with factor 1 contributing 48%, and the contribution of factor 2 was 15%. Table 2 shows the detail of factor loadings, communalities, eigenvalue, and percent variances explained by SRL strategies. Similarly, the scree plot was also visually inspected to choose the correct number of factors to be extracted for self-regulation (Figure S2). Like the Kaiser-Guttman rule, the scree plot also showed two factors containing 11 items.

Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis (CFA) is usually employed to validate the factors of the instruments. It examined the mode of interrelationships among latent variables without explicit directional relationships (Gunzler et al., 2013; Raykov & Marcoulides, 2006). For the current study, the factor validity of the instrument was assessed by two consecutive confirmatory factor analyses for each subscale. In this study, the achievement goal orientation scale having 17 items was tested using AMOSS to

ensure how they fit the three latent factors: mastery, performance, and avoidance goal. In line with the results, achievement goal had three latent variables ($\chi^2 = 389$, $df = 116$, $\chi^2/df = 3.3$, CFI= .95, RMSEA = .07), which is a good fit (Steiger, 2007). However, according to Schumacker and Lomax (2016), the RMSEA range between 0.05 to 0.08 indicates a close fit.

Next, SRL strategies were measured through eleven items or observed variables. After EFA, elaboration and critical thinking were identified. Among 11 items of SRL strategies, elaboration was allotted six items. In contrast, five items were clustered with critical thinking. The first order confirmatory round was performed, and a single factor model was a good fit ($\chi^2 = 75$, $df = 43$, $\chi^2/df = 1.7$, CFI= .98, RMSEA= .04).

Analytic Method Using Smart PLS

The structural equation model (SEM) was used to evaluate the validity of the proposed model. Figure 1 is showing the proposed model for the current study. Figure 2 shows an overall structural model for goal orientation, self-regulation, and DE problem-solving. In SEM, two models, including the measurement model (outer model) and structural model (inner model), are embedded (Lin & Hsieh, 2010; Valente et al., 2016). Therefore, PLS's two-stage analytical procedures have been carried out in the current research analysis. First, the measurement model demonstrates the relationship between latent variables and their indicators. In contrast, the structural model determines the relationships

between the determinants (Fritz et al., 2012). Furthermore, the measurement model usually enables the evaluation of the construct's reliability and validity, measured through convergent and discriminant validity.

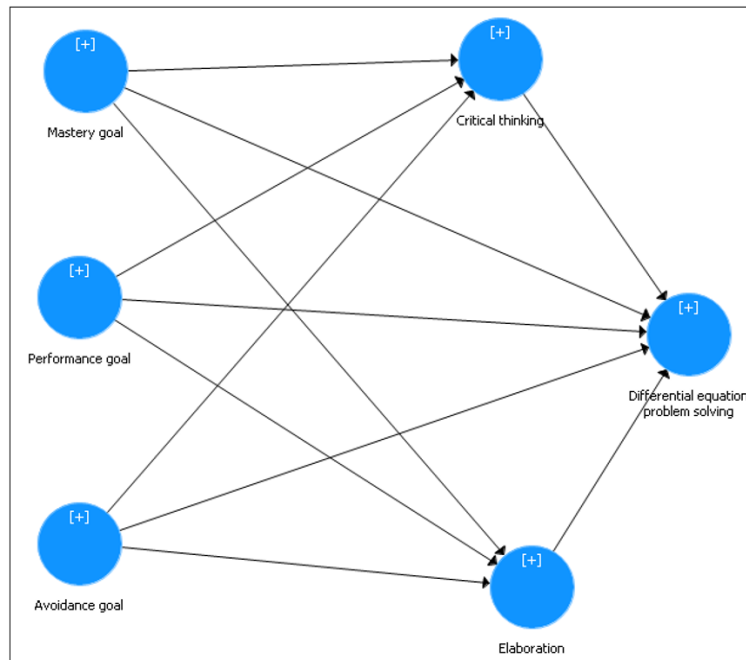


Figure 2. An Overall structural model for goal orientation, self-regulation, and differential equation problem-solving

The convergent validity is assessed through factor loading, composite reliability (CR), and average variance extracted (AVE). In contrast, discriminant validity is evaluated by comparing the square root of AVE with the correlation between the variables (Hair Jr et al., 2016). For the present work, the results are provided in Table 3. These values illustrated that all constructs loadings that exceeded the recommended value for AVE and CR were greater than 0.5 and

.7, respectively (Hair, 2010). The value of R^2 expresses the explanatory power of the predictor variables on the respective construct. The endogenous latent variables are classified as substantial, moderate, or weak based on R^2 values of .67, .33, or .19, respectively (Chin, 2010). In analyzing the estimates, it was noticed that elaboration ($R^2 = .59$) and DE problem-solving ($R^2 = .52$) were in the moderate range, while critical thinking ($R^2 = .24$) was in the weak range.

Table 3

Construct reliability and validity of mediation model

| Construct | CR | AVE | R ² | GoF= $\sqrt{(AVE \times R^2)}$ |
|---------------------------------------|------|------|----------------|--------------------------------|
| Avoidance goal | .964 | .818 | - | .58 |
| Critical thinking | .88 | .594 | .24 | |
| Differential equation problem-solving | 1.00 | 1.00 | .52 | |
| Elaboration | .93 | .689 | .594 | |
| Mastery goal | .933 | .7 | - | |
| Performance goal | .908 | .666 | - | |

The second way to validate the measurement model is discriminant validity, an extent to which items differentiate among constructs. Discriminant validity was evaluated through the square root of AVE for each construct's correlations (Gefen & Straub, 2005). In this respect, Hulland and Business (1999) further illustrated that the variables could be considered distinct theoretical entities while the correlation between the variables is lower than the square root of the AVE. For the current study, relevant values are provided in Table 4, confirming that estimated values agree with the reported scheme.

The values of predictive relevancy (Q^2), effect size (f^2), and significance levels of

the loadings, weight, and path coefficients were also calculated before testing the structural model. Several researchers also recommended the calculation of goodness of fit (GoF) prior to the structural model estimates. GoF is a diagnostic tool used to assess the model fit (Tenenhaus et al., 2005). It is usually measured using the geometric mean of the average communality (AVE) and the average R^2 ($GoF = \sqrt{AVE \times R^2}$). Reported cutoff values for evaluating the results of the GoF analysis are : GoF small = 0.1; GoF medium = .25; GoF large = .36 (Hoffmann & Birnbrich, 2012). The current model yielded a (GoF) value of .58, indicating a large model fit (Table 3).

Table 4

Discriminant validity of mediation model

| Constructs | Avoidance goal | Critical thinking | DE problem-solving | Elaboration | Mastery goal | Performance goal |
|-------------------|----------------|-------------------|--------------------|-------------|--------------|------------------|
| Avoidance goal | .91 | | | | | |
| Critical thinking | .02 | .77 | | | | |

Table 4 (*Continue*)

| Constructs | Avoidance goal | Critical thinking | DE problem-solving | Elaboration | Mastery goal | Performance goal |
|--------------------|----------------|-------------------|--------------------|-------------|--------------|------------------|
| DE problem-solving | -.26 | .38 | 1.00 | | | |
| Elaboration | .04 | .49 | .61 | .83 | | |
| Mastery goal | .02 | .42 | .63 | .75 | .84 | |
| Performance goal | .07 | .47 | .50 | .63 | .68 | .82 |

In the current model, the endogenous variable is predicted by more than one exogenous variable. In such situations, effect size calculations are usually recommended to assess how a predicting (exogenous) variable contributes to the R^2 value of an endogenous latent variable. According to Cohen (1988), an f^2 value up to 0.02, 0.15, and 0.35 shows a small, medium, and large effect size. For the current model, the predicted f^2 values for the DE problem-solving were .08, .17, and .06 for mastery, avoidance goal, and elaboration, respectively. The analysis of f^2 values revealed that avoidance has a moderate effect while elaboration has a small effect.

Whereas the performance goal and critical thinking had relatively very small effects. Similarly, when the f^2 values of mastery, performance, and avoidance goal towards the mediating variables were considered (Table 5), it was revealed that in predicting elaboration and critical thinking, the effect of mastery goal with f^2 values of .49 (large) and .02 (small), respectively (Table 6). Similarly, the effect of performance goals for elaboration and critical thinking, with f^2 values of .06 and .09, respectively, showed a small effect. However, a small effect was noticed in the avoidance goal on elaboration and critical thinking (Table 5).

Table 5

Predictive relevancy (Q^2) and effect size (f^2) for the mediation model

| Constructs | Q^2 | f^2 (DE problem-solving) | f^2 (Elaboration) | f^2 (Critical thinking) |
|--------------------|-------|-------------------------------|------------------------|------------------------------|
| Avoidance goal | - | .17 | .00 | .00 |
| Critical thinking | .13 | .01 | - | - |
| DE problem-solving | .50 | - | - | - |
| Elaboration | .41 | .06 | - | - |
| Mastery goal | - | .08 | .49 | .02 |
| Performance goal | - | .01 | .06 | .09 |

Likewise, the predictive sample reuses technique was used as a criterion for predictive relevance (Q^2) (Akter et al., 2011). Based on the blindfolding procedures, Q^2 evaluates the predictive validity of a complex model. Fornell and Larcker (1981) suggested that a Q^2 value greater than 0 means the model has predictive relevance and vice versa. Chin (2010) suggested cross-validated redundancy procedures to obtain Q^2 value. For this model, Q^2 values for elaboration, critical thinking, and DE problem-solving are .41, .13, and .50, respectively (Table 6). These were all above zero and thus, indicated acceptable predictive relevance. The second phase of PLS's two-stage analytical procedure was to examine the structural model. Then, it is used to test the hypothesized relationship within the model. Hair Jr et al. (2016) recommended a bootstrapping method (with 5000 samples) to establish path coefficient, weight, and the significance levels of the loadings.

Structural Model Results for Direct Paths.

According to Hair Jr and Lukas (2014), the recommended critical t-values for two-tailed tests are 1.65 ($\alpha = .10$), 1.96 ($\alpha = .05$), or 2.58 ($\alpha = .01$). The findings of the structural model for direct path revealed that among goal orientations, mastery goal and avoidance goal strongly affected the differential equation problem-solving. The results of direct effects are provided in Table 6. It was observed that avoidance goal ($\beta = -.283$, $t = 9.027$, $\text{sig} < .00$) had relatively larger effect as compared to mastery goal ($\beta = .334$, $t = 5.628$, $\text{sig} < .00$). In the case of a performance goal, no such significant direct path was observed.

Interestingly, in SRL strategies, elaboration have shown direct effects ($\beta = .274$, $t = 4.953$, $p < .00$) on differential equation problem-solving. Whereas no significant direct path was an observer for critical thinking. The results of direct effects are provided in Table 6.

Table 6

Structural estimates for direct path (hypothesis testing)

| Mediation | B | SE | t value | p value | Findings |
|---|-------|------|---------|---------|---------------|
| Mastery goal -> DE problem-solving | .334 | .059 | 5.628 | .00 | Supported |
| Performance goal -> DE problem-solving | .09 | .053 | 1.691 | .091 | Not supported |
| Avoidance goal -> DE problem-solving | -.283 | .031 | 9.027 | .00 | Supported |
| Critical thinking -> DE problem-solving | .069 | .057 | 1.216 | .224 | Not supported |
| Elaboration -> DE problem-solving | .274 | .055 | 4.953 | .00 | Supported |

Path Analysis of Goal Orientation, SRL Strategies, and DE Problem-Solving.

To evaluate the mediating role of SRL strategies, mediating model estimations were calculated. This model comprised of goal orientation subscales (mastery, performance, and avoidance goal), self-regulated subscales and DE problem-solving. Table 7 illustrates elaboration had partial mediation role with respect to mastery ($\beta = .17$, $t = 4.07$, $p < 0.05$) and performance goal ($\beta = .06$, $t = 2.66$, $p < .05$). Performance goal had optimistic as well as significant affects ($\beta = .06$, $t = 2.66$, $p < .05$) via elaboration. Results of avoidance goal orientation ($\beta = .00$, $t = 1.02$, $p < 0.05$) showed that SRL strategies both (elaboration and critical thinking) did not

play a mediation role between avoidance goal and differential equation problem-solving.

During the mediation evaluation, it was observed that elaboration had played a significant mediating role ($\beta = .17$, $t = 4.07$, $\text{sig} < .05$) between mastery goal and differential equation problem-solving. The detailed results of mediation effects for this model are provided in Table 7. The avoidance goal orientation results ($\beta = 0.00$, $t = 1.02$, $p < 0.05$) showed that the SRL strategies (elaboration and critical thinking) did not mediate the relationship between avoidance goal and differential equation problem-solving.

Table 7

Structural estimates (hypothesis testing) for the mediation model

| Mediation | B | SE | t value | Findings |
|--|-----|-----|---------|-------------------|
| Mastery goal -> Elaboration -> DE problem-solving | .17 | .04 | 4.07 | Partial mediation |
| Performance goal -> Elaboration -> DE problem- solving | .06 | .02 | 2.66 | Full mediation |
| Avoidance goal -> Elaboration -> DE problem-solving | .00 | .01 | .31 | No mediation |
| Mastery goal -> Critical thinking -> DE problem- solving | .01 | .01 | 1.02 | No mediation |
| Performance goal -> Critical thinking -> DE problem- solving | .02 | .02 | 1.17 | No mediation |
| Mastery goal -> Critical thinking -> DE problem- solving | .00 | .00 | -.24 | No mediation |

DISCUSSIONS

The main aim of this study was twofold. The first aim was to explore the potential role of goal orientations and SRL strategies in mathematics problem-solving, particularly DE problem-solving. The second aim was to study the potential mediating role of SRL strategies.

Direct Effects of Epistemological Math Beliefs, Goal Orientations, and SRL on DE Problem Solving

The analysis confirmed that goal orientation and SRL strategies strongly affect DE problem-solving (Table 6). Among the constructs, mastery goal and elaboration significantly influence the DE problem. Avoidance goal had shown negative contribution while no such significant direct path was observed in the case of a performance goal.

Mastery goal results were aligned with the study of Wolters et al. (1996), who has provided evidence that the accomplishment of mastery goals is positively related to achievement. Additionally, current study results were also well supported by several researchers (Kaplan et al., 2002). It was also observed that avoidance goal ($\beta = -.283$, $t = 9.027$, $\text{sig} < .00$) had relatively larger effect as compared to mastery goal ($\beta = .334$, $t = 5.628$, $\text{sig} < .00$). Avoidance goal results provide a new direction and a good agreement with the literature because the simultaneous presence of multiple goals is associated with more positive outcomes (Elliot & McGregor, 2001). Although empirically, goals are independent, the

presence of a set goal does not imply the absence of others. However, these findings contradicted a few studies, reporting a null relationship between these variables (Kingir et al., 2013).

In the case of a performance goal, no such significant direct path was observed. The previous findings of several researchers are well supported (Coutinho, 2007). Barron and Harackiewicz (2001) suggested that optimal achievement outcomes may occur when students pursue both mastery and performance goals together because when they have the option of pursuing both types of goals, they can better negotiate their achievement experiences by focusing on the achievement goal that is more relevant at a particular time.

Interestingly, in SRL strategies, elaboration have shown direct effects ($\beta = .274$, $t = 4.953$, $p < .00$) on differential equation problem-solving. Whereas no significant direct path was an observer for critical thinking Table 7. These elaboration results are aligned with several other researchers (Pintrich & De Groot, 1990). These researchers strongly recommended that the employment of various learning strategies impart an important predictor of students' academic performance and mathematics problem-solving. Similarly, critical thinking results were consistent with Fadlelmula et al. (2015) study, who claimed that only elaboration was considerably related to mathematics achievement among SRL strategies. Authors have explained that applying an inadequate set of learning strategies might contradict the previously

reported findings. Therefore, in the present study, the non-significance of critical thinking might be appeared because of considering only two strategies (elaboration and critical thinking). Another reason may be the complex relationship between self-regulatory strategies and achievement. It was reported that a few high-achieving students succeed without using SRL strategies. Sometimes learning-related emotions influence SRL, especially critical thinking (Villavicencio, 2011). Usually, positive emotions are positively associated with SRL, whereas negative emotions are negatively correlated with these learning strategies.

Partial Mediation of SRL Between Goal Orientations and Problem Solving. SRL strategies, including elaboration and critical, were expected to mediate the relationship between the goal orientations (mastery, performance, and avoidance goal) and DE problem-solving. SRL strategies were expected, to improve students' beliefs, thereby enhancing students' problem-solving. The analysis confirmed that only elaboration mediated problem-solving mastery and performance goals (Table 7). In addition to the non-mediation role, negative and non-significant results of avoidance goal had also supported the proposed hypothesis (Table 7).

Partial Mediation of Elaboration Between Mastery Goal and Problem Solving. Analysis showed that elaboration mediated the mastery goal of problem-solving (Table

7). However, it was observed that the indirect effect of mastery goal ($\beta = .17$, $t = 4.07$, $\text{sig} < .05$) via elaboration on problem-solving is small, while the direct effects of mastery goal on problem-solving were seen as significant even after including SRL strategies as a mediator ($\beta = .33$, $t = 5.63$, $p < .00$). Therefore, on the one side, the findings supported the often-made assumptions that SRL strategies improve the students' achievements. On the other hand, in contrast to common belief, elaboration (SRL strategies) has only partially mediated math problem-solving. These results also indicate that other factors improve problem-solving resulting from mastery goals besides elaboration. Therefore, it may be concluded that mastery goal probably has similar effects on other factors than elaboration, which cause impairments in students' problem-solving.

Wolters (2004) described that high efficacious mastery goal-oriented students view their course work as fascinating, imperative, and valuable, hence becoming probable involved in diverse metacognitive and cognitive activities to enhance their learning capabilities. These results were also best supported by the study of Fadlilmula et al. (2015). Findings showed that among achievement goals, mastery was significantly interrelated with the use of learning strategies and math achievement (Fadlilmula et al., 2015). In addition, Mohsenpour (2006) reported that achievement goals partially mediate the association between the use of cognitive strategies and achievement. Several other

researchers also reported that only the mastery goal predicts deeper level strategies, such as elaboration (Elliot & McGregor, 2001; Yumusak et al., 2007).

Partial Mediation of Elaboration Between Performance Goal and Problem Solving.

The current study showed that performance goals were also positively linked to elaboration. However, via critical thinking, no significant effects were observed. A possible justification for this mediation role of elaboration might be that the students, who tried to outperform others, used more strategies to achieve better results in DE problem-solving. These findings align with Kadioglu and Kondakci (2014) study, where performance goal was linked to strategy use. The current study's findings can also be attributed to the common evaluation practices in the Pakistan educational context, such as grade-focused evaluation, the dominance of the entrance exam, and secondary school score to calculate final entry test results for admission into ranked universities. Therefore, the contribution of the performance goal in solving the differential equation problems model was believable. However, no direct or indirect effects were observed in a few studies. This contradiction may be explained because the nature of learning skills, characteristics of individuals, and environmental conditions also affect performance goals (Midgley et al., 2001).

Overall, it can be concluded that to ensure optimum achievement and problem-solving, students have to pursue the option

of both mastery and performance goals together. By utilizing both options, they can better negotiate their achievement experience that is more relevant at a particular time.

An explanation for the Avoidance Goal Not Supporting Mediation.

Results of avoidance goal orientation ($\beta = 0.00$, $t = 1.02$, $p < 0.05$) showed that both SRL strategies (elaboration and critical thinking) did not play a mediation role between avoidance goal and DE problem-solving. These results were consistent with Fadlelmula et al. (2015) research findings. He explained that students who avoid looking incompetent could not use more learning strategies and consequently become unsuccessful in mathematics. Kadioglu and Kondakci (2014) also reported that avoidance goal is not a significant predictor of learning strategies. Goal theorists suggest that once learners adopt an avoidance goal, they become defensive and impassive about their learning and tend to withdraw from learning; as a result, self-regulation does not happen (He, 2004).

An explanation for the Critical Thinking Not Performing Mediation Role.

Critical thinking did not mediate the relationship between goal orientations and DE problem-solving (Table 7). These results supported the study of Fadlelmula et al. (2015), where performance goals did not mediate the relationship between self-regulation and math achievement. He suggested that students, who tried to outperform other

students, might not be able to use more strategies. Therefore, these students were unable to achieve math achievement. Several other factors possibly affect the goal orientations in problem-solving can be identified. One possible reason for the lack of mediation of critical thinking on DE problem-solving is the difficulty with critical thinking measurements. Another reason might be the questionnaire, which could not measure the students' adaptation to SRL over time (Jansen et al., 2019).

Several authors pointed out that although critical thinking is also one of the important constructs of self-regulation, it has been proved that goal orientation, particularly mastery goals, employs a positive exertion on critical thinking and facilitates a better understanding of knowledge and skill improvement. However, few research studies have addressed this construct (Phan, 2009). Therefore, research studies on achievement goals and critical thinking persist in their earliest year and are limited to a few research bodies. Besides this, the self-report of critical thinking used in a few studies is not permanently valid and reliable.

Implications of the Study

To summarize, we investigated the potential role of goal orientations and SRL strategies in DE problem-solving. In addition, the mediating role of SRL strategies was also examined. The positive effect of goal orientations on SRL and problem-solving leads to practical implications that these motivational beliefs effectively affect students' problem-solving and performance.

We, therefore, advise mathematics teachers and educators to implement these factors in both college and higher education to support students' engagements in SRL strategies and their achievements.

The results of the performance goal were more positive and significant as compared to previous studies. The current study's findings can be accredited to the appraisal practices in the developing countries' educational contexts (like Pakistan). Grade-focused evaluation, dominance of the entrance exam, and secondary school scores to calculate final results are important for admission to ranked universities. Therefore, the contribution of the performance goal in solving the DE problems model was believable. However, optimum achievement outcomes may occur when students collectively pursue each mastery and performance goal. Because once they have a choice of pursuing both types of goals, they could better negotiate their achievement by focusing on the achievement goal that is more applicable at a selected time.

The partial mediation of goal orientations on DE problem-solving by SRL results in the theoretical implications that the improvements in the problem-solving result from the intervention of beliefs are mostly due to factors other than goal orientations and SRL strategies. For example, we have described the influence of the non-routine nature of the task, context familiarities, and time on a task that may affect the problem-solving. Therefore, it might be useful to review the relation of these factors to explain the students' problem-solving and achievements in mathematics.

CONCLUSION

In this study, the role of goal orientations and SRL have been investigated for problem-solving, particularly related to Des-based problem-solving. Results illustrated that mastery and avoidance goals directly affected the DE problem-solving in goal orientations. While in SRL, elaboration directly influenced the DE problem-solving. However, no such effect was observed for performance goals and critical thinking. Similarly, it was also noted that only elaboration had the mediation role for both mastery and performance goals. In the case of critical thinking, no significant effects were noticed. The study's findings confirmed that motivational beliefs and learning strategies influence problem-solving. Therefore, teachers and educators must design their instructional strategies by incorporating the students' motivational beliefs and learning strategies for the effective learning of the DE course.

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SUPPLEMENTARY DATA

Table S1

Adopted Scoring rubric for non-routine words problem based on Analytic Scoring Scale (Charles et al., 1987)

| Stages for differential equation problem-solving | Score for understanding | Characteristics | Description |
|--|-------------------------|------------------------------------|---|
| Understanding | 0 | Compete for misunderstanding | Lack of comprehension problem Not able to identify important given data |
| | 1 | Partial understanding | Some parts of the problem misinterpreted Partially understand data, partially understand goals and hidden data |
| | 2 | Complete understanding | Ability to take information and translate it into the mathematical model, fully retrieve given and hidden data, formulate proper equation |
| Planning a solution | 0 | No attempt/ inappropriate plan | Wrong Integration procedure, not able to put constant of integration, |
| | 1 | Partially correct plan | Correct interpretation up to a certain point, but the strategy remains major flawed |
| | 2 | The plan led to a correct solution | Successful findings |
| Getting answers | 0 | No answer | Cannot execute integration steps |
| | 1 | Copying error, computer error | Mathematical/computational error |
| | 2 | Correct answer, correct label | No error in answer |

Table S2

Cronbach's alpha values for the research instruments

| Instrument | Scale | Number of items | Cronbach's alpha value | Reported Cronbach's alpha value | Reference |
|--|-------------------|---|------------------------|---------------------------------|-----------------------|
| Differential equation task | DE task | 5 (Each task requires 6 steps for its solution) | 0.66 | | |
| Achievement goal orientations | Mastery goal | 6 | 0.83 | 0.86 | Midgley et al. (1996) |
| | Performance goal | 6 | 0.76 | 0.86 | |
| | Avoidance goal | 6 | 0.76 | 0.75 | |
| Self-regulated learning strategy (SRL) | Critical thinking | 5 | 0.90 | 0.75 | Pintrich (1991) |
| | Elaboration | 6 | 0.89 | 0.80 | |

Table S3

Inter-item correlation matrix

| Constructs | 1 | 2 | 3 | 4 | 5 | 6 |
|-----------------------|-------|-------|-------|-------|-------|-------|
| Mastery (1) | 1 | .67** | .02 | .28** | .75** | .62* |
| Performance (2) | .67** | 1 | .07 | .35** | .62** | .50** |
| Avoidance (3) | .02 | .07 | 1 | .05 | .04 | .25** |
| Critical thinking (4) | .28** | .35** | .05 | 1 | .38** | .27** |
| Elaboration (5) | .75** | .62** | .04 | .38** | 1 | .60** |
| DE problems (6) | .62** | .50** | .25** | .27** | .60** | 1 |

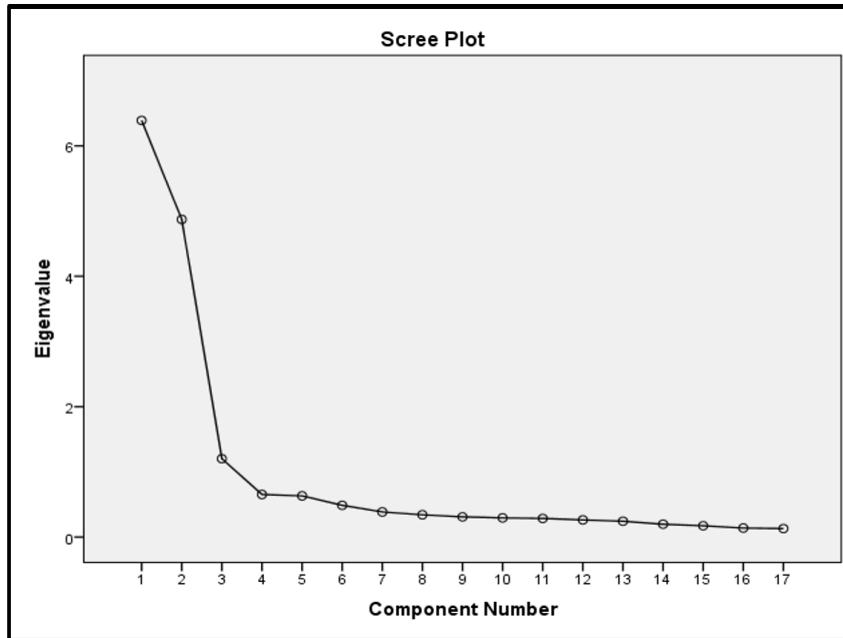


Figure S1. Scree plot of goal orientations

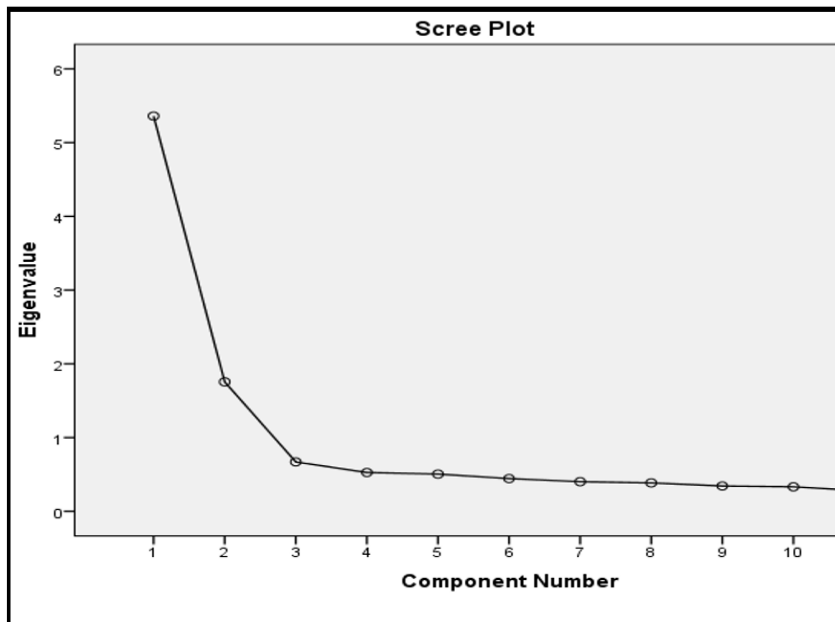


Figure S2. Scree plot of self-regulated learning strategies

Household Debt and Economic Growth: The Role of Institutional Quality

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ABSTRACT

Household debt has a detrimental effect on economic growth. Thus, this study examines the connection between household debt and growth in institutional quality. The impact of the relationship on economic growth is assessed using a bias-corrected least square dummy variable of 43 nations. We discovered that institutional quality enhances the role of household debt in sustaining economic growth. Household debt is significantly detrimental to growth when institutional quality is low. Its harmful effect can be lessened with medium institutional quality. Interestingly, higher household debt is beneficial in sustaining growth if accompanied by better institutional quality. Household debt and institutions reinforce each other towards sustaining economic stability for countries with higher institutional quality. The findings are expected to assist central banks and other government authorities in formulating the relevant institutional settings for ensuring economic sustainability, such as prudent debt management and macro-prudential policy. Future studies may consider empirical analysis on a distinct split sample of advanced and emerging economies and employ different estimator methods.

Keywords: Bias-corrected LSDV, economic growth, household debt, institutional quality

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INTRODUCTION

Household debt is the wheel of consumption. It gears economic growth through collective demand. However, it can also hinder economic growth. Economic

experts' research on household debt is steadily gaining attention, suggesting the tremendous increase in household debt accumulation. It may be detrimental to long-term growth (Cecchetti et al., 2011; Daud et al., 2021; Horioka & Niimi, 2020; Kim et al., 2014). Household debt is necessary to compensate for a household's income shortfall in financing everyday consumption expenditures (such as personal care, food, vehicles, and properties). An increase in consumption may stimulate economic growth with strong financial support from banking institutions, particularly for household borrowing. However, rising demands and anticipated future asset margins encourage financial institutions to provide subprime mortgages to customers with slacker lending rules (Justiniano et al., 2016; Mian et al., 2017). As a result, financial development was the primary driver of increasing household debt (Samad et al., 2020), usually resulting in financial crises (Aliber & Kindleberger, 2017).

Household debt continues to rise following the global financial crisis in 2008. According to the IMF (2017), the median debt ratio in developing countries has increased from 15% of GDP in 2008 to 21% in 2016. The rising ratio in advanced countries is comparable to the median debt ratio, which has increased from 52% of GDP in 2008 to 63% in 2016. Increasing household debt in developing countries is worrying since economic shocks may directly increase the burden on people paying the debt. This paper highlights the concern of the continuous upsurge in household debt.

The expansion of the economic growth framework, inclusive of institutional quality as a descriptive variable, is critical to empirically examining the effect of household debt on economic development. Many banking crises are due to weak political and economic institutions that cause macro-economic turmoil (Demirguc-Kunt & Detragiache, 1998). The immediate consequence of poor institutional quality is the reduced welfare of a country (Huang & Wei, 2006). Conversely, high institutional quality provides secure environments and policies that lead to economic development (Kim & Loayza, 2017). It emphasises the critical function of institutional quality on economic development. The overlooked adverse effect of household debt on growth directly points to the credibility of institutional quality, a factor still lacking in empirical research.

Accordingly, this study examines the impact of household debt on economic growth while considering the role of institutional quality. This factor is essentially effective in reducing the problems associated with household debt (IMF, 2012). This study further assesses the interaction between household debt and institutional quality. Lombardi et al. (2017) found that the level of the legal protection of creditors acts as an indicator of institutional quality, causing lower levels of the economy to correspond to higher levels of household indebtedness. Their findings suggest that households only borrow when they have strong faith and confidence in institutions. In addition, households are optimistic about future income when they feel secure in the country's

stability. However, institutional quality has a limited function as a conditional variable in the household debt-growth nexus. Thus, this study focuses on the relationship between household debt and growth while including the role of institutional quality.

This study contributes to the literature in three ways. First, although previous research has addressed the impact of household debt on growth, for instance, Alter et al. (2018), Cecchetti et al. (2011), and Lombardi et al. (2017), this study includes the importance of institutional quality, which is currently under-researched. The research focuses on institutional quality using the ICRG database in response to the study by Khan et al. (2019). They established the critical significance of institutional quality in the evolution of credit growth and financial development. Second, the current study is the first to investigate the long-run macroeconomic effects of debt on growth using a panel dataset that enables the categorisation of institutional quality as an interaction term, which is a different approach from previous research (Demetriades & Law, 2006; Gazdar & Cherif, 2015; Law et al., 2018; Law & Habibullah, 2009). Third, this research uses a bias-corrected least square dummy variable (LSDVC) suitable for the cross-country dataset of 43 countries, according to Bruno (2005a, 2005b). Due to a lack of research on the panel countries, this study contributes to the current body of knowledge.

This article investigates the impact of institutional quality on the connection between household debt and economic growth using a bias-corrected LSDV

estimator built for a dynamic panel with cross-sections covering 43 countries from 1984 to 2018. Empirical evidence demonstrates that improved institutional quality increases production growth. Additionally, the adverse impact of household debt on growth deteriorates when institutional quality declines. Interestingly, at a medium level of institutional quality, the impact of increased household debt on growth is both positive and strong. The rest of this article is organised as follows: the debt-growth nexus research, the techniques, and measures used to define the data variables, the major findings, and the conclusion.

LITERATURE REVIEW

A famous theory that highlights the importance of institutional quality can be traced back to the study of Levine (1998), who emphasised the significance of the legal environment for economic advancement and its impact on economic growth. Numerous studies have shown a connection between economic development and institutional quality. Among the scholars, North (1990) highlighted the influence of institutional changes on economic performance. Several measures represent these institutional changes, i.e., property rights, degree of the legal protection of creditors, the amount of accessible information, duration of the resolution, revenue tax rate, lending dependency, government stability, economic freedom, political freedom, bureaucracy quality, corruption, and democratic accountability. Other notable studies, such

as those by Acemoglu et al. (2001) and Hall and Jones (1999), suggested that robust private property rights are linked with greater per capita income growth. “Pro-institution” researchers also claimed that proximate factors (such as physical and human capital) are functions of institutional quality (Acemoglu et al., 2014). Khan (1995) confirmed that institutional factors are tempting to complement the neoclassical growth model. Jappelli et al. (2013) asserted that the negative feature of institutional frameworks, such as weak execution of indentures and the issue of asymmetrical information, curb financial crises and cause higher credit defaults. As a result, it can be argued that institutional quality significantly impacts economic development.

The role of institutions in influencing the financial system and economic growth has also received significant attention throughout the literature. Research has shown a significant positive connection between institutional quality and the rise of financial development. Law and Habibullah (2009) extended the Solow growth model by estimating the factor with the Ordinary Least Square (OLS) and cointegration test. They found that a well-developed institutional quality and financial market leads to an improved GDP per capita in East Asian economies. Similarly, Demetriades and Law (2006) examined a larger dataset of 72 countries from 1978 to 2000 using the mean group (MG) and pooled mean group (PMG) methods. They concluded that countries with an advanced financial system anchored in a sound institutional framework significantly impact economic

performance. Law et al. (2018) established the non-linearity of financial development on growth in a panel of 87 countries using the GMM estimator. They demonstrated the significance of institutions in mitigating the financial curse phenomenon. Khan et al. (2019) inspected the effect of institutional quality (IQ) on economic development using the International Country Risk Guide (ICRG) database (i.e., government stability, democratic accountability, bureaucratic quality, corruption, and law & order). It was discovered that institutional quality has a significant impact on the establishment and expansion of credit in 15 developing and growth-leading countries.

Researchers further employed different datasets to measure institutional quality. For instance, Dobbie and Song (2015) found that bankruptcy protection leads to higher income, lower mortality, and fewer foreclosures. In addition, the research indicates that institutional quality enhances the impact of certain other variables in the growth model, such as financial development and credit expansion. Bahadir and Valev (2020) applied the ICRG data to examine institution quality and found that the impact is greater in nations with inferior institution quality. There is also a higher proportion of consumer credit in the total household credit.

The aspect behind the importance of institutional quality, whereby household debt encourages economic growth, is justifiable. In previous works, however, household debt was shown to have a negative effect. The consequence of income shocks may place the individual

in default and lead to repayment issues. In addition, low institutional quality (such as government instability, high corruption, or lax regulations) may not be able to cope with financial market instability. It will consequently negatively affect household debt which will influence growth. However, the effect of household debt can be buffered by setting strict regulations in nations with high institutional quality. When institutions and policies are successful, the effect of increasing the debt-to-GDP ratio on household growth seems to be generally positive. However, when institutions and policies are ineffective, it tends to be negative regardless of household debt levels (IMF, 2017). Thus, this study aims to assess institutional quality on the relationship between household debt and growth.

There are many debates on the impact of institutional quality, especially on economic growth. Unfortunately, empirical data remains lacking on how institutional quality affects the relationship between household debt and growth. This study confirms that possible gaps are present.

DATA AND METHODOLOGY

Data

The panel dataset utilised in this research has two primary scopes: a cross-sectional dimension covering 43 nations¹ and a time

¹ The household debt data is unavailable for all countries, and the Bank for International Settlements (BIS) has the finest database. Since comparable data at the international level are available for only a few countries, obtaining more comprehensive data on the household debt to GDP ratio is thus a worthy cause. Hence, the BIS database, which offers a standard calculation of household debt, is preferable.

series dimension from 1984 to 2018. All variables were averaged across a non-overlapping five-year period to represent the long-term connection between growth and debt fluctuations. Data availability on household debt is a major challenge for some countries, which justifies the study sample. Consistent with Cecchetti et al. (2011) and Lombardi et al. (2017), we used household debt to GDP as the measure for household debt. As for economic growth, we utilised real GDP per capita growth, defined as the increase in gross domestic product per capita at consistent prices, obtained from the World Bank Database. Gross capital creation is a proxy for economic growth-related investments. Data on this component was obtained from the World Bank database. Numerous research (Cecchetti et al., 2011; Gómez-Puig & Sosvilla-Rivero, 2017) have utilised population growth as a substitute for labour input. The data for this factor was mostly obtained from the World Bank database. According to Gómez-Puig and Sosvilla-Rivero (2017), the research used life expectancy at birth as a proxy for human capital, as previously utilised by Sachs and Warner (1997). Data was also obtained from the World Bank database. The total imports and exports quantified openness to trade as a proportion of GDP. The World Bank's database was used to compile the data. Consumer price indexes were also applied to determine the rate of inflation.

METHOD

This research applied the following dynamic panel regression model, with the inclusion

of household debt and institutional quality, based on the literature (Barro & Sala-i-Martin, 1997):

$$y_{it} = a_i + \gamma y_{i,t-1} + \beta_1 HD_{it} + \beta_2 INS_{it} + \sum_{j=1} \beta_j X_{it} + \delta_i + \varepsilon_{it} \quad (1)$$

Where y is the real GDP per capita growth, y_{t-1} is a one-lag HD_{it} ged measure of real GDP per capita growth, HD_{it} is household debt, INS_{it} is a proxy for institutional quality, X_{it} signifies other controlled variables for a particular nation i at a given period and δ_i is the country-specific impact. In accordance with Cecchetti et al. (2011), we included a one-lagged risk measure γ into the model to incorporate the economy's conditional convergence to its steady state. The household debt-to-GDP ratio β_1 is included in accordance with Cecchetti et al.'s (2011) debt-growth model for panel countries, which consists of household debt with anticipated negative indications. The relationship between institutional quality and growth is given by β_2 , which is the magnitude for INS . The institutional quality shown in the literature has a positive influence on growth. Consequently, β_2 is expected to be positive. $\beta_j, j= 1...,9$ are the constraints to be assessed, while X_{it} is the collection of independent variables that act as explanatory regressors: capital, population growth, human capital, trade openness, inflation, and financial crises. The error term is denoted by ε_{it} and the country-specific effect is represented by i .

Equation (1) represents the independent effects of household debt

and institutional quality on economic growth. As previously mentioned, the debt-growth nexus dominance is highly dependent on institutional quality. The link between household debt and growth may be institutionally constrained. To determine whether institutional quality balances household debt or acts as a modifying factor in the debt-growth nexus, we expanded Equation (1) by including their interactions as a new variable:

$$y_{it} = a_i + \gamma y_{i,t-1} + \beta_1 HD_{it} + \beta_2 INS_{it} + \beta_3 (HD_{it} \times INS_{it}) + \sum_{j=1} \beta_j X_{it} + \varepsilon_{it} \quad (2)$$

The literature often uses interactive terminology to describe the contingency impact of the relationship between variables of interest. However, according to Brambor et al. (2006), the interpretation of coefficients for β_1 and β_3 of Equation (2) in the model of interaction terms may be misleading. For example, coefficient β_1 effectively summarises the effect of household debt only when institutional quality is zero. Likewise, β_3 efficiently captures the effect of institutional quality on growth only when household debt is non-existent. Thus, the results do not directly interpret the direct signs of β_1 and β_3 and their significance level on the correlation between household debt, the interaction terms, and economic growth. Brambor et al. (2006) reasoned that the marginal impact of institutional quality in sustaining household debt on economic growth might be computed as follows:

$$\frac{\partial y_{it}}{\partial HD} = \beta_1 HD_{it} + \beta_3 HD \times INS_{it} \quad (3)$$

β_3 is predicted to be positive from Equation (3). As a reference point or baseline, the effect of household debt on economic growth can be considered as β_1 , which is predicted to be negative. With a negative β_1 , a positive β_3 indicates the ability of high institutional quality to mitigate the detrimental impact of household debt on a nation's development. In this scenario, institutional changes may be essential to preserve economic stability. We included capital, population growth, human capital, trade openness, inflation, and banking crises as controllable variables in the baseline specifications of Equations (1) and (2). According to Keynes (1936), greater savings promote economic development through increased investments. Domestic savings are used to fund collective investments from external sources in labour-enhancing technological innovations to determine the growth rate equilibrium of per capita output (Solow, 1956; Swan, 1956). Thus, investment is a significant factor in economic growth, as measured by gross capital creation in this research. As a proxy for a country's size, population increase is also a critical control variable (Checherita & Rother, 2012; Woo & Kumar, 2015). According to the Malthusian hypothesis of population, rising population pressure on food supply can erode well-being, resulting in unhappiness. In addition, a growing population will lead to scarcity of land and reduced quality of life (Dao, 2012). Thus, population increase harms economic growth (Checherita & Rother, 2012; Woo & Kumar, 2015).

Conversely, labour input or human capital is regarded as a critical indicator of productivity since it reflects on creative activities which generate more ideas that tend to catch the attention of investors (Grossman & Helpman, 1993). Furthermore, trade liberalisation affects economic development. According to Seghezza and Baldwin (2008), openness to trade increases labour productivity through knowledge transmission. Inflation is also argued to be a critical macroeconomic gauge of economic growth. Increasing inflation burdens businesses, requiring them to reallocate extra resources to fund rising prices (Gokal & Hanif, 2004). As a result, firms and families with conservative investing strategies often perform poorly. According to Barro (2013), the rise in average inflation is caused by a decline in the annual growth rate of real GDP per capita. As a result, inflation is included in the growth equation. Cecchetti et al. (2011) further expanded the neoclassical growth model by emphasising the critical function of government, businesses, and household debt on economic development. As previously mentioned, household debt has received increasing attention following the 2008 financial crisis. Thus, the crisis is included in the model (assuming a zero value over the next five years) and assessed using systemic banking crises. Laeven and Valencia (2013) noted that should a financial crisis occur in one, two, or more of the following five years, there would be no banking crisis, and the values of 1/5, 2/5, and others will remain unchanged.

The vast literature proposed several methods to estimate the panel dataset. However, a suitable estimator depends on the features of the dataset itself (i.e., N cross-sections and small or large T series). This study assesses 43 countries using an unbalanced series dataset deemed fit by the bias-corrected Least Square Dummy Variable (LSDVC) estimator, a technique well-suited for small samples with a limited cross-section group. Numerous benefits exist in adopting the LSDVC approach. One advantage is that possible biases in the estimator (due to endogeneity associated with reverse causality and omitted variable bias) are minimised by adding lag-dependent variables into Equations 3 to 5 for evaluation. According to Bruno (2005a, 2005b) and Bun and Kiviet (2001), LSDVC is appropriate for small N and imbalanced datasets, particularly macro-panel datasets. Anderson and Hsiao (1982) presented two instrumental variables (IV) methods, while Arellano and Bond (1991) provided estimate measures based on the generalised method of moments (GMM) for a first-difference model. It was more effective than Blundell and Bond (1998). However, when dealing with dynamic panel data, first-differenced IV or GMM estimators may exhibit significant small-sample bias due to using inferior instruments. Nevertheless, GMM and IV estimators possess favourable characteristics when N is large. They only become biased when the panel consists of more cross-sectional units. Accordingly, this

study employed a bias-corrected LSDV² for analysing the panel dataset of 43 countries.

FINDINGS AND DISCUSSION

Descriptive Statistics

Institutional quality is a significant variable in this study. Institutional quality is assessed using five indicators, which efficiently interpret the quality of institutional factors that may strengthen economic growth and raise household debt. Bureaucracy quality, corruption, government stability, law and order, and democratic accountability are the relevant indicators. These indices have been used in the literature to measure institutional quality and were proven to affect economic growth (Khan et al., 2019; Law et al., 2018). According to previous research, institutional quality has a positive impact on growth. The indices were obtained from the International Country Risk Guide (ICRG) database. Table 1 presents the nations examined and the average values of the four key variables in their original forms: institutional quality, real GDP per capita growth rate, GDP per capita income, and household debt. The average values cover each country and are arranged

² Some studies employed the bias-corrected LSDV since it reduces bias from small samples and outperforms other dynamic panel analyses such as the Generalized Method of Moment (GMM) (Perić, 2019). In a recent study, Dahir et al. (2019) analysed capital and funding liquidity in bank lending by employing LSDVC on 57 banks in BRICS countries. In another study, Ibrahim et al. (2019) applied the bias-corrected LSDV to a sample of 37 banks in Malaysia to examine competition and bank stability. Chaudron (2018) also utilised the LSDVC for analysing the interest rate and profitability of 41 Dutch banks.

Table 1
List of countries and average values of selected variables

| Countries | Low institutional quality (INS < 25.141) | | | | Countries | High institutional quality (INS > 25.141) | | | |
|--------------|--|-----------|-----------|-----------|-------------|---|----------|-----------|-----------|
| | INS | GDPPCG | GDPPC | HD | | INS | GDPPCG | GDPPC | HD |
| Colombia | 18.181 | 1.892 | 6082.881 | 17.733 | Spain | 25.229 | 1.728 | 26022.37 | 49.045 |
| Russia | 18.444 | 2.716 | 9191.47 | 8.444 | Israel | 25.355 | 1.805 | 28400.77 | 37.972 |
| China | 18.721 | 8.39 | 5292.301 | 31.983 | Singapore | 25.712 | 3.549 | 39883.08 | 42.612 |
| Brazil | 18.996 | 1.09 | 10119.25 | 19.006 | France | 26.532 | 1.29 | 36119.06 | 39.563 |
| Indonesia | 19.124 | 3.895 | 3122.108 | 13.225 | Japan | 27.013 | 1.711 | 40206.75 | 61.985 |
| South Africa | 19.167 | 0.913 | 7370.313 | 38.34 | Ireland | 27.468 | 3.89 | 54753.68 | 76.652 |
| Saudi Arabia | 19.31 | 0.381 | 19491.24 | 10.362 | Belgium | 27.654 | 1.548 | 37713.62 | 42.913 |
| Thailand | 19.383 | 3.652 | 4359.436 | 50.073 | Germany | 27.86 | 1.491 | 39728.64 | 60.19 |
| Mexico | 19.758 | 1.161 | 9136.289 | 11.99 | Austria | 27.93 | 1.422 | 44857.45 | 48.696 |
| Argentina | 20.236 | 1.583 | 8911.368 | 4.973 | UK | 28.402 | 1.745 | 33792.2 | 67.392 |
| Turkey | 20.285 | 3.08 | 9424.727 | 7.262 | US | 28.722 | 1.657 | 42206.15 | 71.472 |
| Malaysia | 21.055 | 3.313 | 9899.452 | 61.812 | New Zealand | 28.753 | 1.425 | 31556.36 | 71.06 |
| Hong Kong | 22.112 | 2.776 | 27927.92 | 55.34 | Australia | 28.836 | 1.699 | 43249.92 | 76.168 |
| Korea | 22.118 | 5.116 | 14901.19 | 56.62 | Netherlands | 29.169 | 1.646 | 46708.51 | 92.473 |
| India | 22.9 | 5.665 | 1523.092 | 10.002 | Denmark | 29.215 | 1.327 | 55726.81 | 102.597 |
| Italy | 23.062 | 1.06 | 32813.77 | 27.063 | Switzerland | 29.302 | 1.039 | 71572.5 | 112.968 |
| Greece | 23.445 | 0.715 | 23640.36 | 34.427 | Canada | 29.35 | 1.467 | 39862.59 | 67.025 |
| Czech Rep. | 23.777 | 2.656 | 18295.07 | 20.632 | Norway | 29.382 | 1.758 | 75148.03 | 68.528 |
| Poland | 23.985 | 4.215 | 11277.03 | 21.976 | Sweden | 29.535 | 1.671 | 44060.83 | 60.752 |
| Chile | 24.189 | 2.675 | 12665.09 | 33.08 | Luxembourg | 29.921 | 1.285 | 104000 | 54.938 |
| Hungary | 24.5 | 2.291 | 12021.14 | 18.105 | Finland | 30.402 | 1.836 | 38298.71 | 44.55 |
| Portugal | 24.999 | 1.856 | 19017.65 | 49.557 | | | | | |
| Averages | 21.261227 | 2.7768636 | 12567.416 | 27.363864 | Averages | 28.17819 | 1.761381 | 46374.668 | 64.264333 |

Note: GDPPC: Gross domestic product per capita; GDPPCG: growth of GDP per capita; HD: household debt; INS: institutional quality

from lowest to highest. The countries were categorised as low institutional quality if the values of their institutional quality were below the overall average, which is 25.141. The countries were categorised as high institutional quality if their values were higher than the average. The data indicate that household debt and GDP per capita significantly vary between countries with the poor institutional quality and those with high institutional quality. On average, nations with good institutional quality have a higher level. Advanced countries tend to achieve greater institutional quality and larger household debt accumulation. Most countries have encountered household debt of more than 40% of GDP, except Israel

and France. Household debt was found to be much lower in low institutional quality countries; however, some countries have a very high household debt of more than 40%, such as Thailand, Malaysia, Hong Kong, Korea, and Portugal. Therefore, we may discover lower household debt in nations with poor institutional quality and lower GDP per capita income than in other countries.

For both sets, we calculated the pairwise correlations with p-values between the investigated variables, as summarised in Table 2. The table's top diagonal presents the paired correlations for nations with high institutional quality, while the lower diagonal shows the pairwise correlations

Table 2
Correlations of main variables

| Variables | GDPPCG | GCF | POPG | HC | TO | INF | HD | INS |
|-----------|--------|--------|--------|--------|--------|--------|-------|-------|
| GDPPCG | 1 | 0.382 | 0.079 | -0.398 | 0.157 | 0.208 | -0.4 | 0.044 |
| | | 0 | 0.313 | 0 | 0.048 | 0.007 | 0 | 0.6 |
| GCF | 0.581 | 1 | 0.176 | -0.256 | 0.01 | 0.325 | -0.23 | -0.01 |
| | 0.000 | | 0.026 | 0.001 | 0.902 | 0 | 0.004 | 0.923 |
| POPG | 0.029 | 0.073 | 1 | 0.081 | 0.418 | 0.071 | -0.02 | -0.2 |
| | 0.751 | 0.419 | | 0.304 | 0 | 0.365 | 0.83 | 0.019 |
| HC | -0.283 | -0.071 | -0.375 | 1 | 0.29 | -0.628 | 0.588 | -0.37 |
| | 0.001 | 0.432 | 0.000 | | 0 | 0 | 0 | 0 |
| TO | 0.018 | 0.045 | -0.137 | 0.397 | 1 | -0.233 | 0.02 | -0.1 |
| | 0.84 | 0.618 | 0.129 | 0.000 | | 0.003 | 0.803 | 0.223 |
| INF | 0.037 | -0.142 | 0.124 | -0.169 | -0.164 | 1 | -0.51 | 0.157 |
| | 0.681 | 0.114 | 0.165 | 0.058 | 0.068 | | 0 | 0.062 |
| HD | -0.093 | 0.067 | -0.257 | 0.533 | 0.471 | -0.239 | 1 | 0.105 |
| | 0.299 | 0.459 | 0.003 | 0.000 | 0.000 | 0.007 | | 0.212 |
| INS | 0.05 | 0.033 | -0.458 | 0.305 | 0.156 | -0.118 | 0.177 | 1 |
| | 0.59 | 0.721 | 0.000 | 0.001 | 0.092 | 0.207 | 0.054 | |

Notes: Lower diagonal: $INS < 25.14$; upper diagonal: $INS > 25.14$. The numbers in parentheses are p-values. GDPPCG: Gross Domestic Product per capita growth; GCF: gross capital formation; POPG: population growth; HC: human capital; TO: trade openness; INF: inflation; HD: household debt; and INS: institutional quality

for countries with poor institutional quality. First, connections between household debt and economic growth are less negligible than in nations with strong institutional quality. Consistent with theoretical assumptions, the correlation between household debt and economic growth is negative and significant in high institutional quality countries. Second, the correlation between institutional quality and growth is more robust in low institutional quality countries; however, the p-values of both groups are statistically insignificant. While institutional quality is not significant in either set, a substantial negative relationship between institutional quality and household debt should be anticipated in countries with high institutional quality. As a result, the significance of institutional quality in explaining the connection between household debt and growth may seem complex. Is institutional

quality a determinant factor in mitigating the negative impact of household debt on economic growth?

Figures 1 and 2 display the connection between household debt, institutional quality, and economic growth. The fitted line between household debt and economic growth indicates a decreasing trend, consistent with previous research. However, as shown by the fitted line in Figure 2, some uncertainties exist regarding the connection between institutional quality and development. To ensure that our analysis is significant, we continued with a formal analysis followed by further investigations. The generalised method-of-moments was applied to eliminate outliers (GMM), and the regression analysis was conducted on the calculated model using the entire sample dataset.

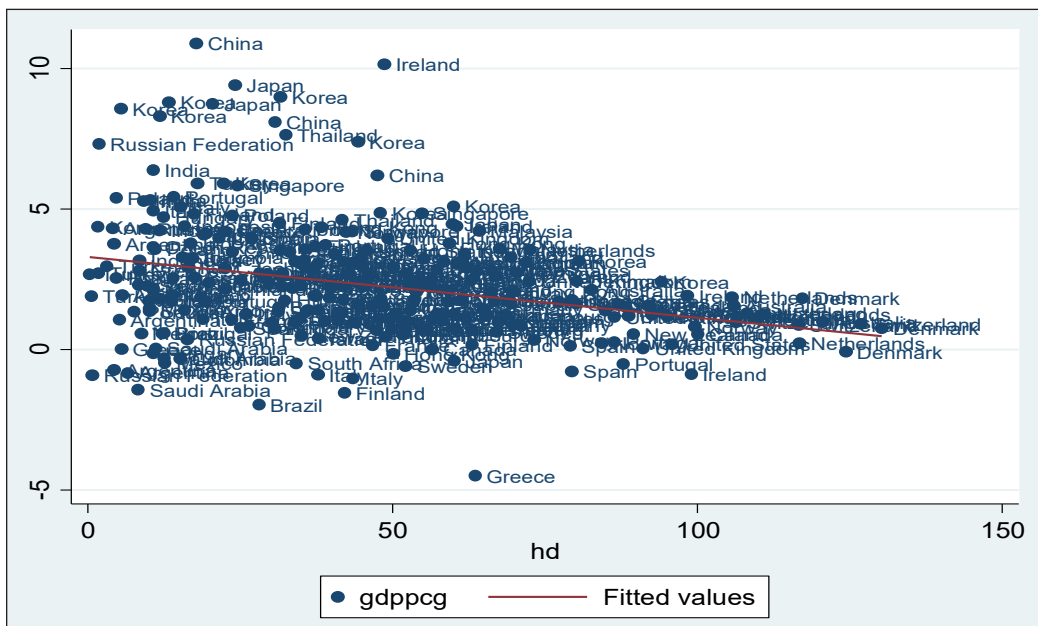


Figure 1. Household debt and real GDP per capita growth

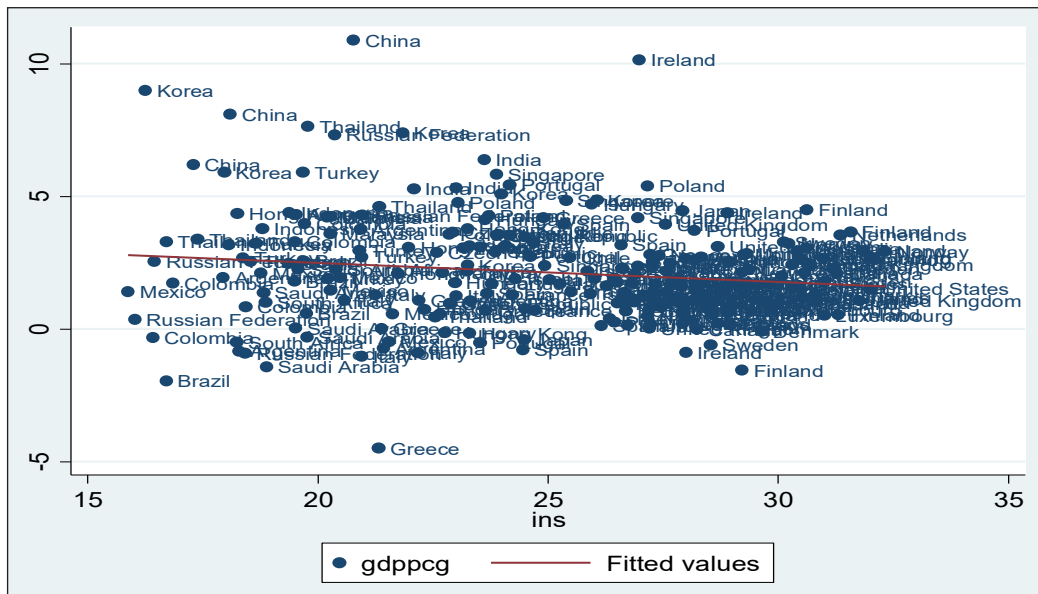


Figure 2. Institutional quality and real GDP per capita growth

Findings

As in Equation (1), we began by examining the independent variables of household debt and institutional quality.³ Table 3 presents the outcomes with and without the dummy crises (respective to columns 1a to 1f) and the regression analysis using a bias-corrected LSDV in accordance with Anderson and Hsiao (1982), Arellano and Bond (1991), and Blundell and Bond (1998). As shown, the calculated coefficients of lag real GDP per capita growth are negative and statistically significant at a level of 1%, indicating that real GDP per capita

growth is suitable and that dynamic panel bias-corrected LSDV is appropriate for this panel data.

Across all regressions, the baseline parameters include a negative and statistically significant coefficient of household debt (1a to 1c). After adjusting the crisis dummy factors, the evidence of the detrimental impact of household debt on economic growth is confirmed (refer to columns 1d to 1f). While the predicted coefficients are small, they remain significant and negative. The present findings confirm those of Cecchetti et al. (2011) and Gómez-Puig and Sosvilla Rivero (2017). It has been predicted that household debt will have a short-run elasticity of -0.042 and a long-run elasticity of -0.034⁴ in regression 1a. Thus,

³ We attempt to show the significant difference in findings without the institutional quality presented in Appendix A. The result shows that the coefficients of the household debt to GDP variable negatively affect the growth but are slightly lower compared to the model with institutional quality. However, our concern aims to explore the effect of institutional quality can be moderating effect on the household debt-growth nexus.

⁴ The calculation of long-run elasticity is measured according to Ibrahim and Law (2016) ($\beta_{-1}/1 - \gamma$), where γ is the coefficient of lagged dependent variables.

a 10% rise in household debt results in a 0.4% decrease in economic growth in the short run and 0.34% in the long run, with everything else equal.

We further saw that institutional quality positively contributes to economic growth, as shown by the substantial positive coefficients in all regression analyses, excluding regression 1a (see Table 3). For example, according to regression 1b, a 1-point improvement in the institutional

quality score is associated with a 0.028% increase in economic growth. Consequently, the current research adds to the previous literature on the role of institutions in promoting economic stability⁵ by including the effect of existing household debt.

⁵ Previous studies have examined the role of institutional quality on the relationship between financial development and growth using the ICRG database, e.g., Demetriades and Law (2006), Gazdar and Cherif (2015), Law and Habibullah (2009), and Law et al. (2018).

Table 3
LSDVC Analysis: Institutional quality and economic growth

| | AH (1a) | AB (1b) | BB (1c) | AH (1d) | AB (1e) | BB (1f) |
|-------------------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|
| Independent variable = GDPPCG | | | | | | |
| L.GDPPCG | -0.231*** -0.067 | -0.239*** -0.065 | -0.203*** -0.069 | -0.205*** (0.065) | -0.215*** (0.063) | -0.174** (0.068) |
| GCF | 0.217*** -0.045 | 0.219*** -0.043 | 0.219*** -0.046 | 0.227*** (0.044) | 0.229*** (0.042) | 0.227*** (0.046) |
| POPG | -1.068*** -0.326 | -1.056*** -0.307 | -1.051*** -0.326 | -0.992*** (0.309) | -0.981*** (0.291) | -0.973*** (0.317) |
| HC | -0.074 -0.091 | -0.066 -0.085 | -0.054 -0.093 | -0.224** (0.098) | -0.215** (0.092) | -0.211** (0.104) |
| TO | 0.026*** -0.008 | 0.025*** -0.007 | 0.026*** -0.008 | 0.029*** (0.008) | 0.029*** (0.007) | 0.030*** (0.008) |
| INF | -0.022 -0.019 | -0.021 -0.018 | -0.021 -0.02 | -0.028 (0.018) | -0.027 (0.017) | -0.028 (0.019) |
| HD | -0.042*** -0.011 | -0.043*** -0.01 | -0.046*** -0.011 | -0.033*** (0.010) | -0.035*** (0.010) | -0.036*** (0.011) |
| INS | 0.027 -0.017 | 0.028* -0.016 | 0.029* -0.016 | 0.074*** (0.021) | 0.074*** (0.020) | 0.077*** (0.022) |
| CRISIS | | | | -3.922*** (1.482) | -3.810*** (1.408) | -4.035*** (1.542) |
| Observations | 228 | 228 | 228 | 228 | 228 | 228 |
| N | 43 | 43 | 43 | 43 | 43 | 43 |

Notes: A bias-corrected Least Square Dummy Variables (LSDVC) estimator proposed by Bruno (2005b) based on modifications by Anderson and Hsiao (AH, 1982), Arellano and Bond (AB, 1991), Blundell and Bond (BB, 1998). GDPPCG = Gross Domestic Product per capita growth, GCF = gross capital formation, POPG = population growth, HC = human capital index, TO = trade openness, INF = inflation, HD = household debt, INS = institutional quality and CRISIS = Systemic Banking Crises

Significance level: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

These findings are consistent with the study on the panel data by Acemoglu et al. (2001) and Hall and Jones (1999). Klapper and Love (2004) and Law et al. (2018) concluded that institutional quality leads to better operating performance and sustained long-term growth. The explanation linking institutional quality with the debt-growth model can be accentuated since high institutional quality provides secure environments and better policy formulations that lead to economic development (Kim & Loayza, 2017). Better institutional quality, such as good governance and regulations, will strengthen the role of financial institutions and help them withstand the risks inherent in contractionary monetary policies (such as financial liberalisation, deregulation, and innovation). Simultaneously, households' optimism regarding additional loans for future income demands will increase since they will feel secure in the country's stability. Accordingly, improved institutional quality is critical for boosting economic success.

Apart from these results, the influence of the control variables on the growth model has been noted. As shown by the positive and significant coefficients of gross capital creation in all regression models, increasing capital input does lead to increased economic growth. On the other hand, the coefficients of population growth are statistically negative. According to Table 3, the trade openness coefficient is positive and statistically significant. The human capital coefficient is negative and significant in the regression models with crisis dummies, ranging from 1d to

1f. These results contradict Radelet et al. (2001), who found a positive effect between human capital and growth. However, the results are consistent with empirical evidence documented by Barro (2003) and Cervellati and Sunde (2011), who proved that human capital (with life expectancy as a proxy) decreases growth. They explained that improved life expectancy among the ageing population with high health problems consequently leads to low productivity and a reduction in the growth of a country (Cervellati & Sunde, 2011).

INTERACTION EFFECTS OF HOUSEHOLD DEBT AND INSTITUTIONAL QUALITY

The research expands the model by factoring in the role of institutional quality as an interaction term. This subsection applies Equation (2) to determine the effect of household debt and institutional quality on economic growth. While Table 4 presents the empirical model without a crisis dummy (columns 2a to 2c) and with a crisis dummy (columns 2d to 2f). As indicated, the calculated coefficients of lag real GDP per capita growth are negative and statistically significant at 1%. It indicates that real GDP per capita growth is suitable and that LSDVC is appropriate for this dynamic panel data.

It should be mentioned that by including household debt and institutional quality as an interaction term, caution is required when attempting to understand the effects between household debt and institutional quality on economic growth. The effect of household

debt on growth depends on institutional quality. As a result, the coefficients for household debt and institutional quality cannot be directly equated to those in Table 3 without considering the interaction impact. Our discussion will subsequently focus on our central ideas by answering two questions: Is the adverse effect of household debt worsening or improving? Can economic stability be improvised with the function of institutional quality? We reassessed the outcomes of the previous subsection to respond sufficiently to these questions.

The interaction model addressed issues regarding the connection between household debt and economic growth with the conditional role of institutional quality. The connection between household debt and economic growth remains appropriate when the interaction term is included in all regression models presented in Table 4. Furthermore, the empirical evidence indicates that the HDXINS coefficient is substantially positive.

As previously stated, the growth consequences of household debt and institutional quality must be seen in conjunction with their interaction effects. A brief examination of Table 4 revealed evidence that the impact of household debt on growth is conditional depending on the country's institutional quality. Additionally, the regression models demonstrate that household debt harms growth and decreases with improved institutional quality, as shown by the positive coefficient of the interaction components in the six regression models. Similarly, institutional changes

may contribute to economic stability. In the interaction model specifications, the direct relationship between household debt and economic growth was consistently negative and statistically significant. However, institutional quality has an insignificant and direct effect on growth. Interestingly, when institutional quality interacts with household debt, it is statistically positive, with a coefficient of 0.004 in all regression models ranging from 2a to 2f. The findings are consistent with Demirguc-Kunt and Detragiache (1998) and IMF (2017). They claimed that institutional variables are critical in moderating the link between increasing household debt and future economic activity.

To further explore these issues, we evaluated the effects of a one-unit increase in institutional quality on household debt and a 1% rise in household debt on the level of institutional quality in various scenarios. In calculating the marginal effect, coefficients in the first condition derivatives can be obtained from the LSDVC estimation, as shown in Table 4, based on Equation (3) using the standard errors recommended by Brambor et al. (2006). The first case is displayed in Table 4, with respect to each regression model (2a to 2f) within the minimum, average and maximum values. As shown in the table, a one-unit mean increase in institutional quality leads to a 0.047% significant decrease in growth when household debt is kept constant. Similarly, at the minimum level of institutional quality (i.e., 15.878), a one-unit increase of institutional quality leads to a 0.084% reduction in growth, making it statistically

Table 4
LSDVC Analysis: Interaction terms

| | Full Sample | | | | | |
|------------------------|-------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | AH | AB | BB | AH | AB | BB |
| | (2a) | (2b) | (2c) | (2d) | (2e) | (2f) |
| | Independent variable = GDPPCG | | | | | |
| L.GDPPCG | -0.241*** (0.065) | -0.248*** (0.063) | -0.211*** (0.067) | -0.203*** (0.066) | -0.206*** (0.065) | -0.169** (0.068) |
| GCF | 0.196*** (0.043) | 0.197*** (0.041) | 0.197*** (0.044) | 0.186*** (0.043) | 0.186*** (0.041) | 0.184*** (0.044) |
| POPG | -1.142*** (0.350) | -1.136*** (0.337) | -1.128*** (0.359) | -1.048*** (0.343) | -1.044*** (0.330) | -1.030*** (0.349) |
| HC | -0.066 (0.090) | -0.061 (0.087) | -0.048 (0.095) | -0.102 (0.092) | -0.097 (0.089) | -0.088 (0.097) |
| TO | 0.024*** (0.007) | 0.024*** (0.007) | 0.025*** (0.008) | 0.024*** (0.007) | 0.024*** (0.007) | 0.024*** (0.008) |
| INF | -0.030 (0.019) | -0.030 (0.019) | -0.029 (0.020) | -0.035* (0.019) | -0.034* (0.019) | -0.035* (0.020) |
| HD | -0.148** (0.059) | -0.150*** (0.056) | -0.154** (0.060) | -0.136** (0.057) | -0.138** (0.055) | -0.140** (0.058) |
| INS | -0.118 (0.100) | -0.119 (0.095) | -0.120 (0.103) | -0.100 (0.096) | -0.100 (0.093) | -0.098 (0.099) |
| HDXINS | 0.004* (0.002) | 0.004** (0.002) | 0.004* (0.002) | 0.004* (0.002) | 0.004* (0.002) | 0.004* (0.002) |
| CRISIS | | | | -3.699** (1.463) | -3.690*** (1.415) | -3.849** (1.508) |
| Observations | 228 | 228 | 228 | 228 | 228 | 228 |
| N | 43 | 43 | 43 | 43 | 43 | 43 |
| Marginal Effect | | | | | | |
| Mean | -0.047*** | -0.048*** | -0.050*** | -0.041*** | -0.041*** | -0.043*** |
| Min | -0.084*** | -0.086*** | -0.088*** | -0.076*** | -0.077*** | -0.079*** |
| Max | -0.018 | -0.018 | -0.020 | -0.013 | -0.014 | -0.015 |

Notes: A bias-corrected Least Square Dummy Variables (LSDVC) estimator proposed by Bruno (2005b) based on modifications by Anderson and Hsiao (AH, 1982), Arellano and Bond (AB, 1991), Blundell and Bond (BB, 1998). GDPPCG = Gross Domestic Product per capita growth, GCF = gross capital formation, POPG = population growth, HC = human capital index, TO = trade openness, INF = inflation, HD = household debt, INS = institutional quality, HDXINS = interaction term and CRISIS = Systemic Banking Crises Significance level: *** p<0.01, ** p<0.05, * p<0.10

significant. It implies that lower institutional quality, as a mediating effect, increases the effect of household debt, hindering economic growth. These results emphasise that lower institutional quality causes household debt to affect economic growth negatively. In the second case, we inspected the impact of household debt on growth at various levels of institutional quality and

Table 5

Marginal effects of institutional quality and household debt on growth

| | INS | HD | $\Delta\text{GDPPCG}/\Delta\text{INS}$ | $\Delta\text{GDPPCG}/\Delta\text{HD}$ |
|------------------------|--------|---------|--|---------------------------------------|
| Lowest INS Colombia | 18.181 | 17.733 | -0.030 | -0.07*** |
| Highest INS Finland | 30.402 | 44.55 | 0.074 | -0.022* |
| Lowest HD Argentina | 20.236 | 4.973 | -0.079 | -0.062*** |
| Highest HD Switzerland | 29.302 | 112.968 | 0.339** | -0.027** |
| Threshold INS | <30 | | | -0.024* |
| Threshold HD | | >53.5 | 0.109* | |

Note: The calculation is based on regression model 2f in Table 4. The calculation of marginal effect, $\Delta\text{GDPPCG}/\Delta\text{INS}$, and $\Delta\text{GDPPCG}/\Delta\text{HD}$ were derived from Brambor et al. (2006).

vice versa. We compared two groups of nations with the lowest institutional quality (Colombia) and the highest institutional quality (Finland). We also examined the variation in household debt between Argentina and Switzerland (Table 5). A one-unit increase in institutional quality leads to a 0.07% decrease in economic development when all other variables remain constant. Likewise, given that institutional quality is at the highest level (i.e., 30.402 in Finland), a one-point increase leads to a 0.22% decrease in economic growth. By maintaining an average level of institutional quality, the interaction effect of household debt variations is insignificant.

On the contrary, with average institutional quality, a 10% rise in household debt will boost growth by 3.39%. Higher institutional quality contributes to consistent development across nations by mitigating the detrimental impact of household debt. However, it must be noted that the significance of household debt in economic development is conditional, depending on the quality of the institutional environment. Surprisingly, it was found that in Switzerland, which has high institutional quality but

the greatest household debt, increasing household debt improves economic growth. These findings highlight the intriguing factor that larger household debt (with a threshold of more than 53.5%) has a strong and significant impact on growth when institutional quality is average, mitigating the detrimental effect of interaction terms when household debt is high.

The empirical evidence proves that lower levels of institutional quality allow household debt to hinder economic growth. The consequence of income shocks may place the individual in default, leading to repayment problems. In addition, low institutional quality, such as government instability, high corruption, and several lax regulations, may result in an inability to cope with financial market instability. It will subsequently contribute to the negative effect of household debt on growth. However, the effect of household debt can be managed with strict regulations in nations with better institutional quality. Hence, this empirical result highlights the importance of maintaining and enhancing institutional quality.

FURTHER ANALYSIS

To determine the validity of our findings, Tables 6 and 7 summarise the results of the regression analyses by employing alternative estimation methods, the first-difference GMM, and system GMM estimators,

established by Arellano and Bond (1991), Arellano and Bover (1995) and Blundell and Bond (1998). Hence, we modified the two-step GMM standard errors for finite samples according to Windmeijer (2005) and used Roodman's (2009) recommendation for compressing the instruments to keep the

Table 6
First-difference GMM analysis

| | (3a) | (3b) | (3c) | (3d) |
|-------------------------------|----------------------|----------------------|----------------------|----------------------|
| Independent variable = GDPPCG | | | | |
| L.GDPPCG | -0.366*** -0.016 | -0.380*** -0.018 | -0.335*** -0.017 | -0.364*** -0.022 |
| GCF | 0.263*** -0.03 | 0.265*** -0.031 | 0.251*** -0.027 | 0.237*** -0.029 |
| POPG | -1.293*** -0.096 | -1.311*** -0.098 | -1.217*** -0.102 | -1.223*** -0.099 |
| HC | 0.157*** -0.045 | 0.183*** -0.046 | 0.111*** -0.04 | 0.184*** -0.053 |
| TO | 0.019*** -0.003 | 0.019*** -0.003 | 0.017*** -0.003 | 0.016*** -0.003 |
| INF | -0.040*** -0.008 | -0.040*** -0.008 | -0.038*** -0.005 | -0.036*** -0.006 |
| HD | -0.079*** -0.007 | -0.147*** -0.029 | -0.073*** -0.006 | -0.163*** -0.027 |
| INS | 0.109*** -0.028 | 0.001 -0.056 | 0.092*** -0.02 | -0.03 -0.048 |
| HDXINS | | 0.002** -0.001 | | 0.003*** -0.001 |
| CRISIS | | | -2.180*** -0.413 | -1.468*** -0.467 |
| Constant | -14.924*** -4.091 | -14.036*** -3.705 | -10.861*** -3.353 | -12.707*** -3.782 |
| Observations | 185 | 185 | 185 | 185 |
| N | 43 | 43 | 43 | 43 |
| Instruments | 36 | 37 | 36 | 38 |
| AR2 p-value | 0.1063 | 0.1572 | 0.2409 | 0.1322 |
| Sargan p-value | 0.6795 | 0.7167 | 0.7404 | 0.7839 |

Notes: GDPPCG = Gross Domestic Product per capita growth, GCF = gross capital formation, POPG = population growth, HC = human capital index, TO = trade openness, INF = inflation, HD = household debt, INS = institutional quality, HDXINS = interaction term and CRISIS = Systemic Banking Crises

Significance level: *** p<0.01, ** p<0.05, * p<0.10

number of instruments lower than the number of cross-sectional units in the empirical implementation. In addition, two specification tests, the second-order autocorrelation (AR2 p-value) and Sargan's p-value test were conducted to observe whether both difference-GMM and system-GMM estimators are constant. The empirical data in Tables 6 and 7 strongly indicate that institutional quality moderates the household debt-growth relationship in the examined countries. Hence, the findings

Table 7
System GMM analysis

| | SYS GMM | SYS GMM | SYS GMM | SYS GMM |
|-------------------------------|----------------------|----------------------|----------------------|---------------------|
| Independent variable = GDPPCG | | | | |
| L.GDPPCG | -0.338*** -0.013 | -0.375*** -0.015 | -0.320*** -0.012 | -0.349*** -0.016 |
| GCF | 0.270*** -0.02 | 0.300*** -0.02 | 0.259*** -0.019 | 0.274*** -0.018 |
| POPG | -0.848*** -0.089 | -1.203*** -0.11 | -0.635*** -0.095 | -0.976*** -0.103 |
| HC | 0.187*** -0.039 | 0.235*** -0.037 | 0.140*** -0.043 | 0.179*** -0.036 |
| TO | 0.005*** -0.001 | 0.007*** -0.002 | 0.005*** -0.001 | 0.005*** -0.002 |
| INF | -0.040*** -0.012 | -0.033** -0.014 | -0.039*** -0.008 | -0.034*** -0.01 |
| HD | -0.085*** -0.004 | -0.242*** -0.025 | -0.077*** -0.004 | -0.229*** -0.026 |
| INS | 0.033* -0.017 | -0.197*** -0.039 | 0.043** -0.02 | -0.187*** -0.04 |
| HDXINS | | 0.006*** -0.001 | | 0.006*** -0.001 |
| CRISIS | | | -3.189*** -0.494 | -2.387*** -0.576 |
| Constant | -14.187*** -3.199 | -12.644*** -2.939 | -11.075*** -3.466 | -8.330*** -2.742 |
| Observations | 228 | 228 | 228 | 228 |
| N | 43 | 43 | 43 | 43 |
| Instruments | 37 | 38 | 38 | 39 |
| AR2 p-value | 0.2694 | 0.3571 | 0.6011 | 0.576 |
| Sargan p-value | 0.1799 | 0.2507 | 0.1832 | 0.2699 |

Notes: GDPPCG = Gross Domestic Product per capita growth, GCF = gross capital formation, POPG = population growth, HC = human capital index, TO = trade openness, INF = inflation, HD = household debt, INS = institutional quality, HDXINS = interaction term and CRISIS = Systemic Banking Crises

Significance level: *** p<0.01, ** p<0.05, * p<0.10

in the former analysis are robust, and the conclusions obtained by these estimates can be utilised to guide policy decisions.

CONCLUSION AND FUTURE RECOMMENDATION

This study examined the connection between household debt and growth and the impact of institutional quality on a panel of 43 countries from 1984 to 2018. The findings indicate that higher household debt is detrimental to economic growth, while better institutional quality significantly spurs growth. The third outcome indicates that the impact of increased household debt on growth is surprisingly positive and robust at an average level of institutional quality. As a result, proper policy designs must be monitored and carefully considered to reduce the negative impact of household debt on growth. For countries with the highest household debt, such as Switzerland, considerably high institutional quality tends to improve the stability of economic growth. Economic downturn from household debt is lessened once institutional quality is high. Variations in institutional quality with low household debt presented an insignificant effect. Both household debt and institution quality play a key role in maintaining economic growth. These findings suggest the following policy recommendations.

First, though the household debt harms growth, households are still required as a tool for increasing consumption and aggregate output. Hence, institutional quality is needed to observe and manage the impact of debt on growth. Sustaining

the beneficial impact of the household debt-growth nexus may be possible if financial institutions exercise caution regarding slack lending practices (see Agarwal et al., 2014) and subprime borrowers (Justiniano et al., 2016). The sole exception is that policy priority should first be given to institutional changes in nations with poor institutional quality. Policymakers may suggest policies that strengthen institutional quality in order to bolster the role of household borrowing in stimulating economic development. Policymakers can introduce measures to control and manage household debt through efficient institutional settings. Also, policymakers can propose measures that reinforce institutional quality, such as a prudent debt management policy to reduce the risk of financial instability and enhance the role of household borrowings in boosting economic growth. Another recommendation is to follow the macro-prudential policies, Basel III, by keeping the dynamic capital buffer. The capital buffer aims to maintain the system resilient throughout the boom and bust of the economic cycle.

Regarding future directions, different options are available. Since this study has analysed a panel dataset that combines advanced and developing countries, future research may offer empirical analysis on the split sample of advanced and emerging economies. Other studies may wish to include different demographic attributes to household debt growth using a micro-dataset. A panel dataset can analyse various demographic changes in the household debt model. The digital technology era has been

popular lately due to the pandemic crisis, which can be further considered in future efforts. More empirical evidence is required to address these issues.

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APPENDIX

Appendix A

Supplementary Table

LSDVC Analysis: Household debt and real GDP per capita growth

| Independent Variables | LSDVC | | | LSDVC (with Crisis Dummy) | | |
|-----------------------|----------------------|----------------------|----------------------|------------------------------|----------------------|----------------------|
| | AH | AB | BB | AH | AB | BB |
| | (1a) | (1b) | (1c) | (1d) | (1e) | (1f) |
| L.GDPPCG | -0.193*** (0.066) | -0.205*** (0.064) | -0.154** (0.070) | -0.158** (0.064) | -0.167*** (0.063) | -0.115* (0.068) |
| GCF | 0.123*** (0.040) | 0.126*** (0.037) | 0.119*** (0.042) | 0.116*** (0.039) | 0.119*** (0.037) | 0.110*** (0.041) |
| POPG | -0.575** (0.289) | -0.575** (0.267) | -0.555* (0.296) | -0.505* (0.278) | -0.507* (0.259) | -0.483* (0.286) |
| HC | -0.232*** (0.070) | -0.225*** (0.064) | -0.216*** (0.073) | -0.234*** (0.068) | -0.228*** (0.063) | -0.219*** (0.072) |
| TO | 0.024*** (0.006) | 0.024*** (0.006) | 0.024*** (0.007) | 0.022*** (0.006) | 0.022*** (0.006) | 0.023*** (0.007) |
| INF | -0.038* (0.021) | -0.038* (0.020) | -0.038* (0.022) | -0.042** (0.021) | -0.041** (0.019) | -0.042** (0.021) |
| HD | -0.032*** (0.011) | -0.034*** (0.010) | -0.036*** (0.011) | -0.028*** (0.010) | -0.029*** (0.010) | -0.031*** (0.011) |
| CRISIS | | | | -4.074*** (1.362) | -4.023*** (1.278) | -4.246*** (1.420) |
| Obs | 245 | 245 | 245 | 245 | 245 | 245 |
| N | 43 | 43 | 43 | 43 | 43 | 43 |

Notes: A bias-corrected Least Square Dummy Variables (LSDVC) estimator proposed by Bruno (2005b) based on modifications by Anderson and Hsiao (AH, 1982), Arellano and Bond (AB, 1991), Blundell and Bond (BB, 1998). GDPPCG = Gross Domestic Product per capita growth, GCF = gross capital formation, POPG = population growth, HC = human capital index, TO = trade openness, INF = inflation, HD = household debt, INS = institutional quality and CRISIS = Systemic Banking Crises. Significance level: *** p<0.01, ** p<0.05, * p<0.10.

Review Article

Motivations for Green Real Estate Investments in Residential Properties: A Review

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ABSTRACT

Green residential buildings benefit their owners economically, socially, and environmentally. However, it is not known whether the buyers know the benefits that will be gained when they purchase this green residence: it could also be that they are just following the current trend. Therefore, this review was conducted to identify the motivations for green real estate investments in residential properties and propose a conceptual framework for future validation. In relation to that, both past empirical and conceptual studies were reviewed. A total number of 277 articles were found in several e-databases, searched with the following keywords: ‘green residential,’ ‘green real estate,’ ‘green building,’ ‘sustainable building,’ ‘driver,’ and ‘motivation.’ After the filtration phase, 26 full-text articles that are pertinent to the study were selected for review. The review revealed four variables that motivate property buyers or investor-owned to invest or purchase green residential property. These variables concern environmental degradation, financial returns, cost-saving, and social and environmental benefits. Therefore, an informed decision on the benefits received, especially for green residential properties, could affect the resident’s motivation towards the certified residential properties, encouraging more demand for green residential in the market and spurring more green and sustainable development. For further research, the proposed conceptual framework could be tested for model testing and validation.

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INTRODUCTION

Conveyed to the Malaysian property market report 2020, green buildings have seen an increase in house ownership,

notably in residential property sales. Green residential buildings show rapid growth from time to time because they are known as the current trend of choice by many purchasers and investors. Investing in green real estate, particularly in the residential sector, is influenced by various underlying motivations. The notion of a motivation to go green is based on a shift in human behavior from investing in conventional buildings to sustainable buildings. As defined by numerous research, motivation refers to a sense of human conviction for executing a decision or action. The elements of motivation could stem from an individual's voluntary activity or a group of people's voluntary action to avoid something undesirable, as evoked by the self-determination hypothesis (Olanipekun et al., 2018).

Since 2012, several studies have documented an increase in the demand for green residential structures in Malaysia. New research shows that green real estate benefits building occupiers (Zhang & Dong, 2020). Furthermore, Chau et al. (2010) cited that life events can influence a person's decisions, and more than half of the inhabitants were aware of the green concept and willing to incorporate it into their homes. Frequent emphasis by environmentalists on adverse impacts of uncontrolled development and urbanization around the globe (Myeda et al., 2016). Chau et al. (2010) revealed that experiences might change an individual's decisions. He added that more than half of the residents were aware and willing to embrace the green concept in real estate development.

Their willingness shows they treasured their green living experiences (Chau et al., 2010) and the benefits of green residential development. Other research also indicates that increasing sustainability awareness impacts property prices (Meins et al., 2014).

Despite the variety of literature on green construction concepts, awareness, and benefits, early literature has yet to investigate purchasers' motivations for green real estate investment. Research from Alsulaili et al. (2019) found that 78% of participants were unaware of the concept of green building with different variations of the green concept, with 52% relating green building with plants. Locally, Shafie et al. (2016) found that Malaysians' awareness of the benefits of green is average, and they have limited knowledge of socio-economic benefits. It is inconsistent with Aman (2014), who mentioned that green awareness in Malaysia is still in its infancy, but it must be inculcated. Understanding the purchaser's motivation for green real estate investment is critical since it could increase demand for green building development. The development of more green building projects will result in a reduction in greenhouse gases that will directly facilitate Malaysia to achieve the fourth strategy thrust of the 11th Malaysia Plan related to green growth, which is pursuing sustainable development. Further, advancing green growth is essential to achieving economic growth, environmental sustainability, and social integration. Therefore, as a corollary, the research aims to bridge that gap in the literature on the key factors in green real estate motivations.

Both Conventional and Green Residential Buildings have Their Strengths

Previous research shared that both conventional and green residential buildings have their benefits (Chau et al., 2010) that encourage investors and potential homebuyers to have more choices for their residential investment. The green residential development could provide facilities that promote social contact and interaction for the residents and a clean and safe residential environment. Furthermore, they also prefer to own houses with better soundproofing and greater green areas (Myeda et al., 2016). Furthermore, Suratman et al. (2018) identified almost half of the home buyers' priorities as energy-saving through natural lighting and ventilation when buying property. Therefore, the energy consumption of residential buildings is found to be lower than that of conventional buildings. Other than that, Wira et al. (2013) point out the most desirable green features are indoor environmental quality, energy efficiency, and greenery because they can bring more benefits to the owners. Various advantages offered by these green residential buildings help shape a more significant perception of the status of green (Aman, 2014). However, it was revealed that there were no significant differences between investors' and potential homebuyers' preferences for conventional and green residential buildings in conserving energy or water, improving air quality, and reducing indoor noise (Chau et al., 2010).

In developed countries such as New Zealand, the awareness of greenhouses

is growing, with price, location, and construction type as the main factors influencing a homebuyer's purchase decisions (Eves & Kippes, 2010). In most cases, the number of bedrooms is an important factor for the buyer as it could influence the energy efficiency savings or reduce the damages made to the environment (Eves & Kippes, 2010). Moreover, the green residential owners were not willing to pay more for their landscaping area compared to those in conventional buildings (Chau et al., 2010). Therefore, green residential developments could not attract environmentalist homeowners (Chau et al., 2010). It is supported by Eves and Kippes (2010). They found various demography of homebuyers, such as young, older, retired, high-income, low-income, and middle-income buyers willing to buy a green residential building.

Nevertheless, homebuyers found several elements to consider apart from landscaping and physical activity for their green residential properties. It includes water and energy consumption, indoor noise level, air quality, and the fee imposed (Chau et al., 2010). In addition, Aman (2014) found that reducing energy and water consumption and using recycled materials were significant drivers in Malaysia's green practice. Razali and Adnan (2015) and Samari et al. (2013) added that besides energy efficiency and indoor quality, other environmental elements also include controlling waste and pollution, maintenance, and the house's environmental impact. Moreover, good lighting and illumination should also be

considered (Meins et al., 2014). Besides, Bezzina and Laiviera (2016) mentioned that the water issue had been considered over recent years, with the presence of hydrological mismanagement and pervasive groundwater abstraction. Abidin et al. (2013) indicated that the investors and homebuyers highly demanded a green residential building with access to green space and public transportation must be constructed with higher quality material. Apart from that, the energy efficiency design of the dwelling is important for homebuyers. According to Meins et al. (2014), the safety and security measures related to people continue to gain significance as the public becomes more aware of the issue. Investors and homebuyers should consider preferences to ensure the developers invest in green features, focusing on their clients' financial constraints and lifestyles (Wira et al., 2013). Therefore, in developing the concept and design for the green homes in Malaysia, Said et al. (2012) suggested that housing developers should note that the green homes that will be developed in the future should consider the needs of house buyers. By considering house buyers' needs, developers will be able to reduce the uncertain effects in the future (Said et al., 2012).

Environmental Sustainability in Malaysia

The publication of the Brundtland Commission report accentuated the sustainability concerns among legislators and policymakers. Sustainability covers

a range of social, environmental, and economic matters, which is referred to as triple bottom line (TBL) sustainability (Royal Institution of Chartered Surveyors [RICS], 2011). Brundtland (1987) defined sustainable development as 'development that meets the needs and aspirations of the present without compromising the ability of future generations to meet their own needs. Therefore, socio-economic development goals must be defined in terms of sustainability. Other leading international professional bodies include the Vancouver Valuation Accord (VVA), which is committed to embedding sustainability within valuation practices and thereby 'mainstreaming' sustainability (RICS, 2011).

In Malaysia, on September 27, 2021, the Malaysian government tabled the country's 12th Malaysian Plan (2021–2025), advancing sustainability as one of the three key themes. The 12th Malaysia plan's dimensions include environmental sustainability, the blue economy, green technology, renewable energy, and climate change adaptation and mitigation. Among the key performance indicators is a reduction of up to 45% greenhouse gas emissions intensity to GDP by 2030 in line with the Paris Agreement and renewable energy to account for 31% of Malaysia's total installed capacity by 2025. Furthermore, the focus will be on developing instruments for climate action, including the introduction of carbon pricing, such as carbon tax and Emission Trading Scheme, in line with the aspiration to become a carbon-neutral nation (Economic Planning Unit, 2021)

Green Rating System in Malaysia

Many developed countries have implemented the green building concept. According to the World Green Building Council (2021), there are 56 lists of rating tools that are administered by the World Green Building Council, which include LEED and Energy Star in the United States, BREEAM in the United Kingdom, Green Star in Australia, BOMA-Best in Canada, Green Mark scheme in Singapore, and Green Building Index (GBI) in Malaysia have been developed to evaluate the environmental performance of buildings. The different adoption of building guidelines and rating systems are influenced by the location's climate, economy, and culture. In Malaysia, Green Building Index (GBI) is the green rating system that evaluates the environmental design and building performance. The rating system was developed in 2009 by Pertubuhan Arkitek Malaysia (PAM) and the Association of Consulting Engineers Malaysia (ACEM) to lead the Malaysian property industry toward becoming more environmentally friendly. GBI guides developers in incorporating sustainability elements into their residential and commercial development. For green residential buildings, GBI rating systems focus on energy efficiency, indoor environmental quality, sustainable site planning and management, materials and resources, water efficiency, and innovation (GBI, 2020). Table 1 shows the elements and maximum points for residential new construction (RNC) criteria.

Table 1
Assessment criteria for Residential New Construction (RNC)

| No. | Item | Maximum Points |
|-----|---|----------------|
| 1 | Energy Efficiency (EE) | 23 |
| 2 | Indoor Environmental Quality (EQ) | 12 |
| 3 | Sustainable Site Planning and Management (SM) | 33 |
| 4 | Material & Resources (MR) | 12 |
| 5. | Water Efficiency (WE) | 12 |
| 6. | Innovation (IN) | 8 |

Source: GBI (2020)

If the criteria of the sustainability elements have been fulfilled, then the GBI would issue green certification. Some of the approved projects have been certified as green townships. A green or sustainable township must be designed and built with efficient resources that address environmental, social, and economic issues (GBI, 2020). Six core categories have been developed to address the delivery of a more sustainable township. The categories are Climate, Energy & Water, Ecology & Environment, Community Planning & Design, Transportation & Connectivity, Building & Resources, and Business & Innovation.

Table 2 depicts several completed green residential townships in Malaysia. By having a certification, homebuyers could verify the sustainability elements in their house, which then could assist them in deciding whether the certified green residential property investment is sound. The increasing trend of green real estate investment also reflects the increasing ownership of investor-owned green buildings.

Table 2
Green real estate township in Malaysia: Residential

| | Project | Types of Property | Location | Green Certification* |
|---|----------------------------------|---|------------------------------------|----------------------|
| 1 | Leisure Farm Resort Central Farm | Townhouse Semi-detached house Bungalow Villa | Iskandar Malaysia, Johor | Certified |
| 2 | Eco Horizon | Terrace House Bungalow Semi-detached house Super-link house Garden house | Bandar Cassia, Penang | Certified |
| 3 | Eco Ardence | Semi-detached house Bungalow Link house Terrace House Townhouse | Shah Alam, Selangor | Certified |
| 4 | Eco Majestic | Apartments Terrace House Semi-detached house Cluster house Bungalow | Semenyih, Selangor | Certified |
| 5 | Ken Rimba | Condominiums Pool Villas Double-storey terrace house Commercial | Shah Alam, Selangor | Certified |
| 6 | Bandar Gamuda Gardens | Terrace house Serviced Apartments Link Semi-detached house Super-link Terrace house Rumah Selangorku Apartments | Kuang, Selangor | Silver |
| 7 | Bandar Rimbayu Township | Double-storey terrace house Semi-detached house Apartments Serviced Apartment Shoplot | Telok Panglima Garang, Selangor | Silver |
| 8 | Sunway Resort City | Condominiums Commercial Office Tower Hospital Educational Institution | Bandar Sunway, Selangor | Silver |
| 9 | Marvelane Homes By The Lake | Condominiums Semi-detached houses Bungalows Cluster houses Townhouses | Subang Jaya, Selangor | Platinum |

Source: Property Guru (2020)

Note: GBI classification: Platinum (86-100 points), Gold (76-85 points), Silver (66-75 points), Certified (50-65 points)

RESEARCH METHODOLOGY

The study adopted a methodical literature review following Anzagira et al. (2019) to explore the motivations for green real estate investment. The process includes the inclusion and exclusion criteria in the database search to exclude any unrelated topic of the study. Through discussion, this paper discusses the concept of green real estate. The benefits obtained from adopting the green certification in the residential township, and the drivers of the real estate investment. Figure 1 illustrates the review procedures used in this study.

A preliminary desktop search resulted in 277 articles identified in several electronic databases. Past research papers published in both empirical and conceptual studies were reviewed. The study starts with an

initial identification of relevant and eminent electronic research databases that include Scopus, Emerald Insight, Science Direct, Google Scholar, and ResearchGate to retrieve the articles. The descriptors used in the search engine included the synonyms to enhance the number of related and relevant searches toward the subject area. The descriptors include ‘green residential,’ ‘green real estate,’ ‘green building,’ ‘sustainable building,’ ‘driver,’ and ‘motivation.’ A filtering process was undertaken afterward when 26 full-text relevant articles were extracted from the initial research. The filtration was done through abstract and main context reviews to determine the relevance of a particular article. A matrix table was developed to highlight the green real estate determinant (see Table 3). The

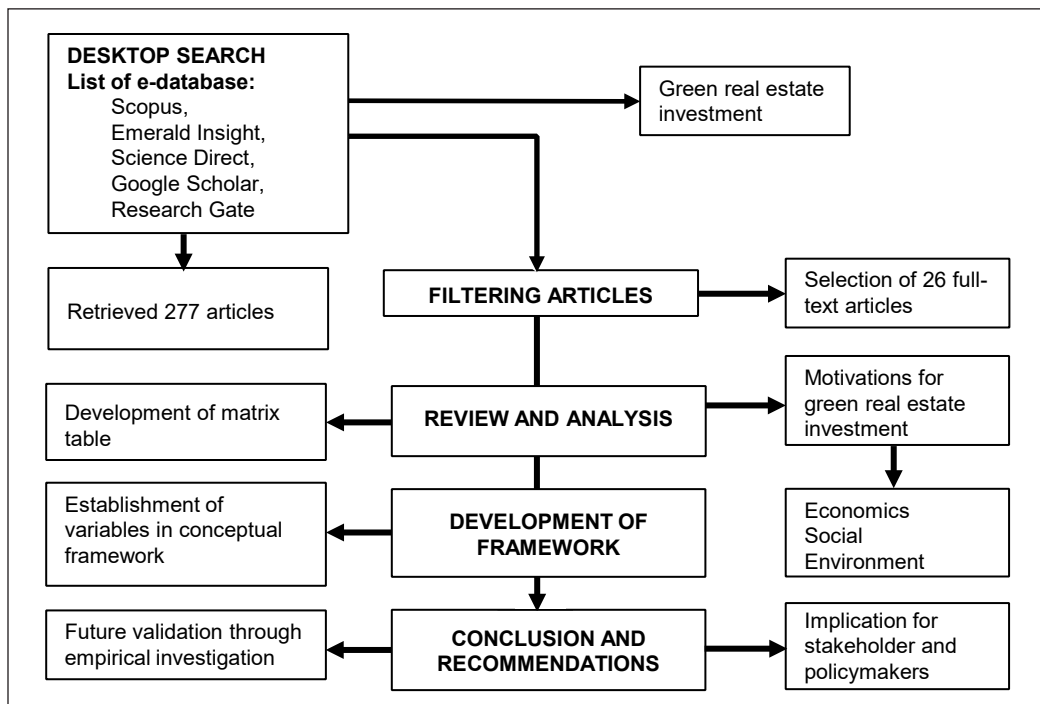


Figure 1. Flowchart of review procedures

development of the proposed framework is based on these filtered papers (Figure 1). The selected articles were critically reviewed and analyzed to explore green real estate investment and its application to residential properties. The identified motivations are categorized into economics, social, and environment. Next, these variables are illustrated in the conceptual framework (see Figure 2). Conclusion and recommendations towards stakeholders and policymakers are included as future research is needed to test the proposed conceptual framework.

RESULTS AND DISCUSSION

Green real estate or green building is a sustainable building that is designed, constructed, operated, and maintained with the efficient use of resources such as energy, water, and materials to reduce building impacts on the environment and human well-being (Kim et al., 2020). Embodied in this definition are the ideas of prioritizing efficient energy and water consumption and satisfying environmental considerations

from building impacts. Correspondingly, the United Nations Environment Program (UNEP) clarifies the idea of green in real estate as the total commitment to both the social and environmental aspects that will result in low carbon development or sustainable development (UNEP, 2011). Furthermore, the literature has documented that green real estate investment is poised for constant growth in the coming years, supported by the increase in green real estate development projects since 2009 based on the increasing trend of the certified number of green building projects (Ajibola, 2019).

The Conceptual Framework of Motivations of Green Real Estate Investments in Residential

From the literature review, three dimensions motivate property buyers or investor-owned to invest in or purchase the green residential property: economic, environmental, and social. The four determinants that have been established from the matrix table (see Table 3) are in line with three sustainability

Table 3
Matrix of green real estate investment determinants

| Author(s) | Kim et al. | Duan et al. | Ajibola et al. | Chen et al. | Mangialardo et al. | Gluszak et al. | Fan & Zhou | Deng & Wu | Xiao et al. | Frequency |
|---------------------------------------|------------|-------------|----------------|-------------|--------------------|----------------|------------|-----------|-------------|-----------|
| Year of Publication | 2020 | 2020 | 2019 | 2019 | 2019 | 2019 | 2019 | 2014 | 2017 | |
| Motivation | | | | | | | | | | |
| Concern for Environmental Degradation | √ | | √ | | | | √ | | √ | 4 |
| Financial Returns | √ | √ | | √ | √ | √ | | | | 5 |
| Cost Saving | √ | | √ | √ | √ | √ | √ | √ | | 7 |
| Social and Environmental Benefits | √ | √ | √ | | √ | √ | √ | √ | √ | 8 |

development objectives which cover different aspects of social development, environmental protection, and economic growth. For sustainable development to be achieved, these three core elements need to be prioritized and interconnected for the well-being of the residents and society. Therefore, the matrix of green real estate investment determinants is developed based on these three sustainability objectives. However, for economic benefit, following Fauzi et al. (2021), the researcher applied breakdown analysis in which the data were divided into two categories for a more robust result. Economic benefit for motivation to invest in green real estate investment, particularly the greenhouse, could likely be due to cost-saving motivation or maximization of financial return in the future.

Environmental Concern. The first motivation bonds to the rising concern of climate change, particularly for environmental degradation (Ajibola et al., 2019; Fan & Zhou, 2019; Xiao et al., 2017). Recent research by Kim et al. (2020) has revealed that investors-owned have tendencies to own certified green buildings, which benefits the environment. In addition, the intensification of climate change awareness and rising energy costs have also increased the market attractiveness of green buildings (Xiao et al., 2017). However, the energy efficiency of buildings may vary under different conditions, especially during extreme weather and haze episodes when buildings tend to operate at full

load (Agarwal et al., 2017b). Therefore, an informed decision on the level of energy efficiency, especially for residential properties, could affect the resident's motivation toward the green certified residential properties. Fujisawa et al. (2020) investigated the effect of different types of labels on energy conservation decisions in Japan. They found that informing consumers about the energy efficiency level of the house could motivate them to choose housing with lower energy consumption levels. It indicates that the residents who are greatly concerned about the environment are easily motivated toward housing with a high energy efficiency level. Similarly, in Singapore, buildings with a basic level of the green label (GM-certified) in the public housing market are, on average, relatively more energy-efficient than buildings without a green label (Agarwal et al., 2017a).

Economic: Financial Returns. Green buildings lease up faster, at higher rents, and maintain higher occupancy levels than conventional buildings (Ajibola et al., 2019; Deng & Wu, 2014; Duan et al., 2020; Fan & Zhou, 2019; Mangialardo et al., 2019). For instance, Deng and Wu (2014) found that green-certified dwellings are 4.2% more expensive than comparable non-certified dwellings. In addition, the development of green buildings in the UK increases the value of nearby conventional buildings (Chegut et al., 2014), implying positive externalities towards the neighborhood area from green certification.

Several empirical studies reliably report that the investor-owned is willing to buy green buildings for higher rental income (Duan et al., 2020; Gluszak et al., 2019; Kim et al., 2020). Duan et al. (2020) reported that with the increase in green residential investment, the urban green space in Shaanxi city had been gradually expanded. The green space expansion reflects the demand for green residential investment. In addition, Mangialardo (2019) pointed out that the green buildings with higher certification show higher returns on investment compared to other green buildings with lower green certification. Also, certified green investments guarantee higher revenue values and rents (Chen et al., 2019). In terms of the house price, Agarwal et al. (2017a) found that the green mark certification increases house prices by 1.61% relative to building without the certification in Singapore. Financial returns regarding real estate values and rents reflect the investors' particular appreciation and the investors-owned green building market.

Economic: Costs Saving. The next motivation is the low operational and maintenance costs (Ajibola et al., 2019; Deng & Wu, 2014; Kim et al., 2020). Robust research has recognized that green buildings can save 30% of energy savings compared to conventional buildings (Mangialardo et al., 2019). Fan and Zhou (2019) indicated that the green technology of the air conditioning system alone could reduce up to 15% energy consumption, depending on the total floor area. Consumers who believe in the

cost-saving of green buildings value green certification and are willing to pay a premium for green building features (Matisoff et al., 2016). Additionally, research by Gluszak et al. (2019) highlighted that lower operating costs and energy consumption are drivers of the increase in the demand for sustainable buildings. Besides, with energy-efficient and water-efficient elements in a building, residents can reduce their utility bills, especially the energy cost (Chen et al., 2019).

Social and Environmental Benefits.

Motivation for green buildings can also be driven by social and environmental benefits (Gluszak et al., 2019). From an investor's point of view, social factors could be just as influential on value as environmental factors in the case of green residential properties. For example, suppose the occupier or tenant of a green residential property benefits from comfort and safety and has access to desirable amenities, particularly green space. In that case, they are more likely to choose this property. The research found that green real estate could enhance social interaction and increase health benefits. For instance, green design attributes can improve the occupant's productivity, health, and well-being (Xiao et al., 2017). Similar results could also be found when green design features improve indoor air quality for society's well-being (Deng & Wu, 2014). Empirical research by Duan et al. (2020) revealed that green real estate development could increase 0.899km² of urban green space. Also, it is documented

that the increase of urban green space in Shaanxi city benefits the urban residents and creates an additional buffer zone for the city. Given the driven criteria, investors and investors-owned will eventually shift from conventional to greener buildings.

Similarly, research by Kim (2020) pointed out that green space reduces greenhouse gas emissions and provides a buffer zone. Therefore, environmental benefits from the green real estate could also indirectly affect the social aspect of the occupants.

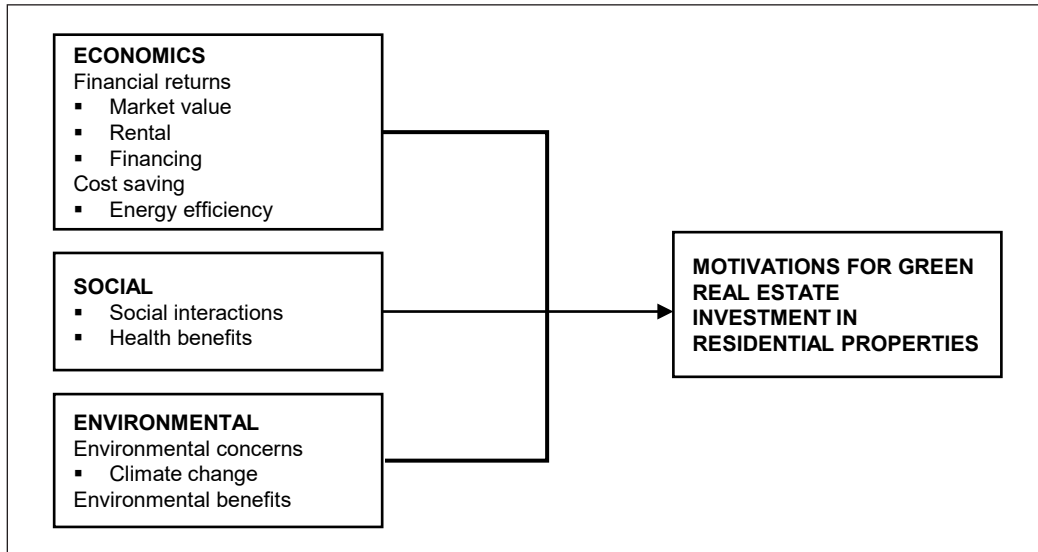


Figure 2. The conceptual framework

Source: Authors' construct

CONCLUSION

The motivation factors for green real estate investment in residential properties can be seen in three aspects: environmental, economic, and social benefits. This paper reviews the literature on green real estate investment and the need to establish the framework for green residential properties. The developed conceptual framework in this paper and the future empirical finding could contribute to the sustainability of residential properties.

The findings from this research could offer valuable benefits in supporting and facilitating Malaysia's medium to long-term

goals of green technology, as mentioned in the 11th and 12th Malaysia Plans. The government could consider various incentive schemes, namely grants and funding for green infrastructure and construction, in line with the 2030 Agenda for Sustainable Development. In moving toward a low-carbonation, promoting green and resilient cities and townships should be more focused on by the government.

Furthermore, this research is crucial to convey the message to the real estate industry, specifically to the property developer, in developing green residential schemes, reducing any uncertainties and

risks in the future. Exploring the motivations for green real estate investment, particularly the benefits of choosing a particular level of green certification, estimates not only the economic benefit of either maximizing return or cost minimization but also socio-environmental benefits which can contribute to the decisions of developers and investors to encourage more green-certified residential and township development in the future. Moreover, this research intends to facilitate related parties and organizations to provide incentives, recognition, and actions to increase the awareness of the investors and buyers related to the green residential building. Finally, this research will contribute to filling the gap in the previous research and encourage future research in the green residential building development industry, either locally or internationally. The development of the conceptual framework in this study could be further tested and validated. The validated model then could promote more green real estate development, particularly in the emerging market of Malaysia.

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Promoting Utility Cycling: Prospects and Challenges from Penang Island, Malaysia

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ABSTRACT

Penang is arguably one of the most developed and urbanized areas in Malaysia. Like most cities typical of Southeast Asia, Penang experiences significant traffic congestion regularly. When the current government was established in Penang in 2008, it aimed to transform the region into a sustainable state. Among the efforts to achieve this goal was a drive towards cycling as a viable mode of transport, which entailed building cycling infrastructure, staging cycling events, and establishing a bike-share system. Despite these consistent efforts by the state government, utility cycling, or commuting cycling, is still a rare sight in Penang. This paper, therefore, attempts to assess the current situation surrounding utility cycling in Penang Island by highlighting the key factors that either enable or discourage utility cycling there. Data were collected from 25 personal interviews with cyclists and other cycling stakeholders. The findings from this data highlight key issues that will help the state government create an action-oriented path toward better utility cycling, thus fulfilling the Sustainable Development Goals (SDGs).

Keywords: Cycling, cycling infrastructure, cycling policy, green transport, sustainable transport policy, utility cycling

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INTRODUCTION

Utility cycling is described, in contrast to recreational cycling, as the use of a bicycle as a mode of transport for practical purposes, such as commuting to and from work, education, shopping, or visiting family and friends (Adam et al., 2020). However, cycling has been proven to have many benefits regardless of its purpose (i.e.,

recreational or utility). Indeed, research consistently demonstrates that cycling, in general, is good for maintaining mental and physical health, the environment, and the economy (Pucher & Buehler, 2012; Shaheen et al., 2013), while utility cycling, in particular, can potentially overcome the problems associated with automobiles, such as traffic congestion, parking-space requirements, and road construction costs (Kumar et al., 2016). Additionally, Willis et al. (2013) highlighted that people who cycle to work are less stressed and feel more relaxed, while Walker (2017, p. xiv) persuasively argued that cycling can lead to a “healthier, safer, equal, happier and prosperous world.” Consistent with other studies, these findings also exemplify that “cycling is the happiest mode of transportation” (Zhu & Fan, 2018, p. 360), and more recently, Te Brömmelstroet et al. (2017) argued that cycling can “develop a sense of place or a sense of society.” In other words, cycling can connect people and society through interactions and negotiations on the roads.

Despite the benefits of cycling, the number of people who opt to cycle to work is small, especially in low-cycling-context countries (Bakker et al., 2016). For instance, many cities in Southeast Asia’s developing countries are still struggling to establish utility cycling as one of their mainstream modes of transport. Several studies on Southeast Asian countries, particularly Singapore, Thailand, the Philippines, and Malaysia, have explored cycling issues, such as the bicycle’s potential as a mobility option

(Bakker et al., 2016, 2017; Jalalkamali & Ghraie, 2012; Kupferschmid et al., 2017), cycling infrastructures and facilities (Castro & Josef, 2020; López & Wong, 2017a; Terh & Cao, 2018), the development of cycling policy (Kumar et al., 2016), and the public’s attitudes and perceptions toward utility cycling (Hashim et al., 2017; Lee & Pojani, 2019; López & Wong, 2017b).

Although many studies examine cycling across communities worldwide, studies specifically examining utility cycling in Southeast Asia remain few and far between. Indeed, there is currently inadequate research into the prospects of and barriers to utility cycling. Furthermore, few studies have been systematically conducted to assess the current situation using qualitative data and information from various stakeholders, especially in Malaysia. Inspired by these knowledge gaps, this paper reports on findings from semi-structured interviews with stakeholders involved in cycling activities on Penang Island, Malaysia. More specifically, this paper aims to highlight the current challenges against and prospects for further encouraging utility cycling on Penang Island.

The paper is organized as follows. The next section describes the study context. The following section outlines which stakeholders participated in the semi-structured interviews and the summary of data collection and analysis methods employed to answer the research objectives. It is then followed by the findings, after which the paper concludes with a discussion of the key lessons learned, limitations of

the study, and an outline of some practical recommendations to assist the local authority in informing programs that promote utility cycling.

Study Context

Penang is one of thirteen states in Malaysia and is located on the northwest coast of Peninsular Malaysia. It is divided into two parts: Penang Island and *Seberang Perai* (Penang mainland). Both the island and the mainland are connected by two bridges, as well as by ferry services. The capital city, Georgetown, is located on the island's north side and is well known as one of the UNESCO World Heritage sites. Penang Island covers an area of 293km² and has a population of 800,000 people (Institute for Transportation and Development Policy [ITDP], 2019). It was chosen as a study area because, like most urban cities in Southeast Asia, it suffers considerable traffic congestion regularly. Despite this, through some of its policies, the state government pledged to make Penang livable and sustainable by 2030. In addition, the local authority, the City Council of Penang Island, has been actively improving the cycling infrastructure there.

Historically, the bicycle has been seen as transportation in Penang. However, over the years, increasingly few Penang residents have viewed it as a mainstream form of transport. There is no comprehensive data on bicycle use for utility there, but it is believed that the modal share for utility cycling in Penang stands at less than 1% (ITDP, 2019). It is not surprising given that Malaysia is

ranked second among the ASEAN countries regarding the greatest number of inhabitants owning private vehicles (897 per 1000 people) (Lim, 2019; Mohamad & Kiggundu, 2007). As noted earlier, one of the major urban issues in Penang Island is traffic congestion. Many factors have contributed to the shift to a car-centric society: the rapid development in Penang Island, such as the boom in industrialization, road and highway construction, and national car policy, as well as high petrol subsidies.

When the current government took over Penang in 2008, it aspired to make Penang a greener, cleaner, safer, and healthier state (DAP Malaysia, 2016). It was a noble ambition on the state government's part; since then, numerous initiatives have been implemented to achieve this goal. One such initiative is promoting cycling amongst the public, as evidenced by the development of cycling infrastructures, such as the dedicated cycling lanes, "sharrows" (bicycle signs painted on roads), and bicycle signboards around the island. The first phase of a 12km cycling lane connecting the Queensbay Mall to GAMA/KOMTAR in Georgetown has been completed. Whereas, the second phase, which includes the cycling and pedestrian spiral bridge to cross from the Bayan Lepas Expressway to the Lebuhraya Sungai Nibong and the Bayan Baru roundabout at the Krystal Point, was completed in 2018. Furthermore, the additional plan in the Penang Bicycle Master Plan 2010 (Majlis Bandaraya Pulau Pinang, 2010) also aimed to construct a cycling path between the Bayan Lepas Free Industrial Zone and

Penang International Airport through the Bayan Baru, which is expected to be completed within the next couple of years.

In addition, there are many cycling events and campaigns organized by the local cycling clubs in Penang. For instance, one of the round-island cycling events has become a yearly occasion to lobby the state government to build cycling infrastructure, including cycling lanes, in Penang. The state government also launched a Friday ride-to-work campaign to encourage people to commute by bicycle to work once a week, using the dedicated cycling lanes to the capital city of Georgetown. State campaigners have also promoted better cycling infrastructure in Penang by providing input, feedback, and recommendations to the state government and the local council. Plus, to further increase awareness of cycling in Penang, the state government has also launched a proper cycling map (Sekaran, 2018).

Penang achieved another milestone at the end of 2016 when the state government launched the bike-share system, which featured more than 20 bike stations located around Georgetown. Moreover, similar to Hangzhou Public Bicycle in China, the local government launched the bike-sharing scheme with similar objectives to tackle traffic congestion (Shaheen et al., 2011). This goal is to be achieved by providing a bike-share system as an alternative mode of transport for the public that offers a solution to the first-and-last-mile problem. The public can rent bicycles at affordable charges and run their errands around town. It

is reported that there are 29 docking stations with 250 bikes available in the Georgetown area, the Gurney Drive, the Karpal Singh Drive, and the Queensbay Mall area (Chiam, 2018). However, critics argue that despite performing relatively well in its first year of operation, the role of the bike-share system as a feeder mode is still underutilized (Kadir et al., 2019).

Furthermore, despite the state government's above-mentioned efforts and initiatives, most cyclists in Penang are still considered to be recreational cycling mostly for leisure or sporting purposes at weekends. In Latin-American culture, "these groups see the bicycle as 'sports equipment' and not as a utilitarian vehicle" (Brussel & Zuidgeest, 2012, p. 194). Commuting by bicycle or cycling to run errands daily is still a rare sight. Foreign labor workers comprise the only group who consistently commute by bicycle on Penang Island. To some extent, perceived social class and status are attached to using a bicycle. Likewise, in many other developing countries, bicycles are often viewed as a transport option for vulnerable groups, while the more affluent groups cycle for recreational purposes (Bakker et al., 2018).

METHODS

This study applied a qualitative method. Initially, a purposive sample of 30 participants was identified from those involved in cycling activities on Penang Island, but only 25 participants agreed to be interviewed. Purposeful sampling was

used for the local council staff, a bike-share operator, and some cyclists. First, the local council staff consists of two traffic engineers, one assistant engineer, two councilors responsible for traffic matters (both have a transportation and urban planning background), and a mayor (formerly an architect for the council). These participants were responsible for cycling activities and programs, such as planning and implementing cycling infrastructures and organizing cycling events. They were identified on the local council's website and were contacted via email. Second, one bike-share operator in Penang was contacted via email. Third, the cyclists used in the study

were categorized into utility cyclists (those who commuted by bicycle at least three times a week) and recreational cyclists (those who cycled for fun at least twice a week). Fourth, some cyclists were identified from cycling groups on Penang Island. Finally, they were contacted via social media platforms such as Facebook and WhatsApp. Although a list of cyclists was compiled at the outset of the research, the snowball sampling technique was also utilized to add more participants. Specifically, they were asked if they would recommend other potential cyclists after interviews. The final sample was classified into four categories, as shown in Table 1.

Table 1

Number of participants

| Participants | Number |
|---------------------------|---------------|
| Utility cyclists (U) | 8 |
| Recreational cyclists (R) | 10 |
| Local council staff (S) | 6 |
| Bikeshare operator (B) | 1 |
| Total | 25 |

The rationale behind selecting these individuals is that this study focuses on multiple perceptions and experiences of utility cycling in Penang Island that received less attention in the literature. The demographic of the participants is shown in Table 2.

A total of 25 in-depth interviews were conducted, with semi-structured questions based on an interview guide.

The questions were designed to identify the participants' perceptions of the cycling infrastructure in Penang, including the perceived barriers and facilitating factors related to utility cycling on the island. The following questions, among other things, were explored: Why do you cycle? What makes you decide to commute by bike? Why are you not commuting by bike to work? Do you think the bicycle as a form

Table 2

Demographic of participants

| Participants | Number |
|--------------------------|--------|
| Age | |
| 21–30 | 4 |
| 31–40 | 6 |
| 41–50 | 7 |
| 51–60 | 3 |
| 61–70 | 5 |
| Gender | |
| Female | 3 |
| Male | 22 |
| Employment status | |
| Employed | 22 |
| Unemployed | 0 |
| Retired | 3 |
| Total | 25 |

of transport is popular in Penang? (Why and why not?) Do you notice any cycling infrastructure/facilities in Penang? Are there any challenges you face while commuting by bike? What do you think MBPP can do to encourage utility cycling in Penang? What can the government, employers, and cycling advocates do to encourage utility cycling in Penang?

The participants were briefed on the study's overview and given a written informed consent form emphasizing their anonymity and confidentiality. On average, the duration of the interviews was between 45 minutes and an hour. Only three participants spoke Malay, while the rest spoke English. All participants gave consent to audio-recorded conversations and have since been de-identified. The recordings were fully transcribed and entered in NVivo Version 12.0. Initial codes were

extracted from the analysis. Codes were then categorized into challenges and prospects for cycling, and themes were identified and organized accordingly in relation to the study's objectives (Heinen et al., 2010; Rios et al., 2013).

FINDINGS

The following section is structured according to two main sets of findings, i.e., the challenges and the prospects for utility cycling on Penang Island. Several themes within these categories were identified from data analysis. The themes for challenges were identified as a poorly built environment, safety and enforcement, lack of cycling facilities, natural environment, and lack of local authority commitment. Conversely, the themes for the prospects were awareness campaigns and education, a bike-share system, incentives, integration of bikes and transit, better cycling infrastructure, automobile restraint policy, and collaboration with the private sector. In the analysis, both the emic (participants') viewpoint and the etic (researcher's) interpretation are considered (Reid et al., 2005).

Challenges to Utility Cycling

Poorly Built Environment. Most participants agreed that the local council's effort to build cycling infrastructures was commendable. However, opinions were divided regarding whether the existing infrastructures, such as dedicated bike lanes, could encourage utility cycling. Most respondents (except staff) were not satisfied with the current condition of the bike lanes.

Indeed, some utility and recreational cyclists commented that the current bike lanes are “not practical for commuting” because of their poor condition, e.g., uneven surfaces and barriers (i.e., bollards) in the middle of certain sections. Moreover, cyclists from both groups expressed discomfort over sharing the bike lanes with pedestrians:

Furthermore, the lanes are shared between pedestrians and cyclists. I would say the city is not yet ready to build proper cycling infrastructure. A lot more has to be done and to be taken into consideration. (U4)

Poor Connectivity and Accessibility. The most significant barrier mentioned by both groups of cyclists was that the dedicated bike lanes along the coastal area were not connected to public places, such as schools, markets, malls, and residential areas. In addition, they claimed that the coastal bike lanes were constructed not for commuting but for recreational purposes. As a result of these connectivity issues, many cyclists from both groups noted that they have to drive to the bike lanes because they do not want to take any risks cycling on the roads alongside other vehicles. Thus, they contended that to encourage utility cycling, “first and last-mile connectivity is important” (R10).

Urban sprawls, meanwhile, are a relatively common problem in Penang. Hence, ‘door-to-door’ utility cycling does not present a convenient option to many people. Furthermore, it is worth noting that

many recreational cyclists, even though they usually cycle for longer distances and in hot weather, will not choose to cycle to work. As U4 opined:

... the distance is the main barrier. Well, in Malaysia, the industrial center and the city center are on different ends; even the neighborhoods are being flocked to one place. Distance does not play a major role for recreational cyclists as they cycle for long distances, but it will take more than distances when cycling to work. (U4)

Safety and Enforcement. Another issue that was raised on multiple occasions was safety. For example, participants discussed safety in terms of cycling on lanes shared with other road users, such as drivers of motor vehicles, as explained by U1:

The number of cars is increasing, and the drivers are not cautious enough when it comes to driving, as they are driving at high speed. The car drivers are also not taking cyclists on the road into consideration when they are driving. (U1)

This issue was raised because Penang is notorious for its congestion and its dangerous and aggressive driving behavior. Other participants, meanwhile, mentioned that the lack of enforcement on bike lanes had encouraged motor-bikers to encroach onto the lane, posing a danger to cyclists:

And of course, here I will say that the cycling group is always asking for enforcement. And that in fact, the council

doesn't really care about enforcement. It is very poor enforcement. (B1)

Other safety issues mentioned by participants were snatch-theft and being chased by dogs.

Lack of Cycling Facilities. The lack of cycling facilities deters many cyclists from utility cycling. Both groups of cyclists noted that certain cycling necessities, such as bicycle-parking spaces, workplaces' shower rooms, and lighting along bike lanes, do not exist in many places. Without proper and safe bicycle parking, the risk of bicycle theft increases. Participants also emphasized the need for employers to support utility cycling by providing cycling facilities at workplaces. Some recreational cyclists commented that top management supporting utility cycling is crucial. Most the utility cyclists at least have shower rooms in their office buildings:

Do they (employers) provide you with necessities like a shower room, changing room, lockers, and places for you to park your bike? I think all these should be taken into consideration, as well. (R10)

A few participants made comparisons between cycling facilities in Singapore and Penang Island. U7 shared his experiences of cycling in Singapore:

For example, the bike lane in Singapore is very flat and along the way, you can have (there are) cafés for refreshments

and then toilets. Even the toilets have a water refill station. You can refill your (water) bottle there. It's very nice. Along the way is mostly shaded with trees and I find our bike lane hasn't enough trees and is very hot. (U7)

Weather. The natural environment—for example, the tropical climate and distance—were commonly cited by participants from each group as the main barrier to utility cycling. The hot and humid weather and the rainy season are certainly challenging for people commuting by bicycle. For instance, U3 pointed out that most people do not enjoy sweating at their destinations.

Lack of Local Authority's Commitment.

While some participants, especially local authority staff, acknowledged the state government's continuous efforts to encourage utility cycling on Penang Island, most cyclists were still unsatisfied and expected more. They discussed the lack of commitment from the state government and local authority, despite the common green rhetoric. One of the utility cyclists believed that the local authority could do more and perform better. In contrast, other cyclists contended that utility cycling is not their top priority and that the local authority staff needed to change their mindset by prioritizing sustainable transport agenda (i.e., cycling). Moreover, some participants were critical of the state government's top management for not setting an exemplary model in encouraging the public to cycle to

work. They stated that the local authority's efforts were more akin to "box-ticking," with the state government seen as paying lip service to be a green and sustainable state rather than committing to such a venture:

I guess he (referring to the mayor) is doing something, but I don't think it is enough. He is more of, like, a leisure cyclist than a serious commuter because I think if he does want to be a serious commuter then I'm sure he will say, "I think we need a shower facility in the town or city hall and better bicycle infrastructure." I mean, he will be pushing for it, right, but no? (U3)

By contrast, two of the staff contended that the current mayor always encourages them to use bicycles to run errands or to attend meetings at a short distance.

Prospects for Utility Cycling

Awareness Campaigns and Education. Participants across the board agreed that cycling-awareness campaigns, including cycling events, had contributed to general recognition regarding the importance of cycling. However, opinions were divided between cyclists and local council staff in terms of whether the cycling campaigns and events were designed to encourage utility cycling. Some of the cyclists claimed that they were organized for recreation and sport. However, a few participants noted that annual cycling events, such as Campaign for A Lane (CFAL), organized for ten years, played a crucial role in developing Penang

Island's bike lanes. All participants agreed that a cycling-to-work campaign, initiated in collaboration with the local council, is a strong platform for creating awareness of utility cycling. However, some participants were concerned that, over the years, the campaign has stopped attracting bike-commuting people to work. In addition, participants emphasized the need for education, especially for school children, regarding the benefits of sustainable transport, particularly concerning the bicycle as a mode of transport. Finally, other utility cyclists observed that cycling education could be incorporated into the driving curriculum.

Bike-Share System. A few participants recognized the contribution of the current bike-share system in Penang Island, which was introduced at the end of 2016 with 29 stations in Georgetown areas and later expanded to a few other locations, such as Queensbay Mall, Intel, and Summerton. One of the staff mentioned the possibility of increasing the number of docking stations in Penang Island and not necessarily focusing on the Georgetown areas. Some participants agreed that expanding the number of bike-share systems can encourage people to run errands around town by bike.

Of course, we need to improve; we need to encourage more people to cycle. Now (we are) thinking to add more stations. In our future plan, we are going to study the alignment between the bike-share stations. The operator (of the bike-

share) also recommends to us which stretch (location) is suitable. (S3)

Incentives. A few participants suggested that monetary incentives, such as cash vouchers and tax rebates, could be a viable option to encourage behavior change. Another utility cyclist added that tax exemptions for employees who cycle to work might be attractive to some people (U2) before pointing out that while cash might be a popular option, it does not necessarily increase utility cycling if cycling infrastructure is not already in place.

Bike and Transit. The integration of bike and transit addresses the first-last mile problems. While Penang public transport (i.e., Rapid Penang) permits bicycles on board, only “folding” models are allowed. In fact, “folding” bicycles are only allowed on selected Rapid Penang buses. In addition, another cyclist, U3, noted that public buses should be equipped with bicycle racks to allow for normal bicycles to be transported:

I’ve seen these buses back in [the] States, where you can mount your bicycle in the front or back. To help people with the last mile sort of thing. So, I think that will be quite useful. Also, with [the train system] KTM, they used to allow bicycles but now they don’t anymore. I don’t know why. (U3)

Better Cycling Infrastructure and Facilities. Most participants concurred with the view that Penang can be considered

a leading state with regard to cycling infrastructure and facilities. Nonetheless, they agreed that better cycling infrastructure and facilities would encourage more utility cycling, especially for those still “on the fence,” i.e., recreational cyclists. Some of the cycling infrastructure and facilities mentioned by the participants include showers and locker rooms at workplaces and commercial buildings. U4 considered himself lucky because his employer is supportive of those who cycle to work and because casual office attire is allowed. In addition, one of the staff, S6, highlighted the prospects of creating more shaded areas for bike lanes and shower rooms in offices. He noted that utility cyclists should talk to their employers about installing a shower room in their workplaces. Another staff member, S4, remarked that the local authority had mandated a development policy for new buildings to provide bicycle facilities, such as shower rooms and bicycle parking. Indeed, another important but often neglected cycling facility is bicycle parking. U3 stated the importance of securing bike parking in workplaces and public places to encourage utility cycling.

Motor Vehicles Restraint Policy. According to the most participants, the greatest issue concerning utility cycling was safety on the roads. It is largely because automobile ownership in Penang is on the rise. Many participants, therefore, advocated an automobile restraint policy and a better public transport system to make the roads safer, especially for utility cyclists.

I would say the policy should be more on us reducing the dependency on cars and giving various alternatives for people to commute, like public transport. In general, the government should come up with an active mobility policy. (U4)

Similarly, the bike-share operator (B1) agreed on a policy to reduce dependency on motor vehicles. However, he added that such a policy could work if there are other alternatives for people to consider, such as incentives and an efficient public transport system. In this vein, some participants described a motor-vehicles restraint policy comprising higher tax for car ownership and fewer fuel subsidies, congestion charges, and higher parking fees. U3 commented:

Maybe parking fees should be higher, congestion charges. This is also to lend a hand to public transport. If you want to reduce carbon emission, heat effect, and traffic congestion, and all of these are really the big cars and the single-occupancy vehicles. I can understand where the car can be useful and everything. I'm not saying ban cars but there are way too many people, able-bodied people, with single-occupancy vehicles. So, we must discourage driving and encourage more public transport, and more cycling. (U3)

Collaboration with Private Sectors. Some participants discussed the need for the local authority to collaborate with the private sector to finance some of the necessary

cycling infrastructures and reduce the financial burden on the state government. S6 explained:

We also work together with the private sector. Thank you to people who have taken part in this contribution (bike lane), like IJM. Of course, when we started the lane, it was not so perfect. Eventually, we hope we can improve. (S6)

Two of the participants, U8 and R2, advocated collaboration with the private sector in the form of corporate social responsibility (CSR), such as knowledge-transfer, i.e., private sectors that possess knowledge on cycling can advise the state government and form collaborative programs, such as “adopting a bike lane.”

DISCUSSION

Normalizing bicycle commuting or utility cycling among locals can be challenging, but utility cycling is feasible for a distance of fewer than 10km. Nonetheless, Heinen et al.'s (2010) study identified similar themes that can hinder utility cycling. These themes are a built environment (i.e., distance, infrastructure); the natural environment (i.e., landscape, topography, weather, and climate); and other variables (i.e., travel time, comfort, safety).

Likewise, many of the concerns that participants raised in this study were in line with the criteria necessary for utility cycling to flourish, i.e., dedicated bike lanes to ensure safety (e.g., separating bike lanes

from motor-vehicle traffic); directness (i.e., fewer detours and no barriers); comfort (i.e., smooth road surface and shaded bike lanes); facilities (i.e., bicycle parking); regulations; cycling promotion activities; and a bike-sharing system (Pettinga et al., 2009; Rios et al., 2013). The findings were also consistent with a survey in Kuala Lumpur documenting that the main barriers to utility cycling were “traffic conditions, driver behavior, road conditions, absence of cycling lanes, lack of public transport and theft concerns” (Bakker et al., 2016; Shokoohi & Nikitas, 2017).

Safety concerns are the main reason people feel discouraged from engaging in utility cycling. As Fishman et al. (2012, 2013) noted, such issues are common in other locations worldwide, such as Australia, the United Kingdom, and North America. For example, Taha (2018) pointed out that respondents in her survey in Penang viewed riding bicycles on shared roads with other motorized vehicles as a challenge. It is not surprising, given that Penang Island roads are always congested, especially during peak hours. According to the Penang Road Transport Department, the registration of new vehicles on the island continues to rise each year, which is particularly alarming when the number of vehicles steadily increases against the total size of Georgetown, which is relatively small compared to other cities (The Sun Daily, 2017). In addition, Penang drivers are notorious for their reckless and dangerous driving. As Fishman et al. (2013, p. 17) have noted, among cyclists, major safety concern is related to “perceived risk of collision with motor-vehicles,” in addition to their fear

of motorists’ behavior due to the virtual non-existence of a bicycle-commuting culture and the lack of workable cycling infrastructure.

Similarly, Shokoohi and Nikitas (2017) reported that the lack of personal safety and the occurrence of traffic crashes were a major barrier to people bike-commuting in Kuala Lumpur. As a result, Malaysia has the third-highest fatality rate from road-traffic crashes in Asia and Southeast Asia, behind only Thailand and Vietnam (Lum, 2019). In response, applying intelligent transportation systems to reduce pedestrian/bicycle crashes may encourage utility cycling (Hadi et al., 2019). Moreover, more stringent enforcement is required to better safeguard cyclists on dedicated bike lanes, especially when motorbikes can easily encroach on such spaces.

Recommendations

The weather, especially the tropical climate, was often cited as one of the challenges to utility cycling (Meng et al., 2016). However, a recent study in Singapore by Lee and Pojani (2019, p. 361) highlighted that high temperatures and heavy tropical rains can be “an important, though not crucial, factor in the decision to cycle.” Perhaps the most convenient option for commuting in a tropical climate, such as Penang Island, is an e-bike (a pedal-assisted bicycle with an electrically charged battery). E-bikes have been well received worldwide for commuting purposes and, to some extent, can overcome the challenges of long-distance commuting or covering

hilly areas (Jackson, 2014; Lee & Pojani, 2019; Strömberg & Karlsson, 2016). They might offer a practical and safe alternative to motorbikes in some circumstances. In many other developed countries, e-cargo bikes are beginning to receive attention as they can accommodate greater loads, such as groceries, and even transport passengers (Riggs, 2016). E-bikes also have the potential to encourage utility cycling.

Cycling for recreation or leisure is popular and vibrant on Penang Island. Many cycling events and cycling groups evidence it. Likewise, as observed by Shokoohi and Nikitas (2017, p. 625), in Kuala Lumpur, “recreational cycling has recently been visible mainly because it has been adopted as a leisure activity by the middle class and practiced mainly within designated and car-free areas, or in residential areas on weekends when traffic is calm and during cycling events.” Hence, it is common to see foreign labor workers commuting by bicycle while the locals cycle primarily for leisure. For that reason, a strong advocacy group for utility cycling is crucial. Furthermore, advocacy for utility cycling should be intensified and mobilized to attract more people to bike commuting. Indeed, Oldenziel and de la Bruheze (2011) argued that social actors are crucial in shaping the social embedding of cycling. To this end, the “bike-to-work” campaign plays an important role in creating awareness of utility cycling and lobbying the state government to create better cycling infrastructure. However, as pointed out by some of the participants, the campaign

is increasingly becoming a recreational cycling body rather than one that encourages cycling for commuting.

In a place where utility cycling is not a received norm, the debate between cycling infrastructure and developing a cycling culture can be endless and is, arguably, a “chicken-and-egg” discussion. For example, the state government introduced a cycling map, known as the Penang Bicycle Route Master Plan, in 2010, detailing the construction of a cycling network around the island. It is advertised as 200km of “bicycle lanes” (Majlis Bandaraya Pulau Pinang, 2010). The use of “bicycle lanes” is a misnomer, however, because not all the lanes are dedicated or segregated bike lanes; indeed, some of the routes are shared with motor vehicles. This returns us to the issue of safety, as discussed earlier.

Overall, Penang’s cycling infrastructure has been regarded as good, but there is still much room for improvement. There is a popular mantra of “build them, they will come,” which follows the notion that if there were an established cycling infrastructure, people would use it. The premise does not seem to apply on Penang Island, in any case. While the cycling infrastructure is in place, the volume of people bike-commuting remains low. For the cycling infrastructure to be fully utilized, the state government and local authorities need to understand the goal of building such a framework, i.e., a cycling infrastructure for utility cycling or recreational cycling. In addition, understanding and differentiating between the diverse types of cyclists are necessary.

For instance, if the state government intends to encourage utility cycling, the built environment must support utility cyclists, i.e., there is a need for a dedicated bike lane to be connected to public places and residential areas. A different understanding of this issue was reflected when cyclists and local authority staff expressed varying opinions regarding the local authority's commitment to encouraging utility cycling. Cyclists (in particular, utility cyclists) expected the government to serve as a role model in providing better infrastructure and other cycling-friendly facilities, such as safe bike parking, well-shaded bike lanes, smooth surfaces, and good street lighting, showers, and locker rooms at workplaces.

On the other hand, the staff, mostly non-cyclists, were satisfied with the existing cycling infrastructure. To effectively support utility cycling, well-trained staff with a high level of commitment, understanding, and skills is needed at the local council. With regards to the notion of the government acting as a role model or leading by example, the Mayor of Odense once pointed out, "If your city is starting from a low level and wants to change the way that people are behaving, my recommendation is that the mayor should lead the way. The most important thing is to start with yourself as a personal example. If it works for you as the mayor, it will work for the city" (Gualdi & van den Noort, 2013, p. 12).

As shown in the findings, it is no surprise that despite enjoying recreational cycling, using a bicycle as a main mode of transport can be inconvenient. It could

be argued that a well-considered cycling infrastructure and an accompanying set of facilities would help transform recreational cyclists into utility cyclists. It is possible because, as Park et al. (2011) documented in their study, more than 50% of utility cyclists in Singapore were once recreational cyclists. In further support of this point, it is notable that many studies reveal that a lack of cycling infrastructure can discourage people from taking up the activity (Akar & Clifton, 2009; Aldred, 2019; Lee & Pojani, 2019; Pucher et al., 2010).

The state government should also consider integrating bicycles (not just folding bicycles) into public transport. It can be addressed by installing bike racks at the front of buses, as has been done in other cities such as Chicago, Toronto, and Portland (Pucher et al., 2011). In addition, a bike-sharing system should be expanded to other areas. Studies have shown that people are not interested in cycling to work if they travel more than 10km each way. Thus, for those who cannot cycle from door to door, integrating bikes and public transport and bike-sharing provides a good alternative. In other words, it can also be a solution for the first-last mile problems. However, public transport must improve its efficiency to attract this option.

As highlighted by the Penang Green Transportation Plan (ITDP, 2019), the key challenges preventing Penang from moving toward green and sustainable transport (including utility cycling) are as follows:

- the pervasiveness of the car culture that supports car ownership, low fuel prices, and low parking fees

- road design that is built to accommodate motor vehicles
- the pervading negative attitude toward walking and cycling.

Dr. Lim Mah Hui, a former local councilor, addressed a local council meeting on the issue of traffic congestion in Penang in 2013. He pointed out that the state government should seriously consider promoting the bicycle as an alternative mode of transport and incorporating it into the Penang Transport Master Plan (PTMP). One of the plans in the PTMP is to build more roads and highways, but this drew considerable criticism from sustainable transport advocates and experts. As argued by López and Wong (2017a), the attitudes of the government and institutions in favoring the car can confer an inferior status on the bicycle. If the state government is serious and committed to fulfilling the Sustainable Development Goals (SDGs) and making Penang a green and livable state, it should strongly support a sustainable transportation and development policy that prioritizes bicycle use. In that case, it should strongly support a sustainable transportation and development policy that prioritizes bicycle use.

Limitations

One limitation of this study is that participants did not discuss the psychological variables involved in choices regarding cycling, such as attitudes and norms. It is significant because these variables contribute to the non-existence of a utility cycling

culture in a predominantly car-oriented city (Heinen et al., 2011; López & Wong, 2017a; Milković & Štambuk, 2015). There remain perceptions in society that tend to associate car ownership and bicycle use with socio-economic status (Shokoohi & Nikitas, 2017). Gozun (2001) argues the importance of personal attitudes and community values in determining the acceptance of utility cycling in Philippine society. Indeed, some stereotype-based attitudes toward cyclists are still prevalent. For instance, some people believe that cyclists do not have the right to use the roads because “they do not pay for road tax” or because “roads are meant for motor vehicles.” López and Wong (2017, p. 669) exemplify this point in their study, stating that “some drivers showed animosity towards cyclists, particularly where cycle facilities took up ‘their’ space.” As suggested by participants, awareness, education, and cycling training are crucial to solving such problems. However, such efforts continue to be neglected in the Malaysian education system, despite researchers such as Pucher et al. (2011) highlighting the important role of cycling education and training among school children, as well as education of motorists on cyclists’ rights and their responsibilities as fellow road users.

Another limitation is that the interviews were not carried out with sufficient numbers of participants of diverse demographics to generate a greater understanding of the perceived issues. For instance, non-cyclists and female participants were under-represented. Admittedly, efforts were made to recruit more female cyclists and non-cyclists, but they declined to participate.

Given the argument presented above, numerous perceived barriers discourage utility cycling, such as a poor built environment, limited cycling facilities, safety concerns, natural environment, and lack of local authority commitment toward utility cycling. Therefore, to fully integrate cycling into the mainstream transport sector, efforts should focus on improving the built environment and cycling facilities and intensifying cycling campaigns, education, and advocacy.

CONCLUSION

Indeed, when assessing the current situation regarding utility cycling in Penang Island, promoting cycling for recreation, leisure, or sports is not lacking in Penang. However, more concerted efforts such as providing a better-built environment and human infrastructure must be mobilized to promote utility cycling properly. There is no one-size-fits-all plan for a utility-cycling city, in any case. Approaches must therefore be tailored to local needs and context to accomplish goals. Future studies could further explore this issue by expanding the context of this study, such as by recruiting a larger and more diverse sample of cyclists, government officials, and other relevant stakeholders at the national level.

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The Influence of Social Media on University Students' Self-Esteem

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ABSTRACT

This study assessed the influence of social media on self-esteem among university students. Social media factors that affected the self-esteem of university students were investigated based on daily time spent on social media. Data were collected from an online questionnaire. Self-esteem was measured using the established Rosenberg Self-Esteem Scale. The quota sampling technique was deployed to select 381 undergraduate university students for this study. Descriptive analysis was performed to analyze the respondents' demographic details, including gender, race, and age. Correlation and regression analyses were executed using SPSS software to test the correlations between social media factors and self-esteem among undergraduate students. As a result, self-esteem among the students was not significantly influenced by the amount of time they spent on social media. Therefore, more studies are in need to further investigate the main factors that influence the self-esteem of university students.

Keywords: Self-esteem, social media, social networking sites, university students, youth

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INTRODUCTION

Social media are platforms and applications (apps) that prioritize networking, community-based interaction, participation, content sharing, and collaboration activities. Social media refer to internet-related programs that help people create and share content based on the philosophy and technologies of Web 2.0. There is a broad range of purposes for one to use

social media, including sharing, learning, interacting, and marketing. One may also use social media to exchange knowledge and thoughts in several ways, such as publishing one's ideas in prose with photographs or through videos and voice recordings via various channels, as well as connecting the audience to fascinating posts, images, and videos.

In the early 21st century, the rise and proliferation of social networking sites (SNSs) were witnessed across the globe. Online media consumption accounted for 33% of daily internet activities, whereby an average user was reported to spend 2 hours and 15 minutes a day on SNSs for communication purposes (Global Web Index, 2017). In July 2020, the use of web-based media extended dramatically to the point that it connected around 51% of the total population (WeAreSocial, 2020). Facebook, Instagram, Twitter, and LinkedIn are instances of active social networking platforms. Facebook recorded over 1.09 billion daily active users in March 2016, while Instagram had over 400 million weekly active users and 80 million users sharing images daily up to 3.5 billion views in 2016. Meanwhile, Twitter had 310 million monthly active users in 2016, whereas LinkedIn registered over 433 million users in the same year. Since the development of these various social media platforms, SNSs have become an integral part of people's lives, especially among the youth. Many teenagers use web-based media to build links to collaborate with others across the globe, exchange and learn knowledge, grow

more grounded identities, and enhance their public activities. However, individual trust and self-development seemed to deteriorate as a result of higher use of long-term interpersonal contact locales (Jan et al., 2017). Self-esteem turned moderate among social media users, especially Instagram users, while self-presentation was adversely affected due to the fear of missing out factor among the users (Jan et al., 2017).

Social comparison not only can lead to jealousy, but it can also lead to motivation (Meier & Schafer, 2018) that boosts one's self-esteem. A study by Al-Ghafri and Al-Badi (2016) revealed that all social media users possessed high self-esteem. Meanwhile, Burnasheva and Suh (2020) found positive associations between social media usage and self-image congruity, which further served as a mediator between social media use among millennials and conspicuous online consumption. Furthermore, for 20 to 30-year-old youth with higher faith in guided intercession studies, the pathway between mental self-portrait congruity and apparent online usage appeared to be more prevalent (Burnasheva & Suh, 2020).

The significance of social media has grown over the past decade, and its influence has had a long-lasting impact on individuals. Social network platforms, such as Facebook and Instagram, have facilitated promoting and selling of products and services within the business segment. However, some people suffer from low self-esteem due to certain associations established on the SNSs. Social media allow users to make social

associations that may trigger psychological discomfort, thus affecting one's level of self-esteem (Chen & Lee, 2013). Increased use of SNSs has resulted in people experiencing lower self-esteem and self-growth, leading to social anxiety, depression, and even suicidal thoughts (Woods & Scott, 2016). Most studies on the relationship between trust and the use of SNSs have shown that people with less confidence want to use more web-based media stages to boost their mental self-portrait and confidence. People with poor self-esteem, life satisfaction, and a few offline connections compensate by using SNSs to acquire more friends and visibility (Barker, 2009; Mehdizadeh, 2010). Several researchers have displayed a favorable association between Instagram use and narcissism, whereby the time spent and the number of posted selfies on Instagram were higher among narcissists (Andreassen et al., 2017; Moon et al., 2016; Sheldon & Bryant, 2016).

The effect of social media on one's self-esteem has been investigated using several statistical methods. For instance, Analysis of Variances (ANOVA) was employed by Al-Ghafri and Al-Badi (2016) to assess the self-esteem level of each social media user category, resulting in an insignificant relationship. Meanwhile, Bergagna and Tartaglia (2018) used *t*-tests and reported insignificant differences in social media usage with self-esteem in light of gender. Finally, correlation analysis was deployed by Köse and Doğan (2019) to determine social media addiction among university students in Turkey.

This present study assessed the influence of social media on self-esteem among university students in Malaysia using the statistical method. The next section elaborates on the methods applied in this study and followed by the section that presents the results and discussion. Finally, this paper ends with the study conclusion and suggestions for future work.

METHODOLOGY

This research work identified the relationship between social media and self-esteem among undergraduate students in Malaysia. The four phases deployed in this study were problem identification, data collection, data analysis, results, and discussion. Figure 1 illustrates the four phases process, followed by a description of each step.

Phase 1: Problem Identification

This study determined the effect of social media use on the self-esteem of undergraduate students in Malaysia based on the time they spent using social media. The problem identification for this study was determined from questionnaire surveys, a literature review (including journals, articles, & websites), and observation.

Phase 2: Data Collection

This study involved undergraduate students from a public university located in Malaysia. The sample size was determined from the population of three subgroups represented by a college in each subgroup. The selected university recorded 23,907 undergraduate students. Hence, the sample size was

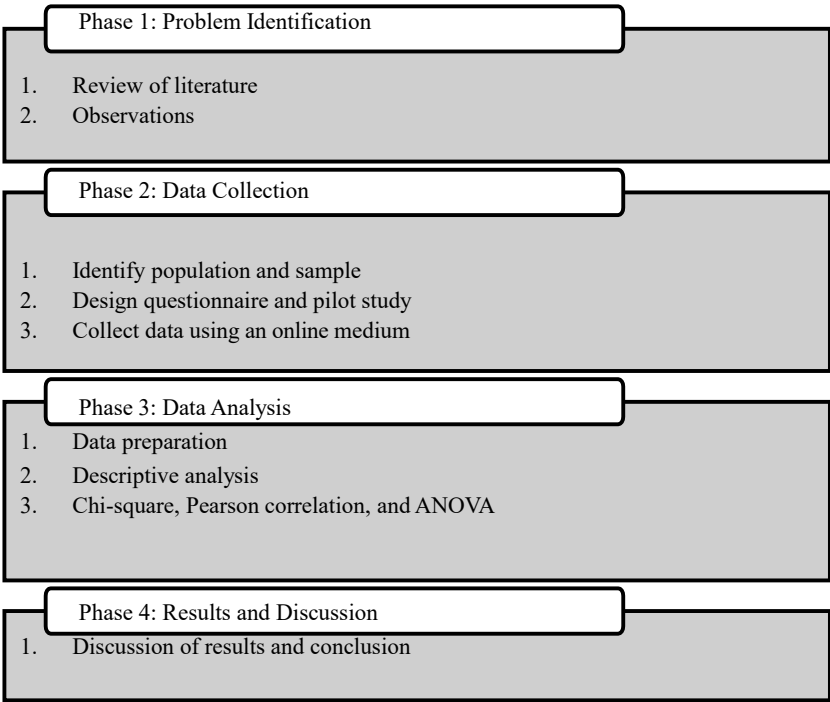


Figure 1. Phases of research activities

381 respondents (95% confidence level), whereby 127 respondents were selected from each of the three colleges. The quota sampling method was employed as the sampling technique. A questionnaire survey was distributed to the respondents. This questionnaire was composed of three sections, as follows:

Section A – Demographic Details

This section has multiple-choice items. The respondents were required to select only one answer for the following demographic details: gender, age, race, college, and current semester.

Section B – Social Media

In this section, several probing questions

were embedded to determine the relationship between social media usage based on a seven-point Likert scale (Strongly Agree to Strongly Disagree). Some of the questions included are as follows: ‘do they often think about social media,’ ‘how long are they using social media,’ and ‘do they feel associated with others when they use social media.’ In addition, the respondents were allowed to choose more than one answer for certain questions, such as ‘which social media platforms they are using’ and ‘what is the purpose of using those social media platforms.’

Section C – Self-Esteem

In this section, the respondents were asked about the extent to which they agree (or otherwise) with ten statements revolving

around their feelings about themselves on a four-point Likert scale (1 = Strongly Disagree to 4 = Strongly Agree). Some items are: 'I feel that I have a number of good qualities' and 'Overall, I am satisfied with myself.' The average scale of the ten items was analyzed. These self-esteem items were adopted from the Rosenberg Self-Esteem Scale (Rosenberg, 2015).

After designing the questionnaire, a pilot study was conducted to ensure that the developed questionnaire was indeed suitable for real data collection. This questionnaire was distributed via online platforms because it is a reasonably rapid and cost-effective technique during the Coronavirus Disease 2019 (Covid-19) pandemic. All students studied from home and practiced remote learning. Data were gathered from Google Forms distributed via SNSs, such as WhatsApp, Telegram, and Facebook.

Phase 3: Data Analysis

Initially, the data cleaning process was conducted to ensure that the data were ready for analysis. Next, descriptive analysis (frequency & percentage) was performed to analyze the respondents' background.

Finally, statistical analyses using chi-square statistics, Pearson correlation, and ANOVA were executed to achieve the main objective outlined in this study.

Phase 4: Results and Discussion

The results retrieved from Phase 3 are discussed and interpreted accordingly in the next section to meet the main objective of this study.

RESULTS AND DISCUSSION

Demographic Details of the Respondents

The respondents' demographics included college, gender, race, age, and semester. Out of the 381 respondents, 127 of them represented each college in the university. In total, 332 (87.1%) of the respondents were female students, while 49 (12.9%) were male students. The ethnicity of the respondents is presented in Table 1, where 283 (74.3%) were Malay students, 56 (14.7%) were Chinese students, and 28 (7.3%) were Indian students. The remaining 14 (3.7%) students were from Bidayuh, Jawa, Kadazan, and Dusun.

Table 1

Frequency and percentage of respondents based on ethnic

| | Frequency | | Percentage | Cumulative Percentage |
|------|-----------|-----|------------|-----------------------|
| Race | Malay | 283 | 74.3 | 74.3 |
| | Chinese | 56 | 14.7 | 89.0 |
| | Indian | 28 | 7.3 | 96.3 |
| | Others | 14 | 3.7 | 100.0 |
| | Total | 381 | 100.0 | |

As shown in Table 2, most respondents (48.3%) were 21–22 years old, while 39.9% of the total respondents were 23–24 years old (the second-highest age range). Most undergraduate students pursuing their degrees fell within these two age categories.

Table 2
Frequency and percentage of respondents based on age

| | Frequency | | Percentage | Cumulative Percentage |
|-------|--------------|-----|------------|-----------------------|
| Age | 19–20 | 19 | 5.0 | 5.0 |
| | 21–22 | 184 | 48.3 | 53.3 |
| | 23–24 | 152 | 39.9 | 93.2 |
| | 25 and above | 26 | 6.8 | 100.0 |
| Total | | 381 | 100.0 | |

The study semester of the respondents is presented in Figure 2. More than half of them (n = 218, 57.2%) were in their fifth and sixth semesters. The least respondents (7.3%) were in their seventh semester.

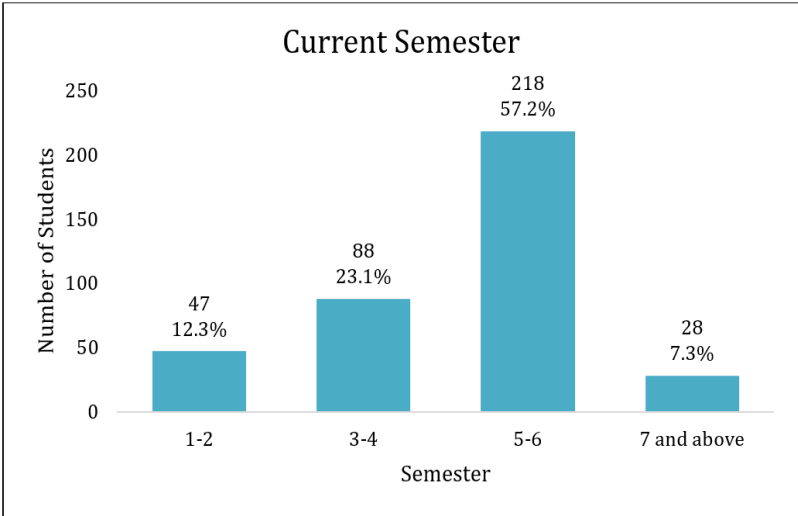


Figure 2. Frequency and percentage of respondents based on the current semester

Discussion of Findings

The primary objective of this study is to determine the influence of social media use on the self-esteem of university students.

This objective was achieved by looking into the time spent by the respondents using social media and the value of their self-esteem. Social media refer to the websites

and apps that emphasize communication, community-based input, engagement, content sharing, and collaboration. Among the various forms of social media are a forum, microblogging, social networking, social bookmarking, social curating, and wikis. Most social media platforms offer similar functions, such as messaging, sharing, posting pictures, and updating

stories. From time to time, more upgraded versions of the apps are launched. Therefore, app developers compete to be the most famous or trending app. Based on this survey, 360 and 359 respondents used Instagram and WhatsApp as the top apps daily. Figure 3 portrays the social media platforms used by the respondents for communication purposes.

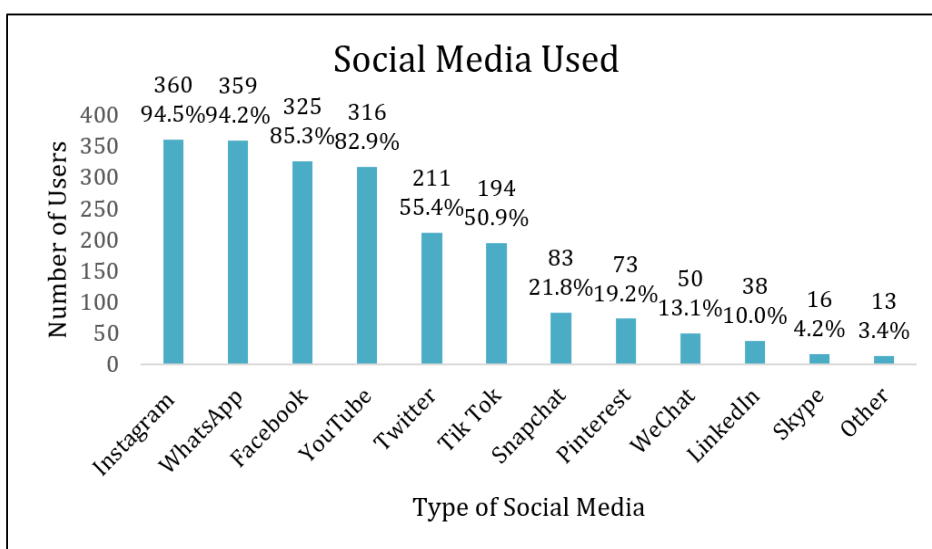


Figure 3. Use of social media platforms by the respondents

The respondents spent several hours daily on social media for multiple reasons. First, the frequency of social media usage served as an indicator of the respondents' self-esteem. Table 3 shows that 122 respondents (32.0%) spent 5–6 hours daily on social media, followed by 3–4 hours spent on social media by 108 respondents (28.3%). Next, only three respondents (0.8%) spent less than 1 hour daily on social media, and 62 respondents (16.3%) spent more than 8 hours or one-third of the total time in a day on social media. The findings

signified that most respondents (60.3%) spent 3–6 hours daily on social media.

Next, the identified levels of self-esteem were divided into three categories: high, average, and low levels of self-esteem. Table 4 shows that only 4.2% of respondents had high self-esteem, with the majority recording average self-esteem (71.7%) and the remaining 24.1% exhibiting low self-esteem. The frequency value of 273 confirmed that most respondents had an average level of self-esteem with a percentage of 71.7%.

Table 3

Frequency of time spent on social media

| | Frequency | | Percentage |
|------------|-------------------|-----|------------|
| Time spent | Less than 1 hour | 3 | 0.8 |
| | 1–2 hours | 44 | 11.5 |
| | 3–4 hours | 108 | 28.3 |
| | 5–6 hours | 122 | 32.0 |
| | 7 – 8 hours | 42 | 11.0 |
| | More than 8 hours | 62 | 16.3 |
| | Total | 381 | 100.0 |

Table 4

Levels of self-esteem

| | Frequency | | Percentage |
|-------|---------------------|-----|------------|
| Valid | High self-esteem | 16 | 4.2 |
| | Average self-esteem | 273 | 71.7 |
| | Low self-esteem | 92 | 24.1 |
| | Total | 381 | 100.0 |

Further analysis was conducted to determine the relationships among the variables using chi-square statistics (χ^2). Notably, an insignificant correlation was noted between ethnicity and time spent on social media ($\chi^2 = 21.0559$; $p = 0.1351$), whereas ethnicity and level of self-esteem displayed a significant correlation ($\chi^2 = 20.1509$; $p = 0.0026$). Meanwhile, the

relationships of age with time spent on social media ($\chi^2 = 10.4843$; $p = 0.7882$) and level of self-esteem ($\chi^2 = 4.4642$; 6141) had been insignificant. The outcomes showed that time spent on social media had a link with neither ethnicity nor age of the students. However, the level of self-esteem was dictated by the students' ethnicity (see Table 5).

Table 5

Level of self-esteem

| | High | Average | Low | Total |
|---------|------|---------|-----|-------|
| Malay | 9 | 207 | 67 | 283 |
| Chinese | 0 | 40 | 16 | 56 |
| Indian | 5 | 17 | 6 | 28 |
| Others | 2 | 9 | 3 | 14 |
| Total | 16 | 273 | 92 | 381 |

The relationship between self-esteem and time spent on social media among the respondents was determined via the Pearson correlation test using continuous data. In Table 6, the Pearson correlation test revealed a weak but positive relationship between the

two variables at 0.029. It indicated that more time spent on social media led to higher self-esteem. The significance value presented in Table 6 exceeded 0.05, depicting an insignificant correlation between social media usage and self-esteem.

Table 6

Correlation analysis between time spent on social media and self-esteem

| Correlations | | | |
|----------------------------|---------------------|----------------------------|-------------|
| | | Time spent on social media | Self-esteem |
| Time spent on social media | Pearson Correlation | 1 | 0.029 |
| | Sig. (2-tailed) | | 0.575 |
| | <i>N</i> | 381 | 381 |
| Self-esteem | Pearson Correlation | 0.029 | 1 |
| | Sig. (2-tailed) | 0.575 | |
| | <i>N</i> | 381 | 381 |

After testing the correlation between the two variables, linear regression analysis was performed to predict the value of the dependent variable (self-esteem) with the help of the predictor variable (time spent on social media). The outcomes are tabulated

in Tables 7 to 10. The value of $R^2 = 0.001$ denotes simple correlation (see Table 7). The R^2 values listed in Table 7 reflect the total variation in self-esteem explained by the time spent on social media, which was very low in this case at 0.1%.

Table 7

Total variation, R

| Model Summary | | | | |
|---------------|--------------------|----------|----------|----------------------------|
| Model | R | R Square | Adjusted | Std. Error of the Estimate |
| 1 | 0.029 ^a | 0.001 | -0.002 | 0.495 |

a. Predictors: (Constant) Time spent on social media

Table 8
ANOVA between self-esteem and time spent on social media

| Model | | Sum of squares | df | Mean square | F | Sig. |
|-------|------------|----------------|-----|-------------|-------|--------------------|
| 1 | Regression | 0.077 | 1 | 0.077 | 0.315 | 0.575 ^b |
| | Residual | 92.763 | 379 | 0.245 | | |
| Total | | 92.840 | 380 | | | |

a. Dependent Variable: Self-esteem
b. Predictors: (Constant) Time spent on social media

The ANOVA (see Table 8) displays the performance of the regression equation if it fits the data. In Table 8, the significant value exceeded 0.05. It means that the regression model was neither statistically significant nor a good predictor of the dependent variable, which in this case, signifies the self-esteem of the respondents.

Table 9
Coefficient

| Model | Unstandardized Coefficients | Standardized Coefficients | T | Sig. | |
|----------------------------|-----------------------------|---------------------------|-------|--------|-------|
| | B | Std. Error | Beta | | |
| (Constant) | 2.155 | 0.083 | | 26.001 | 0.000 |
| Time spent on social media | 0.011 | 0.020 | 0.029 | 0.561 | 0.575 |

a. Dependent Variable: Self-esteem

The coefficients listed in Table 9 facilitated making predictions of the dependent variable. It was executed using the regression equation. The regression equation consists of beta values and the value of the independent variable, time spent on social media, and self-esteem. The regression equation is expressed as follows:

Self-esteem = 2.155 + 0.011 (time spent on social media) [1]

One’s self-esteem can be predicted based on social media usage, as given in Equation [1]. An hour spent on Facebook daily resulted in a 0.011 increment in one’s self-esteem score.

The study outcomes showed no substantial link between individual self-esteem and time spent using social media. However, the correlation value between these variables, which displayed a weak but positive relationship, signified that time spent on social media positively influenced

students' self-esteem. Similarly, Valkenburg et al. (2021) reported that most youths experienced no or very small effect of social media usage on their self-esteem. Instead, the users motivated themselves by using social media for various causes to boost their self-esteem (Al-Ghafri et al., 2016). Turning to this study, most respondents scored average self-esteem, denoting the insignificant effect of social media usage on their self-esteem. It suggests the presence of other reasons behind their score, which could be explored in future work. The next section concludes this study and lists several recommendations for future endeavors.

CONCLUSION AND FUTURE WORK

Social media have undeniably, turned into a crucial application, particularly among the youth. The growing popularity of social media, which tends to increase the emotional burden, such as anxiety, highlights the importance of improving one's emotional well-being. As such, this study assessed the effect of social media use on one's self-esteem. The findings revealed that social media did not adversely affect university students in terms of self-esteem. Instead, the correlation was entirely mediated by social comparison and self-esteem. Furthermore, this study indicated that the level of self-esteem was only correlated with the ethnicity of the students. Since self-esteem varies from one individual to another, other key factors that boost self-esteem among youth should be explored. Future research endeavors should

concentrate on the processes behind the effects of social media use on emotional well-being. Such a study may facilitate health educators and campaigners to devise more effective programs for the youth segment in promoting emotional health in this digital era.

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The Importance of Humanistic Dimension in Managing Rohingya Refugees in the Indonesian Western Province of Aceh

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ABSTRACT

One of the reasons Rohingya refugees were saved from the sea in the Province of Aceh is based on humanity; nevertheless, the stakeholder management on the ground tends to dismiss the importance of the humanistic dimension. It includes challenges of the state in providing assistance, the limitation for resettlement, job opportunity prohibition, limited development of skills, and partnership challenges in the field. This paper addresses the practical implementation of managing refugees at the local level towards the six domains of the humanistic dimension through the Spider Web configuration. It allowed relevant stakeholders in the province to analyze their challenges, address their limitations and measure their practical action in locally managing Rohingya refugees. The result showed that the most important humanistic domain in managing refugees was a partnership with stakeholders followed by the resettlement process. At the same time, the region considered labor opportunity, not an important humanistic dimension. The paper further discussed the possibility of a partnership with non-state actors, particularly private sectors, to provide skills and training development and job opportunities for the future Rohingya self of reliance.

Keywords: Humanity, partnership, refugee management, Rohingya

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INTRODUCTION

The increasing number of refugees has become a protracted issue globally, while the current management of refugees seems stagnant in providing protection and humanity for refugees. The International

Organization for Migration (IOM) has recorded that the dangerous travel by migrants, including refugees, particularly by boats, has resulted in their missing along the journey or possibly their death. More than 7.000 migrants were found missing or dead in the sea in 2016, where the Mediterranean sea was recorded for the highest number reaching up to 5.143 migrants, while in the South East Asia region, 181 were found dead (IOM, 2018).

Meanwhile, the number of refugees increased to nearly 20 million in 2018 under the United Nations High Commissioner for Refugees (UNHCR) mandate, with Syrian refugees occupying the highest number (6,3 billion) and Myanmar refugees of Rohingya have placed the fourth biggest population of 1,2 billion (UNHCR, 2019b). In managing the refugee matters, states have been authorized to carry out protection and provide humanistic assistance as stated in the Refugee Convention 1951 and Its Protocol in 1967. Nonetheless, many destination countries, which are the party of the Convention, tend to have less attention to the importance of humanity to the future life of refugees by not allowing them to enter the countries. Instead, most focus more on the security issue and border tightening, which become barriers for refugees to enter (Frelick et al., 2016). One of the main reasons behind those policies is sovereignty, in which the influx of refugees will harm their local population's culture, economy, and social benefit (Young et al., 2018). Furthermore, the arrival of new refugees might create political instability,

which could endanger culture and economic activity and create a terrorism issue in their countries (Jones et al., 2017).

For states, not part of the Convention of Refugees, including Indonesia, the management of refugees is carried out by the UNHCR. As a result, the office has a key role in refugees' repatriation, local integration, and resettlement (Susetyo et al., 2016). While repatriation and local integration is unlikely to become a potential outcome, resettlement has become the most promising solution.

As a transit point with an uncertain schedule for resettlement, the management of refugees in Indonesia tends to dismiss the importance of humanity, resulting in social and economic problems. The lack of regulation as not a signatory state to the Convention has resulted in Indonesia's difficulty in assisting the future livelihood of refugees. Although the Presidential Decree on Asylum Seekers and Refugees was signed in 2016, the implementation tends to neglect the importance of the humanistic domains of refugees, particularly at the local level. Each stakeholder locally tends to work based on its job and function with no or limited experience dealing with the refugees' issues. Since refugees are a complex problem, collaboration and partnership among stakeholders are crucial. Furthermore, the job prohibition for refugees implies that the Rohingya refugees stay in the shelter without having any appropriate skills and knowledge. It is because Indonesia is not required to provide job assistance for refugees, and access to

employment remains impossible under the Presidential Regulation, although refugees have gained status from the UNHCR (Adiputera & Prabandari, 2018).

The lack of humanistic domains could also create an entry point for people smuggling and human trafficking agents. It was compounded by the fact that people smuggling often happened in South East Asia, where asylum seekers mainly travel through sea routes (IOM, 2016). The most recent incident in the human trafficking issue happened in Rohingya management in the Province of Aceh, where some refugees were caught in Medan, the neighboring province, in 2020. They were on their journey to leave the country after fleeing from the shelter in Lhokseumawe. The police had named five suspects involved in this human trafficking where two of them were local Acehnese fishermen, a woman who lived in Medan to pick up Rohingya in Aceh to be brought to Medan, and another two Rohingyas who were acted as brokers or intermediaries to intentionally take Rohingya refugees to Malaysia (The Jakarta Post, 2020).

It is a fact that Aceh has become one of the specific transit points for Rohingya refugees to move from the sea. As shown in figure 1 below, the province of Aceh in Indonesia was considered the transit for disembarkment from the sea alongside Malaysia (UNHCR, 2021). The Rohingya refugees came from Cox Bazar in Bangladesh and Rakhine State in Myanmar to cross the Andaman Sea and Bay of Bengal to seek other safe countries for their future.

Geographically, the North and East of the region in the province of Aceh are categorized as coastal areas. Their locations are strategically located in the Malacca strait as the main entry point for refugees. Some regions occupying these coastal areas include the District of North Aceh, Bireun, East Aceh, and the Municipal City of Lhokseumawe (BPBD Aceh, 2012). In 2009, there were 443 refugees stranded on offshores in some districts in the province, followed by 130 refugees in 2013. In addition, 1.300 refugees were also recorded as the largest arrivals of refugees in the region in 2016, which later created world attention to the Province (Susetyo et al., 2016). In 2020, nearly 400 Rohingya refugees arrived by boats and were later saved by local fishermen in the province for humanitarian reasons after being floated in the ocean (Farhanditya, 2020). This group of refugees has added to the population of refugees and asylum seekers in Indonesia to 13.454 persons.

Social innovation has been a prominent terminology in social sciences and humanities subjects, particularly concerning collaborative action to solve social and economic problems. It covers new ideas to meet social needs, which later create new social collaboration and relationships (Mulgan, 2012). Moreover, practitioners implied that the innovative social solution is not a new concept but an expansion of ideas found within the literature as an offering solution. It could be in the form of a system, rules, services, models, or new organizational forms (Nicholls et al., 2015).

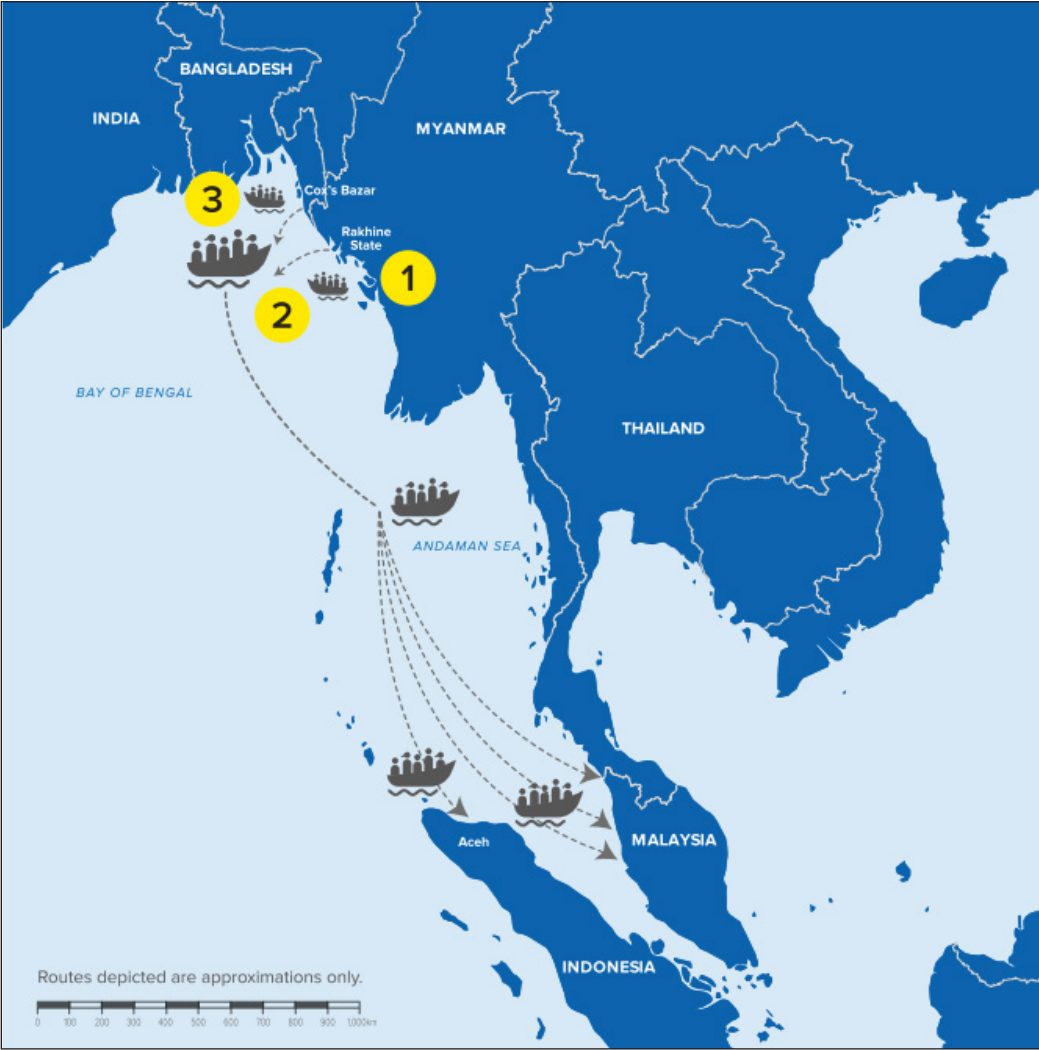


Figure 1. Rohingya refugee movement in the Map's region (UNHCR, 2021)

Meanwhile, humanity is perceived as one of the social innovation elements addressed to developing skills and expertise of the community (Kleverbeck et al., 2019).

There is a large number in the literature on the conceptualization of social innovation and humanity (Hubert, 2010; Kleverbeck et al., 2019; Oeij et al., 2019), yet there is less attention to the practical application of the approach that has been successfully

implemented in different geographical and cultural contexts. While Hubert (2010) addressed that social innovation has become the importance of research in socio-economics and humanity where the purpose is to develop a new approach to improve human well-being, Kleverbeck et al. (2019) explained the indicators of social innovation in developing the human capital of skills and expertise through social integration in the

community. Oeij et al. (2019) also implied the connection between human skills and social innovation where the shortage of human resources and skills would hinder the sustainability of the social innovation process.

While the current humanity approach to managing Rohingya refugees is mainly focused on protection and accommodation for their daily activity, this research is intended to seek the expansion of the humanistic approach as its novelty which includes resettlement, skills and expertise, partnership, regulation, self-reliance and job opportunity in managing refugees and which ones are important in dealing with the refugee issue at the local level. The list of each humanistic dimension issue is provided in detail in Table 1.

This paper is intended to look at the importance of the humanistic dimension through socially innovative actions towards locally managed refugees in the Indonesian Western Province of Aceh. It includes the six domains of humanistic dimensions assessed. The main argument in this paper is intended to range the importance of the humanistic dimension from the most important to unimportant domains of the humanistic dimension. In particular, the research is addressed to understand which aspects of the six domains are the main importance of the humanistic dimension and which ones are the most unimportant domains. Therefore, the research question this paper intends to achieve is “What is the importance of the humanistic dimension in refugee management of Rohingya in the Aceh

Province of Indonesia?” The rest of this paper was started with the introduction of refugee management in Indonesia, followed by the methods used and a literature review of the importance of humanistic domains in managing refugees at the local level. Afterward, the result and discussion were deliberated further prior to summarizing and limitation of the research in the conclusion.

METHODS

The project of managing refugees addressed the participatory approach from stakeholders worked out with refugee issues at the local level. This research employed the web spider configuration to visualize the findings using six strategic domains categorized from a literature analysis. The web spider was helped by the application in the Wondershare Edrawmax to display the result of the research. Prior to deciding which domains are related to the current issue, each domain was discussed and consulted with stakeholders to ensure that the topics were relevant to the Indonesian and local Acehese context. Stakeholders include those working in the Local Desk for Asylum Seekers and Refugees in Lhokseumawe, Immigration officers, a UNHCR and IOM staff, and representatives from NGOs managing Rohingya refugees in Aceh’s Province. The literature and interpretation of each humanistic domain are shown in Table 1.

Fifteen key stakeholders were involved in managing refugees participating in the project. Those stakeholders were chosen due to their direct involvement with Rohingya

Table 1

Literature and interpretation of humanistic domains in the refugee management

| Domain | Interpretation of topic in the literature | Project Interpretation in the field |
|----------------------|--|--|
| Partnership | The refugee issue is not a single country problem, and thus, it is a necessity to have international cooperation to address the drivers of the movement of refugees as well as their impacts on home, transit, and host countries (Solomon & Sheldon, 2019); Partnership for refugee management could be in the form of private-sector collaboration (Menz, 2009); | The partnership is conducted through collaboration with relevant stakeholders, including individuals or businesses, NGOs dan UNHCR. The partnership and collaboration are conducted through routine meetings and discussions, although, in practice, states have greater responsibility to ensure the collaborative action was implemented. |
| Resettlement | Resettlement is part of the refugee management through local integration (Garnier et al., 2018); Resettlement is considered a durable solution for admission of refugees to third countries to access protection and sustainable solution (UNHCR, 2019b) | The government has integrated with local people through temporary accommodation and providing education and health services to refugees. Other NGOs also deliver short training and language skills to refugees. |
| Skills and Expertise | It has also been stated that skills and expertise programs through capacity building and market intervention have been important aspects of managing sustainable migration; businesses can contribute to the solution of migrants, including refugees, by providing training and skills for their future (Horowitz, 2016) | The project focuses on developing the skills and expertise of refugees to have their future self-reliance with knowledge and education. Those skills might be transferred into the opportunities for entrance into local labor jobs or the global market in the resettlement process in destination countries. |
| Labor opportunity | there is a necessity to shift the future view of refugee management to provide investment in skills and training and to allow them to enter the future labor market (Kluge et al., 2018). | Labor opportunities are not formally recognized currently due to the country not being a part of the Refugee Convention. However, training and skill development programs may allow refugees to expand their expertise in searching for future job opportunities, although it is very limited. |
| Implementing Rules | Indonesia's approach to dealing with Rohingya refugees is through Law No. 5 in 1998, which prohibits deportation and returning the refugees if there is a danger for them in their origin country (Alunaza & Juani, 2017). There is also the issuance of Presidential Decree No. 125 in 2016 on Handling Foreign Refugees, where provinces and districts are required to get involved in managing Rohingya refugees (Missbach et al., 2018). | Those rules are viewed as insufficient, particularly from the perspectives of Municipality and Desk for Refugee Management officers. It does not provide further guidance on implementing the particular Presidential Decree. However, other stakeholders view the Presidential Decree as a framework to allow the management of refugees at the local level to be more effective and efficient. |
| Self-Reliance | Self-reliance has been stated as the first objective in the Global Compact for Refugees, to help refugees develop their skills and knowledge for their betterment in the future (UN General Assembly, 2018) | Self-reliance is perceived as a final destination after refugees gain skills and knowledge that equip them to enter the global or local labor market. However, jobs in the local community are strictly limited. However, their strengths will be in destination countries through the resettlement process. |

refugees in the Lhokseumawe of Aceh. They were as follows: four from the Local Desk for Refugee Management in the city, one from Local UNHCR Staff in Aceh, two from Local IOM offices in the city, two from the Immigration office in Lhokseumawe, and six from NGOs.

The approach was conducted through surveys and questionnaires, followed by an in-depth interview and Focus Group Discussion (FGD) to formulate a strategic objective. The six strategic humanistic domains were used to measure the importance of refugee management toward social innovation at the local level. The questionnaire consists of six questions asked to participants regarding the importance level of refugee management, ranging from the most important, important, and not important factors of humanistic dimensions. Participants were requested to choose a statement that most explained the current situation of refugee management at the local level. The facilitator decided to use the range number from 1 to 3 to overlook the quantification of the result. Later, the visual representation of the findings was shown in the spider web configuration to ease understanding of the results.

The interview was organized either formally or informally in the office or other public spaces where both interviewer and interviewees agree and feel comfortable. Before the process, an appointment was first conducted to get a precise time to have an interview with specific stakeholders. These include the Regional Secretary of Lhokseumawe and the Head of Desk for

Asylum Seekers and Refugee Management in Lhokseumawe, the Representative staff from the office Immigration in Lhokseumaw, Staff from the UNHCR and IOM based in Lhokseumawe and Staff from NGO of Yayasan Geutanyoe Foundation in Lhokseumawe.

The FGD process was conducted at the Municipality office in Lhokseumawe to facilitate all stakeholders meeting each other in one place. The FGD is used to discuss and confirm questionnaire findings and interviews. These include the importance of assessing six humanistic domains to gain a similar understanding of the FGD participants. Notes and summaries of the FGD were kept confidential, and it was guaranteed that data gained during interviews and FGD would be used for research only. The participants include the Municipality head officers, the Head of the Desk for Refugee Management and its team, international officers working in the province, and members from different NGOs involved in managing Rohingya refugees in Lhokseumawe.

RESULTS

The following paragraphs show a brief explanation of the follow-up questionnaires and interview sessions conducted in Lhokseumawe to gain an insight into the importance of refugee management at the local level. The approach enables the government and other stakeholders to identify domains that need immediate actions to improve refugee management from the perspective of the humanistic dimension.

The analysis used three categories: the most important, the important, and the unimportant of humanistic domains. The process benefits from visualization of the spider web configuration that allows the participants to look closely at the importance of refugee management at the local level. Each category is explained below.

1. The “Most Important” Humanistic Domain in Refugee Management

From Figure 2, it was clearly stated that all humanistic domains in managing refugees were assumed to be very important. However, the range is different except for labor opportunity, where all participants agreed not to choose refugee job opportunities as the most important factor in the humanistic dimension. The partnership was considered the highest score of importance in the

refugee management in the province. Ten participants believed the partnership would be essential in providing protection and future livelihood for Rohingya refugees in the region. Therefore, the partnership has been the main theme of the Presidential Decree in managing asylum seekers and refugees in the region, where each stakeholder undertook their activities and tasks collaboratively with other involved stakeholders.

Meanwhile, none of the participants believed that employment was important, considering their purpose was not to stay in Indonesia but to look for a chance to travel to other destination countries, particularly Malaysia. After the partnership, resettlement, skill and expertise, and regulation implementation occupied the second most important aspect of humanistic

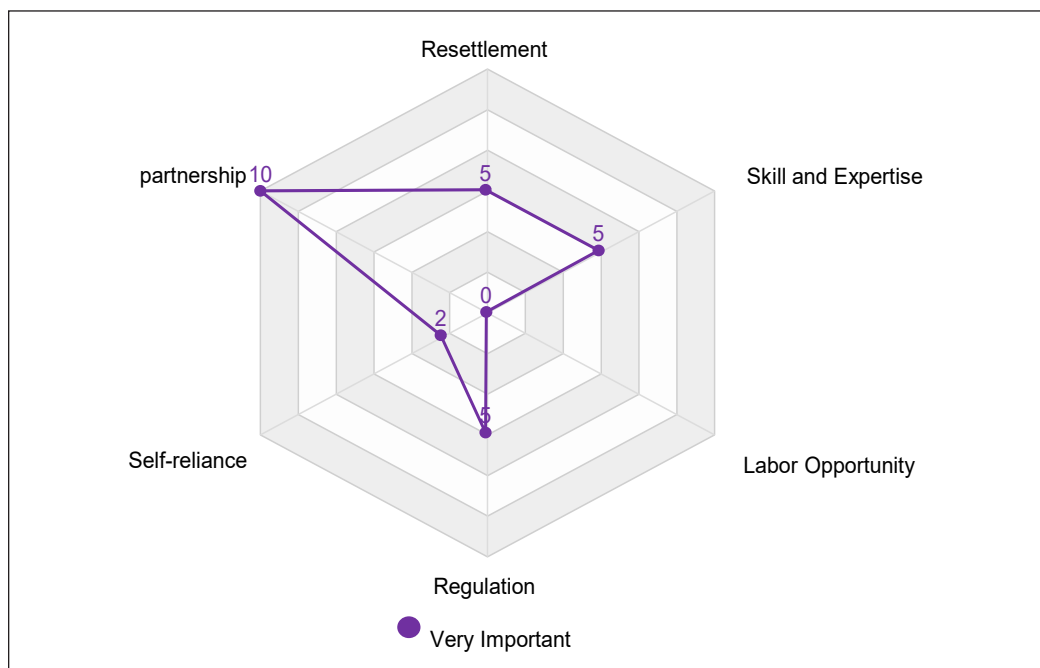


Figure 2. Spider Web Diagram of the most important humanistic domains

domains. Five participants chose the above three issues and shared a similar range in the web spider diagram. Finally, self-reliance was viewed as not the most important aspect of humanistic dimensions, although the range was above the labor opportunity. Only two participants believed that self-reliance would be the most important factor in developing the awareness and capacity building for the future livelihood of Rohingya refugees.

2. The “Important” Humanistic Domain in Refugee Management

Resettlement was viewed as important in managing Rohingya refugees in the province, as shown in Figure 3. Of the project’s fifteen participants, ten selected resettlement as an important domain in

the humanistic dimension. Meanwhile, refugees’ self-reliance, skills, and expertise were viewed as the second important domain in humanistic dimensions after the resettlement. They shared similar numbers in the range of web spider diagrams. Both had nine participants selecting the domains slightly different from the range of resettlement.

Implementing regulation and partnership at the local level showed less importance in humanistic dimensions, where both domains shared the number of seven and five participants, respectively. Nonetheless, labor opportunity was also assumed as less important given that only two participants believed that refugees are not importantly significant to have a job and work placement in the region.

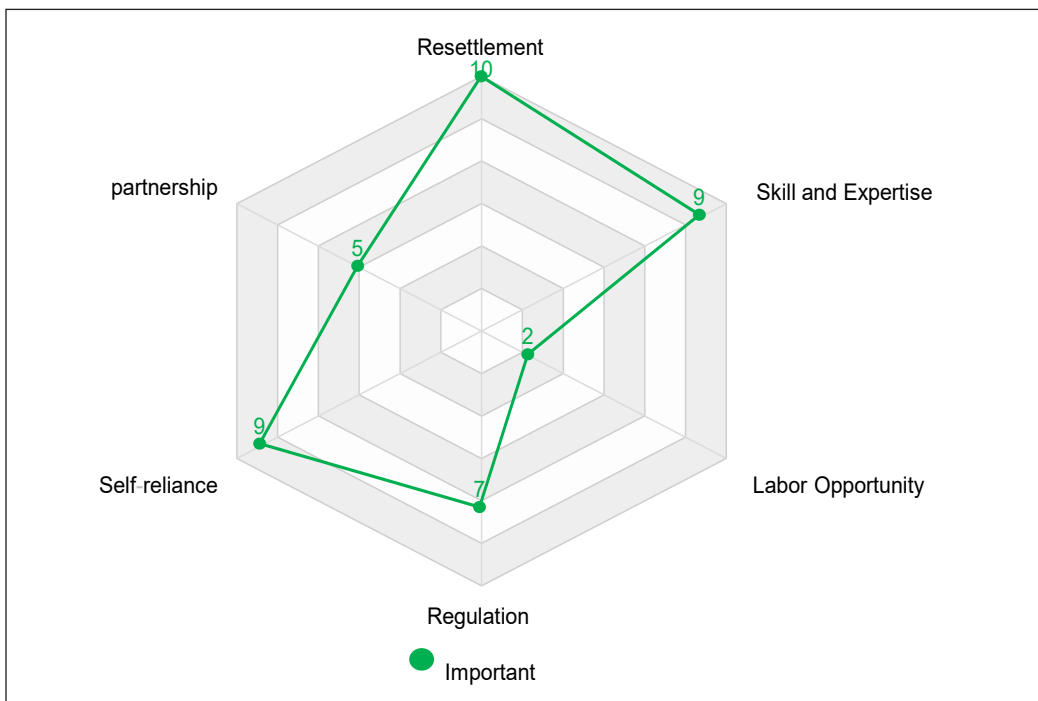


Figure 3. Spider Web Diagram of “the important” humanistic domain

3. The “Not Important” Humanistic Domain in Refugee Management

Labour opportunity had been considered as the “not important” humanistic domain in managing refugees in the province, as pictured in Figure 4. It was coherent with the findings of the most important humanistic domains, where no participants considered the domain the most unimportant aspect. Thirteen participants believed that labor opportunity was not currently necessary in the region. Nevertheless, skills and expertise in the province were considered unimportant in humanistic dimensions where only one participant chose the domain. However, it might be beneficial in third countries with a high development of economic activities. Like skills and expertise, self-reliance and regulation were considered unimportant in the humanistic domain, where only four

and three participants selected the domain, respectively. Interestingly, no participants chose partnership and resettlement as unimportant factors in humanistic domains. This finding was correlated with the main findings of partnership and resettlement as the most important aspect of managing refugees.

DISCUSSIONS

Using a spider web tool promotes a robust discussion on the issue of managing refugees at a local level through innovative social action. The terminology of social innovation has become a global agenda since the Vienna Declaration in 2011. The Declaration acted as a starting point for the research in the social sciences and humanities field to open up a new dynamic and approach in contemporary and future societies (Vienna

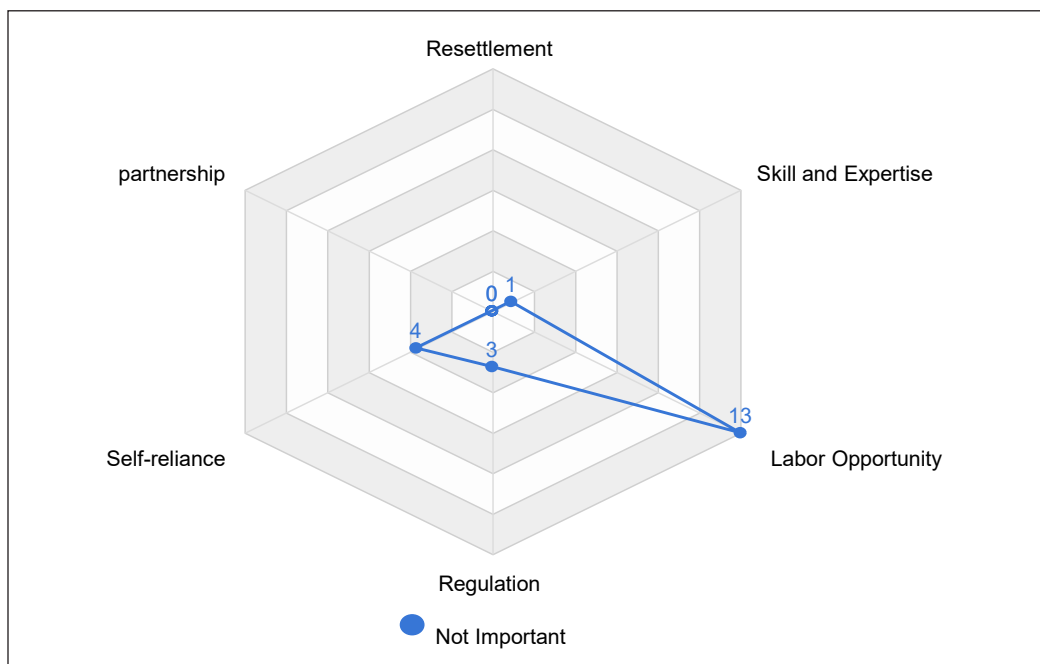


Figure 4. Spider Web Diagram of the not important humanistic domain

Declaration, 2011). Social innovation also relates to the humanitarian issue. Hubert, for instance, expressed that social innovation affects social interaction in human well-being. It focuses on empowering people and driving changes to seek new alternatives to pressing social demands and problems (Hubert, 2010). In this research, the idea of social innovation is focused on the humanistic dimension to be applied to the refugee management issue at the local level.

Although Indonesia is not a part of the Refugee Convention and Its Protocol and without specific laws on refugee problems, Indonesia has applied the human approach in dealing with refugee issues as the main reason for saving refugees, particularly from offshore boats. In this regard, the country was perceived as tolerant of accepting the arrival of refugees and asylum seekers to the region (Ali et al., 2016). Previously, the country has also been regarded as a welcoming state to refugees after receiving and managing the refugees from Vietnam in the Galang Island, Batam, in avoidance of Indo China war in 1975 (Tan, 2016). Known as boat people, those refugees were placed in temporary accommodation established by the UNHCR while waiting for status determination and resettled to third countries. Indonesia also provided health and educational services on the island, which later received international attention and support for the country's development (Panjaitan, 2017). However, the camp was finally closed in 1990 after all refugees successfully resettled to third countries, and some returned to Vietnam after the Indo crisis had ended.

The spider diagram findings also show that partnership regulation has become somewhat important in managing Rohingya refugees in Aceh. Nevertheless, the issue had become problematic in practice since there was no further explanation of the Presidential Decree except for a list of each stakeholder's task involved in the process. For example, the decree required the region to provide temporary accommodation for refugees in coordination with the Immigration office. However, there was no further explanation on how the government contributed to the future livelihood of Rohingya refugees apart from providing a temporary shelter, although this was part of the IOM and UNHCR tasks and purposes.

This condition was explained further by the Head of the Desk for Asylum Seekers and Refugees in Lhokseumawe during the interview. He stated that there was a lack of coordination among stakeholders in managing refugees in Lhokseumawe. It was because the Presidential Decree did not explain other specific tasks and activities to which the local government should contribute. As a result, each stakeholder assumed their tasks and function individually in managing refugees in the region.

Meanwhile, the temporary shelter provided for Rohingya refugees was not meant for refugees to stay for a long period. All refugees arriving in Aceh would be recorded and transferred to Medan under the coordination between the government and the IOM. It was basically due to the instruction from the Indonesian Government in 2015 that all refugees in Aceh need to be

accommodated by the UNHCR in the form of resettlement or repatriation within one year (Missbach, 2018). Therefore, many refugees have been brought to Medan in the province of North Sumatera as the neighboring province of Aceh. In Medan, IOM and UNHCR have representative offices, making monitoring the activities of refugees easier. Afterward, all refugees arriving in the Aceh province were placed temporarily in the Aceh's shelter while waiting for the UNHCR to determine their status. They will finally be relocated to Medan with the assistance of IOM.

In addition, although the partnership term refers to the collaboration between and among relevant stakeholders, there was a discussion on the involvement of the non-state actors. These include Non-Governmental Organizations (NGOs) and Private sectors. While NGOs were required to organize skills and expertise development programs, businesses and private sectors could become agents involved in providing funding and professional expertise for refugees. Through these links, the government could grant permission to private sectors to allocate their social responsibility funds to help accelerate programs and achieve goals and objectives in refugee management. One goal was to provide skills and updated knowledge for refugees to help them become self-reliant in the future.

Furthermore, resettlement in the web spider configuration has been viewed as an important domain of humanity. For not a party to the Convention and Protocols

of Refugees, it is the role of the UNHCR to undertake the management of refugees in Indonesia, including determining the status of refugees (Jesuit Refugee Service Indonesia, 2013). The UNHCR in Indonesia conducts three procedures. First, they are returning refugees to their origin countries, integrating with the local community, and resettling refugees to third countries (Susetyo et al., 2016). However, repatriation of refugees to their origin countries seems difficult to be implemented due to unsafe and existing persecution, which could endanger their future life. Meanwhile, local integration is not an option due to states not being a party to the Convention and Protocols of Refugees. Therefore, the most promising action by the UNHCR is then to resettle those refugees in third countries (Missbach et al., 2018).

Nevertheless, resettlement has been difficult due to the limitation of quota and the increasing number of the refugee population. As shown in Figure 5 below, there were 1.4 million refugees who are ready for resettlement and have been identified and documented as refugees (UNHCR, 2019a). The quota for transferring refugees to developed states decreased by 50% in 2017, while the refugee population increased by 17% in 2016. Therefore, the successful resettlement process each year is less than 100.000 from nearly 20 million refugees representing 0.1% globally (UNHCR, 2019b). While waiting for the resettlement process, refugees must stay in transiting countries until they are finally resettled, which could take a long

time. In Indonesia, the number of refugees compared to resettlement programs showed a small portion. Of 13.745 refugees and asylum seekers in the country, only 663 were successfully transferred to Australia, Canada, and the United States (4.8%) in 2019 and 391 in 2020, representing 42% of the total population (UNHCR, 2020).

The History of Refugee Management in Indonesia

The experience of Indonesia in dealing with refugees started more than forty years ago when a large number of Vietnamese refugees arrived on Galang Island in Batam due to the Indochina crisis in 1976 (Tan, 2016).

Known as boat people, those refugees were placed in temporary accommodation on the Island, established by the UNHCR and the Government of Indonesia, while waiting for determining status and resettled to third countries. Indonesia was perceived as tolerant in managing those refugees, including providing education and health support which later received international attention through the development of the state (Panjaitan, 2017). However, the camp was finally closed in 1990 after all refugees successfully resettled to third countries or returned to their origin countries.

As a non-signatory party of the Refugee Convention, Indonesia could not

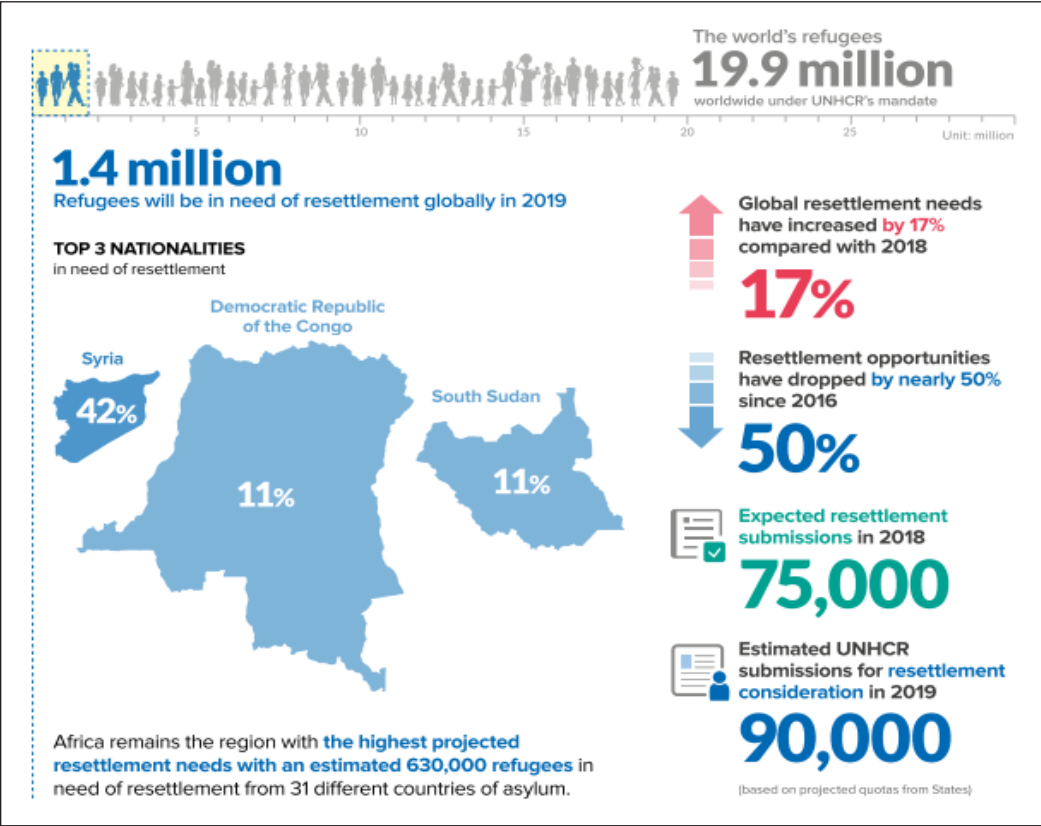


Figure 5. Global refugee resettlement (UNHCR, 2019b)

determine the status of refugees. However, the country applies for a non-deportation and refoulement status in the principle of humanity. Furthermore, as stated in Law 5 in 1998 in Foreign Relations, the country prohibits deportation and returning the refugees if there is a danger for them to return to their origin country (Alunaza & Juani, 2017). To further implement the law, the President signed Presidential Decree Number 125 in 2016 on Managing Refugees and Asylum Seekers from Overseas. In this decree, regions are required to work together with the central government, in particular, to provide basic living and temporary accommodation for refugees in cooperation with the UNHCR (Missbach et al., 2018).

Implementing the Presidential Regulation is also perceived as ambiguous, particularly for stakeholders involved in managing refugees. The regulation focuses on shared responsibilities while specific tasks and functions are not fully explained. Some local and national organizations carried out programs in the shelter of refugees. Nonetheless, there is no further guidance in the regulation on how to implement programs among those organizations and government activities collaboratively. The municipality of Lhokseumawe took front roles in managing refugees by requiring all involved organizations and stakeholders to manage a regular meeting to overview the implementation of refugee management in the field. Despite limited guidance on the rules, the coordination among stakeholders was carried out routinely, and problems, if persisted, were collaboratively undertaken.

Moreover, there is also an economic issue in the region in terms of labor opportunities for refugees. While refugees are guaranteed their basic daily living, skills development is difficult to be gained to support their future livelihood. In dealing with this issue, the country is expected to work collaboratively with relevant stakeholders, particularly the UN Refugee Agency, to maximize support for refugees and the region's local community. There is also a possibility to get involved in the private sector by providing skill enhancement and market intervention policy to prepare refugees for future self-reliance. However, the implementation of providing employment opportunities was not an easy task, considering the complicated relationship between working agencies and employers. If Rohingya refugees were intended to be able to access the work, they need to be facilitated by the government of the UNHCR to ensure they were paid accordingly. Furthermore, the language barriers were also a challenge for employers and employees, which could be an object of exploitation for refugees. The web diagram supported this fact as all participants agreed that job opportunity is considered the most unimportant aspect in the humanistic dimension.

Refugee Management Towards Future Collaboration with the Non-State Actors

As stated previously, the management of refugees is conducted by states, particularly those that were parties to the Refugee Convention and Its Protocols. On the

other hand, the UNHCR assisted the countries that were not the party to both conventions, including Indonesia. Relying on the partnership as the most important humanistic domain found in the research, it is worth noting the collaboration between states, UNHCR, and other non-state actors, including NGOs and private sectors and businesses, through a partnership issue. One reason for this initiative is that the refugee issue is not a single country problem and is complex, touching economic, social, and political conditions. Therefore, it is necessary to have international collaboration to address the drivers of the movement of refugees and their impacts on home, transit, and host countries (Solomon & Sheldon, 2019).

The involvement of NGOs in Rohingya refugee management in Aceh had been inevitably carried out by 2015 when a large group of Rohingya arrived in the province after being saved by local fishermen. Some NGOs were actively involved in the refugee issue at the shelter and had been working closely with the UNHCR. These include, for example, the Jesuit Refugee Services and Yayasan Kemanusiaan Madani Indonesia, as well as Dompok Dhuafa to assist the government at the local level in protecting Rohingya refugees (UNHCR, 2020). The current NGOs involved in Rohingya refugees in the Province include Yayasan Geutanyoe Foundation, the Indonesian Red Cross, and Muhammadiyah, which focuses on emergency responses to Rohingya refugees in Aceh (MMC, 2021).

Regarding private sector involvement in humanity issue of refugee management, it is necessary to provide skill empowerment for refugees and capacity building to equip them to enter the labor market in the future. Market intervention and capacity building are perceived as part of sustainable migration where intervention is carried out in origin and destination countries (Italian Centre for International Development, 2017). Indeed, the new arrivals of refugees in developed countries will likely be accepted generally if jobs and work opportunities are available, and refugees could participate in the labor market (Young et al., 2018). The Refugee Convention in 1951 stated that other than states, businesses and private sectors were able and allowed to participate in dealing with the refugee issues. Different forms of action have shown partnership with private sectors, including policy, implementation, and research activities in different regions globally. In the EU, for example, the government has asked private sectors to become actively involved through the partnership to formulate migration policies (Menz, 2009). In the Asia Pacific region, the involvement of business leaders is also viewed as an advantage through the partnership in the Bali Process Declaration. Similarly, the Australian example in collaborating with public and private is also important to be taken into consideration, such as allowing migrants to flow to business, providing returned incentives if the economy is slow, strong union monitoring to avoid cheap labor, and other sympathy activities for migrants (Warshall, 2002).

Nevertheless, labor opportunity in the region's humanistic domains of Rohingya management was viewed as "not important." Regarding this, it is necessary to search for labor opportunities for refugees outside the country of transit or preparation for resettlement in third countries. Concerning the issue of refugees entering the labor market, it is also a necessity to enable collaboration with the International Labor Organization (ILO) to have a formal work possibility for refugees. UNHCR, in collaboration with the ILO, has provided a 5-year global education strategy (2019–2023) to reduce the gap in education for refugees and make the involvement of multi-stakeholders to develop refugee self-reliance in which attention will be given primarily to non-formal and skill training to support host countries (UNHCR, 2019a).

Previously, ILO and UNHCR collaboration on market and value chain has been implemented in many countries such as Costa Rica, Egypt, Mexico, Pakistan, South Africa, and Zambia to enhance refugee protection and households in building a better future. Those collaborations will also enhance positive economic development in the host countries and the community through the push and pull factors. The former will have the initiative to focus more on the target group of refugees for skill development, while the latter is related to expanding the market and increasing employability for refugees (ILO, 2017). These guidelines of collaboration between ILO and UNHCR experience could be a case learned by Multinational companies

as a framework to provide capacity building scheme as an alternative solution to the refugee issue.

To some extent, allowing refugees to have a formal job opportunities could boost the development of the state in general. It is because refugees are employable, meaning that when refugees are provided access to the labor market, they will integrate quickly and become an investment for a state (Kluge et al., 2018). The UNHCR has implemented the partnership between public and private by being a broker to bridge the necessity of protection for refugees to deliver training for the self-reliance of refugees. Becoming a broker organization brings different sectors together, providing expertise, knowledge, and network to find a durable solution for refugee matters (Mehan, 2016).

The skills and expertise program to enable refugees to enter the labor market could also be implemented by relocating Corporate Social Responsibility (CSR) from the business sectors. It has been experienced in Germany, for instance, where some companies have begun contributing to refugee management by integrating refugees into labor markets in the new forms of CSR, including occupational preparation courses. These initiatives involved more than 25 multinational companies in Germany (Emerllahu, 2017).

Germany also received more than one million refugees in 2015 as the biggest country in the EU to receive refugees, and almost three hundred thousand of them were successfully integrated into the local labor market in the country in

2016 (Gericke et al., 2018). In addition, the State also uses technology to increase the capacity of refugees in Germany, such as the introduction of an application to help refugees integrate by offering a basic German language course and training, as well as information on how to find jobs, asylum procedures and social custom (IOM, 2018). In Indonesia, although there was no collaboration with the private sectors, there was informal education provided by the UNHCR in collaboration with the government and NGOs to deliver training and learning of the national language (Bahasa Indonesia). It would lead refugees to be able to interact and communicate with local people. Although most students are children, the program is open to adult refugees. In delivering this service, the UNHCR provides a translator to help refugees understand the programs.

Regarding the involvement of NGOs, it would also be an advantage if companies could work together with NGOs to deliver training, education, and skill development for refugees. While companies have CSR programs of capacity building for refugees, NGOs closer to the community could implement the program through training and skill development programs for refugees (Singh, 2017). In addition, the allocation of CSR for capacity building of refugees would be an opportunity for TNCs to gain a competitive advantage, which in the end could increase trust from other businesses, governments, policymakers, and investors (Saltaji, 2017). Furthermore, CSR in international cooperation could

assist the host government by pursuing business sectors to hire refugees to become their workers while the government could provide tax allowances for these companies (Saltaji, 2017).

Alongside the humanity issue through collaboration and partnership with private sectors, the social innovation agenda should also be in line with the Global Compact of Refugees declared in 2018. A refugee compact is an agreement between the origin government and donors in the form of funding, loans, and concessions to provide job opportunities in refugee-hosting states (Overseas Development Institute, 2018). The Global Compact, in particular, has stated the importance of partnership in dealing with the refugee issue, which is a vital tool for responsibility sharing in host and transit countries regarding humanitarian principles. The partnership in the compact includes the following: new institutional arrangements for the creation of business and financial instruments; and support for refugees, host, and transiting countries in employment and labor mobility enabling greater opportunities for private sector investment (UN General Assembly, 2018)

As the web spider showed that partnership became the most important humanistic domain, collaboration among stakeholders might lead to achieving the second objective of the Global Compact for Refugees, which is the self-reliance of refugees. Self-reliance is “the ability of people, households or communities to meet their basic needs and to enjoy social and economic rights in a sustainable and

dignified way” (UNHCR, 2019c). It will enhance the ability of refugees to be self-reliant and provide humanity and future livelihood opportunities.

CONCLUSION

The use of a spider web configuration was intended to present the visual drawings of the importance of refugee management for the humanistic dimension in the most western Province of Indonesia. Among six humanistic domains, the partnership has become the most important domain the government and other stakeholders should rely on in providing policies and actions to refugee management in the region. Furthermore, resettlement has become the second important domain in managing refugees to prepare refugees to be transferred to third countries. In addition, labor opportunity for Rohingya refugees was considered unimportant in humanistic domains.

Using the web spider approach from stakeholders involved in managing refugees at the local level helps establish the benefits of collaboration in achieving goals for the betterment of refugees and society at the local level. Although there are challenges and barriers to managing refugees in the province, the refugee issue was originally not a single stakeholder problem. Indeed, partnerships with all relevant stakeholders are urgently needed to promote sustainability in future refugee management, particularly at the local level. The partnership issue is also obvious in the current local management of refugees in Aceh, where the State was

present to help protect Rohingya refugees alongside other relevant stakeholders.

However, this paper has some limitations in which the management of Rohingya refugees was viewed from the roles of states at the local level in the humanistic dimension while dismissing the role of political decisions and intervention in the state management of refugees. Political intervention is important in providing regulations and policies related to refugee management in practice, which this article has not discussed. Also, this research was not intended to discuss deeply the issue of people smuggling and human trafficking, which is currently being debated after the frequent arrivals of Rohingya refugees in the province.

In addition, Indonesia and the UNHCR need to work closely with private sectors and NGOs to manage refugees sustainably in the form of humanity through educational training and skill development, which later provide an opportunity for global market intervention. Therefore, looking for other practitioner experiences using similar approaches, particularly at the local level, collaborating between the state, the UNHCR, and private sectors to manage future refugees is interesting.

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Determinants of Consumers' Purchase Behaviour Towards Online Food Delivery Ordering (OFDO)

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ABSTRACT

Nowadays, customers globally are turning to online shopping for almost everything, which is considered a new norm expected to remain indefinitely. Although online food delivery has become a trend, several issues hinder customers from purchasing food online, such as poor customer reviews, trust issues, low food quality, poor packaging, delay in delivery, and risk associated with personal data. Thus, this study aims to identify the effect of reference groups, positive online comments, perceived risks, perceived benefits, and food safety consciousness of online food delivery ordering (OFDO) adoption. The convenience sampling technique was used to collect data from Malaysian consumers. The questionnaire survey data was collected from 288 respondents using the structural equation modelling-partial least squares (SEM-PLS) method. This study shows that reference groups, positive online comments, perceived benefits, and food safety consciousness positively affect the purchase behaviour of online food delivery services. Among all factors, the perceived benefit of online food delivery ordering (OFDO) has the largest effect on consumer

behaviour ($f^2=0.273$). Customers prefer using OFDO due to the application's user-friendly interface, variety of choices, ease of ordering from anywhere and anytime, better discounts, rewards, and cashback.

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INTRODUCTION

Nowadays, customers globally are turning to online shopping for almost everything, which is considered the new norm and expected to remain indefinitely. In addition, online shopping behaviour continues to increase due to the recent Movement Control Order (MCO). The slogan “Stay at Home” has dramatically changed the lives of Malaysians, especially in how they acquire their daily essentials. As a result, the number of eCommerce consumers in Malaysia has skyrocketed.

Online food delivery has never been as common as it is now, and the trend will undoubtedly continue to grow in 2020 and beyond. Due to lockdown and social distancing measures, consumers increased their online shopping, and with many physical store closures, Malaysia’s e-commerce market has accelerated (GlobalData UK Ltd, 2020). According to the National Restaurant Association, approximately 80,000 establishments have temporarily or permanently closed since the pandemic started, down from 110,000 at the pandemic’s peak (Vesoulis, 2021).

Therefore, restaurant operators must adopt a technology that allows contactless delivery through online food services to ensure survival and prosperity. By offering this service, restaurant operators can increase revenue, reach more customers, and expand their customer base (See-Kwong et al., 2017). As e-commerce gains popularity, more consumers purchase products or services online. With the new norms of purchasing behaviour and the

current situation, business owners need to consider different business strategies, such as adopting an e-commerce approach.

Although online food delivery has become a trend, a few issues were noted hindering customers from purchasing online food, such as poor customer reviews, trust issues, low food quality, poor packaging, delay in delivery, and risk associated with personal data and others (Gupta & Duggal, 2021; Zhao et al., 2017). Moreover, despite the importance and the evolving consumer behaviour towards online food delivery in Malaysia, studies addressing the contributing factors to purchasing online food through delivery services in Malaysia remain inadequate in the extant literature (Chai & Yat, 2019). Most studies on OFDO in Malaysia focused on the intention to purchase rather than consumer behaviour (Pitchay et al., 2021; Shafiee & Wahab, 2021). The study of consumer purchasing behaviour is crucial for marketers because it allows them to understand their customers’ expectations. It is beneficial to comprehend what motivates consumers to purchase a product. Thus, by integrating Social Identity Theory (SIT), Perceived Risks and Benefit Model, and food safety consciousness, this study aims to explain customer behaviour towards using OFDO. Specifically, this study examines the effect of reference groups, positive online comments, perceived risks, perceived benefits, and food safety consciousness on consumer behaviour towards online food delivery ordering (OFDO).

This article is structured as follows: A review of past literature and hypotheses

development are presented in the next section. Next, Section 3 presents the research methodology, followed by the results of key findings. Then, the discussion section presents the main conclusion from the findings. After that, the implications of the study are highlighted. Lastly, the limitations and future research suggestions are outlined.

LITERATURE REVIEW

Online Food Delivery Ordering (OFDO)

Even though extensive studies on online buying behaviours and their antecedents have been conducted, the literature focusing on online food delivery ordering is scarce (Yeo et al., 2017). Online food delivery refers to buying food via a website or web applications. The OFDO has been gaining popularity since the global COVID-19 pandemic in early 2020. Customers can place an order online at practically any time and from any location, saving time and resources that would otherwise be spent travelling to pick up a meal. During COVID-19, minimising interaction helps safeguard consumers, staff, and the public from viral propagation. Additionally, OFDO caters to customers' hectic schedules and enables users to securely offer friends, family, and colleagues all types of food.

OFDO providers are divided into two categories: the platforms provided by the restaurant owners, such as Kentucky Fried Chicken (KFC), Pizza Hut, McDonald's, and other types of restaurants. The second category is third-party companies providing OFDO platforms, such as FoodPanda, GrabFood, Zomato, UberEats, and GrubHub.

Before 2018, the popular ordering method is through the telephone (Yeo et al., 2017). However, applications for ordering food have recently been deemed more convenient and practical than the telephone because customers can search, retrieve, assess restaurants' ratings, and review them before making payment (Alalwan, 2020).

Social Identity Theory (SIT)

Tajfel and Turner (1979) proposed the social identity theory (SIT) in social psychology. Since then, SIT has been widely applied in consumer behaviour (Belk, 1988) because consumer behaviour is influenced by social surroundings (Bearden & Etzel, 1991). Social identity is a term that refers to how people's self-concepts are shaped by their affiliation with social groupings. According to SIT, engaging in attitudinally consistent behaviours is contingent on perceptions of attitude support from the reference in-group. Individuals who receive normative support from a relevant group are more likely to act in accordance with such attitudes than individuals who do not receive normative support (Johnston & White, 2003).

Reference effects represent the SIT in this study. There has been very limited research conducted on online settings using the SIT. Thus, in this information era, there is an urgent need to examine reference effects on online consumer behaviour, especially towards OFDO (Zhao et al., 2017). The term "reference effects" refers to how reference groups and online comments impact a consumer's online purchase decision (Zhao et al., 2017). There are two

main reasons why reference effects were used in this study. First, consumer behaviour has shifted due to the internet and social media use (Dwivedi et al., 2021). Social media has empowered customers to express their views and feelings online and connect with others. As a result, online comments about previous purchases made on social media influence consumers' purchasing decisions. These shared experiences serve as a source of reference and reliable proof for consumers' own purchasing assessments and decisions, demonstrating the impact of the Internet on consumer behaviour (Zhao et al., 2017).

Second, a reference group is an individual or group of individuals who exert influence over the behaviour of others. Individuals frequently compare themselves to the group and enable the group to help them improve their attitude, knowledge, and behaviour (Hoyer et al., 2001). The reference group in this study refers to friends, family, co-workers, and celebrities with whom consumers make comparisons and imitates their purchase behaviour. Food selection and preference are greatly influenced by social influences (Higgs & Thomas, 2016). Thus, this study used positive online comments and reference groups to represent SIT.

Reference Groups (RGs) and Online Food Delivery Ordering

In this study, reference groups refer to friends, family, co-workers, and celebrities that consumers used for comparisons, of which they imitate the purchase behaviour of these RGs. Through direct encounters,

reference groups are also suggested to be a primary source of personal norms, attitudes, and values (Hsu et al., 2006). It was empirically confirmed and supported by numerous studies on marketing (Ding et al., 2020), medical (Scott, 2021), strategic management (Gómez et al., 2021), and psychology (Dieffenbach et al., 2020).

In terms of food choices, families and friends strongly affect individuals' decisions on food choices. Furthermore, families remain the most crucial reference group since it influences and shapes individuals' values and expectations (Hsu et al., 2006). In addition, education, upbringing, advertisements, press reports, and word-of-mouth also influenced food preferences and acceptability (Verlegh & Candel, 1999). Friends and co-workers influence food preferences because meals are commonly consumed in the presence of others. Due to the growth of social networking and more abundant information, consumers can easily access reference groups, such as celebrities, idols, internet celebrities, and opinion leaders (Ding et al., 2020). Therefore, the following hypothesis is formulated.

H1: Reference groups have a positive effect on consumer behaviour towards OFDO.

Positive Online Comments and Online Food Delivery Ordering

In this digital era, whereby we often use online platforms as a primary medium for communication, online comments are considered a new form of word-of-mouth or e-WOM communication (Zhao et al.,

2017). Online comments are user-generated content (UGC); thus, online comments could potentially influence other purchase decisions (Sethna et al., 2017). According to social norms theory, comments are one of the components that posits others' opinions influence our behaviour; hence, from the perspective of the reasoned action theory, it will influence the purchase behaviour of consumers (Lee & Jin, 2019).

In online businesses, consumers share their experiences through social media and other platforms. The OFDO applications or websites provide a section for the consumers to review food and services. Before making a purchase, consumers usually go through the comments section and evaluate accordingly before making a purchase. Consumers consider online comments more trustworthy than product or service providers' recommendations, whether favourable or unfavourable. They use comments as the primary source of information when making purchasing decisions (Sa'ait et al., 2016). Consumers' behaviour towards a particular product or service is influenced by negative online reviews, especially when the overall set of reviews is negative (Jin & Phua, 2015).

Previous research found that online comments positively affect consumers' purchase intention (Park et al., 2007). Similarly, a study conducted among hotel consumers also perceived that online reviews would affect their hotel booking intentions and perception of trust (Sparks & Browning, 2011). Furthermore, Arif et al. (2020) surveyed Facebook users and

found that positive postings related to a particular product will increase consumers' intention to purchase. Likewise, according to Zhang et al. (2017), the depth of online reviews, the strength of the reviews, the richness of the description, and the credit score of the reviewers are factors influencing consumers' buy intent. Therefore, the following hypothesis is formulated.

H2: Positive online comments have a positive effect on consumer behaviour towards OFDO.

Perceived Risks and Benefits Model

Bauer (1960) pioneered the concept of risk and benefit perception in examining consumer purchase behaviour. However, earlier studies have since developed the model frameworks based on consumer perceptions of risk and benefit, which are major determinants of consumers' online or offline purchase decisions (Gassler et al., 2019). Therefore, developing a uniformly acceptable framework for assessing consumers' perception of risks and benefits is critical (Gupta & Duggal, 2021). Thus, a framework of risks and benefits perception is essential to this study to understand consumer behaviour towards OFDO better and clarify the perceived risks and benefits model.

Every purchase decision involves some level of risk due to the various advantages they seek (Kim et al., 2008). Thus, the perceived risks and benefits model is invaluable for analysing why consumers choose a particular product or service. For example, food intake is determined by

perceived risks and benefits, influenced by the outrage associated with the hazards and euphoria associated with the gain (Choi et al., 2013). In this study, both perceived risks and benefits will be used to predict consumer behaviour towards OFDO. In general, perceived risk is the sum of probabilities and uncertainty in a buying choice and the repercussions of choosing an unfavourable action; a perceived benefit is consumers' belief regarding the extent to which they will benefit from purchasing a product (Kim et al., 2008).

Perceived Risks and Online Food Delivery Ordering

According to Bauer (1960), most consumer purchasing behaviours are risky because buying decisions could have unanticipated or unpleasant outcomes that lead to perceived risks. However, there are no commonly accepted definitions of perceived risks as researchers defined them based on research contexts (Yang et al., 2015). This study conceptualises perceived risks in three dimensions: personal, psychological, and financial, as suggested by Gupta and Duggal (2021).

Considering the nature of OFDO, there are high chances of possibilities of psychological risk, personal risk, and financial risk. Regarding psychological risks, OFDO tends to be late in delivering the food, has hygiene issues, and may not serve as per religious belief. Personal risks include the lack of personal contact, the high cost of devices, and earlier online experiences. Likewise, financial risks may

be related to fraud, payment inconvenience, and unreasonable fees (Sinha & Singh, 2014). Moreover, consumers may not be comfortable using OFDO due to the lack of personal touch and connection (Gupta & Duggal, 2021).

Perceived risks negatively influenced consumer behaviour in online shopping (Siyal et al., 2021). Additionally, perceived risk as a multi-dimensional construct directly affects consumer behaviour in using online banking (Kaur & Aurora, 2021). Similarly, Raman and Aashish (2021) found that Indian consumers' perceived risks were an antecedent of consumer behaviour towards mobile payment systems. This study is consistent with a study among the younger generation in Taiwan (Wei et al., 2021). However, there are still limited studies on perceived risks' effect on online food delivery ordering. Most perceived risk-technology adoption studies focused on online shopping in general and online banking. Recently, Gupta and Duggal (2021) found that Indian consumers' usage of OFDO was influenced by perceived risk. Similarly, a study on OFDO among consumers in India found that the perceived risk of acquiring a particular disease and fear negatively influenced their purchasing frequency through OFDO (Mehroli et al., 2021). In the same vein, a recent study found that perceived risk negatively affects the intention to purchase through OFDO in New York (Leung & Cai, 2021). Hence, the following hypothesis is proposed:

H3: Perceived risk has a negative effect on the consumers' behaviour towards OFDO.

Perceived Benefits and Online Food Delivery Ordering

Constructing a framework that includes risk and benefit perceptions is critical to gaining more profound knowledge about consumer behaviour towards using OFDO (Gupta & Sajnani, 2020). The term 'perceived benefits' refers to the anticipated benefits that OFDO provides consumers. In this study, the benefit of values and convenience are the two dimensions of perceived benefit, as suggested by Gupta and Duggal (2021). The most apparent benefit of OFDO is that it saves time and effort, as going out to buy food or home-cooking takes time and costs more money (Punj, 2012). Hence, OFDO is a prevalent choice worldwide due to its time-saving features, ease of ordering, and accessibility from anywhere (Kimes, 2011; Wang et al., 2020).

Furthermore, consumers could leisurely explore product information in terms of time and location, enjoy a limitless selection of restaurants, and easily compare costs. In terms of value benefit, OFDO has better value for money because it offers better discounts, rewards, and cashback. Additionally, OFDO provides the flexibility of an online payment gateway and the option of product customisation, which are deemed advantages for individuals who prefer cashless transactions and product personalisation (Gupta & Sajnani, 2020). On the other hand, Mehroli et al. (2021) suggested that consumers who perceive OFDO has not so much benefit will order food through online food delivery less frequently. Generally, people staying at

home during the COVID-19 pandemic are inclined to adopt OFDO to protect themselves against the virus and save money on travel expenses.

OFDO has played an unprecedented role during the outbreak of the COVID-19, thus benefiting not only consumers but also other stakeholders, restaurants operator, app providers, and others. The pandemic and government measures have greatly impacted people's daily lives, influencing or changing consumers' behaviour. Thus, consumers opted for OFDO because of its numerous benefits, especially in this new norm situation (Leung & Cai, 2021). Due to consumer behaviour changes with the new norm, especially towards using e-commerce, it is crucial to study the effects of perceived benefits in emerging economies such as Malaysia. Although OFDO is widely used in Malaysia, research on the perceived benefits' effect on OFDO consumer behaviour is limited. Therefore, the following hypothesis is formulated:

H4: Perceived benefits have a positive effect on consumer behaviour towards OFDO.

Food Safety Consciousness and Online Food Delivery Ordering

Food safety is the most crucial consideration when dealing with food, especially during this pandemic. People are afraid of contracting the virus; thus, the consumer decisions on buying food are strongly influenced by their food safety consciousness. In this study, food safety consciousness relates to how well consumers understand the

current state of food safety and how much importance they place on it (Zhao et al., 2017). However, empirical evidence of food safety related to OFDO is limited.

Previous studies found that food safety assurance strongly affects OFDO, enhancing consumers' trust in OFDO (Xiao et al., 2015). Furthermore, there is evidence from the recent study on OFDO that the safety measures adopted by restaurants and delivery services will help maintain their customer base, hence, securing consumers' loyalty (Dsouza & Sharma, 2020). As OFDO products are highly perishable food items with a typically short shelf life, food safety becomes a top priority in purchasing food and beverages. As Malaysia is the home of Southeast Asian cuisine, food safety has become a great concern among health authorities in Malaysia due to its profound impact. Since halal food premises are widely in demand in this country due to its larger Muslim population, food operators must

follow strict rules and regulations to get a halal certificate. Among the requirements is to fulfil the food safety requirement, hygiene, and cleanliness standards. Therefore, the following hypothesis is formulated.

H5: Consumers' food safety consciousness (FSC) has a positive effect on consumer behaviour towards OFDO.

Figure 1 illustrates the conceptual framework and the associated hypotheses based on the literature discussed.

METHOD

Data Collection Procedure

Data were collected for two months from Malaysia's urban population in all thirteen states and three federal territories. The urban population was selected since they have a better internet connection and the OFDO application is only available in a particular area in Malaysia, namely the urban area. Initially, a pretesting of the

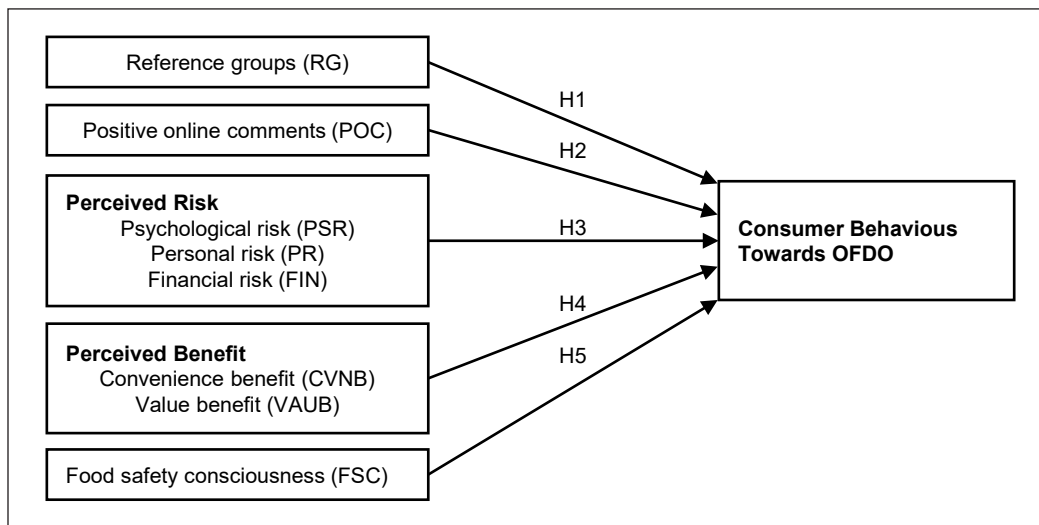


Figure 1: Conceptual framework

instrument was conducted before the actual data collection. The cognitive interviewing strategy was used, whereby fifteen responses were collected. Cognitive interviewing is a method for scientifically studying how people think about and respond to survey questionnaires. It was conducted to understand better how respondents reply to survey questions. The pretesting method allows the researcher to modify and improve the questionnaire to be more precise and easier to complete (Lavrakas, 2008). Based on the interview, no major modification was required for the questionnaire. The comments were more on the grammar, layout, and font size. Overall, respondents could easily understand the questionnaire. After minor modification, a larger sample of 339 responses was received from the target population, out of which seven responses were excluded from the analysis due to straight-lining, and 44 responses did not have experience using OFDO. Therefore, 288 responses that were found to be completed and usable were used in the final data analysis.

Sample Size and Respondent Profile

The sample of this study was Malaysian consumers aged 18 years and above. Since the sampling frame is not available, this study uses G*Power ($f^2 = 0.15$, power = 0.95, Alpha = 0.05 and predictors = 5) for minimum sample size determination. The results from G*Power 3.1.9.7 software indicate that this study requires a 138 minimum sample size. Using power analysis for sample size computation was recommended in recent

publications (Hair et al., 2014, 2017; Ringle et al., 2020). The sampling technique used was convenience sampling. In order to ensure the adequacy of the sample and a better response rate, 500 questionnaires were distributed using an online survey. After a few follow-ups, only 339 respondents answered the survey through the online platform. However, after screening, only 288 respondents fulfilled the requirement, whereby only consumers with experience in using OFDO qualified for this research on consumer behaviour.

Most respondents are female (66%) and belonged to the age group of 19–25 years (45.1%). Graduated respondents (diploma or bachelor's degree) are the highest group (65.6%). In terms of OFDO frequency, most respondents used OFDO once or twice a month (41.7%), followed by a few times a week (24.7%). Most respondents have been using OFDO for more than 24 months (27.1%). Appendix 1 presents the demographics of the respondents.

Measurement

The questionnaire used for this research was adopted from previous research and consisted of four sections. The first section asked one screening question, whether the participants have prior OFDO experience. The second section comprised respondents' demographic profiles, while the third section was about the frequency of using OFDO and the duration of OFDO usage, as suggested by Ali et al. (2021). The last section comprised questions regarding all items in the conceptual framework, as

shown in Appendix 2. The study adapted all measurement items from previous literature, which were modified to fit this study context. The perceived risks and benefits of OFDO were measured by the items adapted and modified from Gupta and Duggal (2021). Reference groups, positive online comments, and food safety consciousness of OFDO were measured via the items borrowed from Zhao et al. (2017). For the dependent variable (consumer behaviour), the three items were adapted from Yadav and Pathak (2017). This study used a five-point Likert-type scale from “strongly disagree” (1) to “strongly agree” (5) for the measurement.

Statistical Data Analysis

The research model and hypotheses were examined using the partial least squares structural equation modelling (PLS-SEM) approach. The data was analysed using SmartPLS 3.3.3 software in a three-step PLS-SEM method. First, the outer (measurement) model was used to test the reliability and validity of all constructs for the reflective construct. Next, the second assessment is for the formative measures (second-order construct). The second step was conducted after the assessment of the reflective measurement was completed and found to be satisfactory. The assessment of formative measures consists of collinearity (Variance Inflation Factor [VIF]) and weight and significance (outer weight significance [Bootstrap]). In this study, the perceived risks (three dimensions) and perceived benefits (two dimensions) are modelled as

a Type II (reflective–formative) measure. In the final step or step three, the assessment of the structural model was tested for path coefficient significance (Hair et al., 2017).

The reasons for using the PLS-SEM technique are two-fold. First, the model in this study incorporates structural models with reflective and formative measurement models that can be easily included in PLS-SEM. Second, since the results revealed that the data in this study was not multivariate normal, a non-parametric analytic programme using SmartPLS is more suitable than Multiple Regression Analysis using SPSS Statistics.

Data normality was measured using multivariate skewness and kurtosis as suggested by Hair et al. (2017) and Cain et al. (2017). The results revealed that the data obtained were not multivariate normal, Mardia's multivariate skewness ($\beta=9.930$, $p<0.01$) and Mardia's multivariate kurtosis ($\beta=85.404$, $p<0.01$).

RESULTS

First Step: Measurement Assessment of the Reflective Measurement Model (First-Order Construct)

First, the measurement model was performed to test the validity and reliability of the instruments using the guidelines by Hair et al. (2019) and Ramayah et al. (2018). The loadings, average variance extracted (AVE), and the composite reliability (CR) were assessed for the measurement model. The loadings' values should be ≥ 0.5 , the AVE should be ≥ 0.5 , and the CR should be ≥ 0.7 . As shown in Appendix 3, both AVE

values are higher than 0.5, and all CR values are higher than 0.7. The loadings were also acceptable, with only seven loadings scoring less than 0.708 (Hair et al., 2019). A universally accepted norm for Cronbach Alpha (α) value is a score of 0.6-0.7, which indicates an acceptable degree of reliability, and a score of 0.8 or higher indicates a very good level. However, numbers greater than 0.95 are not always desirable because they may indicate redundancy (Hulin et al., 2001). In this study, all constructs are in the range of 0.647 to 0.878, and all are acceptable. Three items were deleted due to loadings' values below ≥ 0.5 .

Next, the discriminant validity was assessed using the HTMT criterion, as suggested by Henseler et al. (2015) and updated by Franke and Sarstedt (2019). The HTMT values should be ≤ 0.85 , and the stricter and lenient mode criterion should be ≤ 0.90 . As shown in Table 1, all values of HTMT were lower than the stricter criterion of ≤ 0.85 . As a result, it can be concluded that the respondents were aware of the distinctions between the six variables. Thus, both validity tests reveal that the measuring items are valid and reliable.

Second Step: Assessment of Formative Measures (Second-Order Construct)

The formative measures were assessed once the reflective measurement was completed and judged to be satisfactory. One of the main reasons for including the second-order construct in research is to reduce the number of interactions in the structural model, making the PLS path model more parsimonious and easier to grasp (Hair et al., 2014). Therefore, in this study, perceived risks (three dimensions and perceived benefits (two dimensions) are modelled as Type II: Reflective-Formative High Order Construct.

First, for Collinearity or Variance Inflation Factor (VIF), there is no collinearity issue in the VIF assessment of this study since all the VIF values are below 5.0 (Hair et al. 2014). Second, for weight and significance, as presented in Appendix 4, the significance and relevance of the outer weights of the formative constructs are examined. The results show that only three indicators were significant, and two were insignificant. However, an insignificant indicator can still be retained based on content validity (Hair et al., 2013).

Table 1
Discriminant validity (HTMT)

| | Benefit | FSC | PB | POC | RG | Risk |
|---------|----------------|------------|-----------|------------|-----------|-------------|
| Benefit | | | | | | |
| FSC | 0.270 | | | | | |
| PB | 0.604 | 0.301 | | | | |
| POC | 0.325 | 0.367 | 0.067 | | | |
| RG | 0.303 | 0.324 | 0.227 | 0.539 | | |
| Risk | 0.210 | 0.174 | 0.220 | 0.150 | 0.227 | |

Third Step: Assessment of the Structural Model (Hypotheses Testing)

Table 2 summarises the criteria to assess the proposed hypotheses. The effect of the five predictors on consumer behaviour, R^2 , was 0.280 ($Q^2 = 0.186$), which suggests all five predictors explained 28.0% of the variance in consumer behaviour towards OFDO. Reference Groups ($\beta=0.112$, $p<0.05$), Positive Online Comments ($\beta=0.183$, $p<0.05$), Perceived Benefits ($\beta=0.476$, $p<0.01$) and Food Safety Consciousness ($\beta=0.153$, $p<0.05$) are all positively related to consumer behaviour towards OFDO; thus, H1, H2, H4, and H4 are supported. Contrary to the expectation, Perceived Risks ($\beta=0.095$, $p>0.05$) do not affect consumer behaviour.

DISCUSSION

As theorised, for H1, reference groups have a positive effect on consumer behaviour towards OFDO. Indeed, friends, families, co-workers, and celebrities influenced consumer behaviours towards OFDO. This finding is consistent with Ding et al. (2020) and represents the collectivistic society of Malaysians, manifested in the long-term

devotion toward “members” of a group. Thus, when consumers observed reference groups used OFDO, they would be more inclined to use OFDO.

Similarly, H2 positive online comments influenced consumer behaviours towards OFDO, which is also supported. The finding corroborates with Social Identity Theory that people’s self-concepts are shaped by their affiliation with social groupings. Furthermore, as most respondents are young consumers, the data revealed that their decisions are easily influenced by online recommendations and positive comments on social media (Tan et al., 2014). This finding is consistent with other studies, such as Arif et al. (2020), Park et al. (2007), Sparks and Browning (2011), and Zhang et al. (2017).

However, based on the result, H3 is not supported. First, perceived risks do not affect consumer behaviours towards OFDO. It may be because the OFDO system is widely used and well-established. Thus, minimum risks are involved, and online payments are more trustworthy (Li et al., 2020). Besides, psychological, financial, and personal risks are no longer an issue with the new norms. Additionally, consumers’ risks

Table 2
Hypotheses testing

| Relationship | Std Beta | Std Dev | t-value | p-value | BCI LL | BCI UL | f ² | Hypotheses Results |
|-------------------|----------|---------|---------|----------|--------|--------|----------------|--------------------|
| H1: RG -> PB | 0.112 | 0.058 | 1.924 | 0.027 | 0.014 | 0.199 | 0.013 | Supported |
| H2: POC -> PB | 0.183 | 0.090 | 2.028 | 0.021 | 0.076 | 0.359 | 0.034 | Supported |
| H3: Risk -> PB | 0.095 | 0.071 | 1.336 | 0.091 | -0.080 | 0.173 | 0.012 | Not Supported |
| H4: Benefit -> PB | 0.476 | 0.050 | 9.472 | $p<.001$ | 0.396 | 0.559 | 0.273 | Supported |
| H5: FSC -> PB | 0.153 | 0.063 | 2.444 | 0.007 | 0.060 | 0.264 | 0.027 | Supported |

are not a significant concern with customers' experience and knowledge of using OFDO. Another reason for the insignificant result is that the benefits of OFDO outweigh its risks.

Interestingly, in this study, perceived benefits have the largest effect on consumer behaviour towards OFDO. Thus, H4 is supported. Convenience and value benefit are the two dimensions of perceived benefit that strongly influence consumer behaviour. Undoubtedly, consumers use OFDO due to its benefits, such as the time-saving features, ease of ordering, and accessibility from anywhere, offering better discounts, rewards, and cashback. Furthermore, with the social distancing advice and work from home approach since March 2020 and the movement control order by the Malaysian government, dine-in is still restricted. Therefore, OFDO is the most practical solution to the current situation to suppress the COVID-19 virus proliferation. This finding is consistent with the previous research by Leung and Cai (2021) and Mehroli et al. (2021).

Finally, the researchers discovered that consumers' food safety consciousness has a positive effect on consumer behaviour, and as such, H5 is supported. This outcome agrees with Dsouza and Sharma (2020). Furthermore, since most respondents in this study are highly educated, they have better food safety knowledge and exhibit high demand for food safety, which indicates the positive effect of food safety consciousness on consumer behaviour towards OFDO.

THEORETICAL, MANAGERIAL, METHODOLOGICAL, AND SOCIAL IMPLICATIONS

In terms of the theoretical perspectives, this research's findings enhance the existing literature as follows: first, the contribution of this research can be seen through the incorporation of the two theories from previous research, which are Social Identity Theory and Perceived Risk and Benefits Model. Few studies combine these two theories to determine consumer behaviour, especially in the OFDO settings. Zhao et al. (2017) asserted that they were pioneers in defining reference effects in an online setting while broadening and enriching the "social influence" notion by employing reference groups. Additionally, there is an urgent need to examine reference effects on online consumer behaviour in this information era, especially online comments. Similarly, consumers often consider the risks and benefits of various options when it comes to food. Hence, the justification of integrating both theories, Social Identity Theory and the Perceived Risk and Benefits Model, in assessing consumer purchase behaviour towards OFDO. Second, incorporating food safety consciousness into the research framework enriches the theory of online purchase behaviour. The most crucial consideration is food safety, especially in this pandemic era. Third, a fascinating discovery of this study is that the perceived risk of OFDO has no effect on consumer behaviour, which contradicts some of the past research findings on OFDO and other sectors, such as online banking and mobile

payment systems. This discovery may point to the types of technology consumers use. Consumers might not experience risks associated with OFDO.

Next, the study has a few managerial benefits that provide valuable insights for app developers, restaurant operators, and online vendors using OFDO or planning to use the OFDO system. First, the findings from this study revealed that the most important predictor of consumer buying behaviour is the perceived benefits of OFDO. Therefore, app developers, restaurant operators, and online vendors should provide more convenience and benefits, such as a user-friendly app interface, broad choices for food ordering, ease of use, diverse online payment options, value for money, better discounts, and better rewards, and cashback. Second, restaurant operators should intentionally pay attention to online comments. Consumer behaviour towards OFDO is determined by other customers' positive online comments and recommendations. Furthermore, effective measures must be taken immediately to improve the services or products based on the negative comments. Additionally, it is vital to building smooth communication channels with consumers to mitigate the impact of unfavourable comments. Third, restaurant operators and online vendors must always prioritise food safety. Keeping food safe and hygienic is critical for businesses since it prevents the spread of foodborne illnesses and food poisoning. Lastly, the reference group effect, such as family members, friends, co-workers, and

celebrities, would greatly affect consumer purchase behaviour. Therefore, restaurant operators should enhance these RGs' effect by ensuring their food quality and engaging celebrities in promoting their business.

Among the methodological implications of this study is adopting the PLS-SEM technique using SmartPLS 3.3.3 due to the non-normality of data. The study assessed perceived risks and benefits modelled as second-order and Type II (reflective-formative). One of the key reasons to add a second-order construct in research, according to Hair et al. (2014), is to reduce the number of relationships in the structural model, making the PLS path model more parsimonious and easier to grasp. This method is replicable by future research. This research is also unique compared to other studies on OFDO, as other studies focused on the intention to purchase. Since OFDO is widely used nowadays, it is more suitable to conduct a study on consumer behaviour rather than their intention. Additionally, both purchase intention and purchase behaviour must carefully select the right respondents; for purchase intention, the respondents should be those who have yet to use OFDO, while for purchase behaviour, the right respondents are those who are using OFDO.

Lastly, in terms of social implications, this study helps better to understand the behaviour of online food delivery consumers. First, this study contributes to helping the food and beverages operators understand consumer behaviour. Second, this study also assists the OFDO app developers and business owners in creating

and enhancing their applications. Third, understanding consumer behaviour will help formulate better marketing strategies, increase customer loyalty, and penetrate a new market. For instance, in this study, the reference groups, positive online comments, perceived benefits, and food safety consciousness positively affect consumer behaviour. Thus, food and beverage operators should put extra effort into ensuring a high quality of service to get positive feedback and comments from consumers and prioritise food safety. Furthermore, owners of the OFDO platforms should provide more benefits, such as rewards and cashback, and ensure safe payment. Indirectly, these efforts would increase the country's income, ensure the sustainability of the food and beverages operators, and offer more employment opportunities. Accordingly, this will safeguard Malaysia as a local culinary tourism destination.

LIMITATIONS AND FUTURE RESEARCH SUGGESTIONS

The coefficient of determination or R squared of this study's model is only 28.0%, indicating that the variance percentage collectively explains consumer behaviour relating to reference groups, positive online comments, perceived risks, and food safety consciousness. However, according to Hair et al. (2014), the R squared of 28% is deemed weak. Thus, further research should explore the determinant of OFDO behaviour using other theories, such as technology readiness, decomposed theory of planned behaviour, and other benefit

dimensions. Usually, the decomposed theory of planned behaviour has higher predictive power than other theories in explaining an individual's behaviour or intention (Moons & De Pelsmacker, 2015).

On the other hand, this study only focuses on the consumer perspective; it would be interesting to know the determinants of the usage of OFDO by food and beverage owners. They are the key players of OFDO and the major influence on consumer decisions due to their vast numbers and various choices they offer. Moreover, since the items used in this study are still new and the area of study is fresh, there is a need to refine them further to be more viable and generalisable scales.

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APPENDICES

Appendix 1

Demographics of respondents

| Attribute | Frequency | Percentage |
|---------------------------------------|-----------|------------|
| Gender | | |
| Male | 98 | 34 |
| Female | 190 | 66 |
| Age (Years) | | |
| 18-25 | 130 | 45.1 |
| 26-33 | 57 | 19.8 |
| 34-41 | 61 | 21.2 |
| 42 and above | 40 | 13.9 |
| Educational Level | | |
| Secondary School | 12 | 4.2 |
| Graduate Level (Diploma/Degree) | 189 | 65.6 |
| Postgraduate (Master/PhD/DBA) | 85 | 29.5 |
| Professional Qualification | 2 | 0.7 |
| Online Food Ordering Frequency | | |
| Not even once a month | 8 | 2.8 |
| Once or twice a month | 120 | 41.7 |
| Once a week | 67 | 23.3 |
| Few times a week | 71 | 24.7 |
| Almost every day | 22 | 7.6 |
| Duration of OFDO Usage | | |
| 1-6 months | 73 | 25.3 |
| 7-12 months | 50 | 17.4 |
| 13-18 months | 45 | 15.6 |
| 19-24 months | 42 | 14.6 |
| more than 24 months | 78 | 27.1 |

Appendix 2

Research instrument

| Construct/ Items | Questions |
|------------------------------------|---|
| Consumer Purchase Behaviour | |
| PB1 | I have been purchasing through online food delivery regularly |
| PB2 | I have been purchasing online food delivery for my daily needs |
| PB3 | I have been purchasing online food delivery over the past six months |
| Reference Group | |
| RG1 | I often follow family members' recommendations when I purchase Online Food Delivery |

Research instrument (continue)

| Construct/ Items | Questions |
|---|--|
| RG2 | I often follow my friends' recommendations when I purchase Online Food Delivery |
| RG3 | I often follow my co-workers' recommendations when I Online Food Delivery |
| RG4 | I often follow web celebrities' recommendations when I Online Food Delivery |
| Positive Online Comments (POC) | |
| POC1 | I pay special attention to positive online comments when purchasing Online Food Delivery |
| POC2 | I often read online recommendations when purchasing Online Food Delivery |
| POC3 | I often read positive online comments about the Online Food Delivery sold online |
| POC4 | Online recommendations and positive comments make me more confident in purchasing Online Food Delivery |
| Perceived Risk – Psychological risk (PSR) | |
| PSR1 | OFDO has non-trustworthy/non-reliable service |
| PSR2 | OFDO has improper and late food delivery |
| PSR3 | OFDO has hygiene issues during delivery |
| PSR4 | OFDO is not served as per religious belief |
| Perceived Risk – Financial risk (FIN) | |
| FIN1 | I fear online fraud when using OFDO |
| FIN2 | The OFDO payment is convenient (<i>reverse</i>) |
| FIN3 | OFDO has reasonable delivery fees (<i>reverse</i>) |
| Perceived Risk – Personal Risks (PR) | |
| PR1 | OFDO has a low personal connection or lack of personal touch |
| PR2 | I am uncomfortable with the use of OFDO |
| Perceived Benefit – Convenience Benefit (CB) | |
| CB1 | The OFDO has a user-friendly app interface |
| CB2 | The OFDO has virtually broad choices for food ordering |
| CB3 | The OFDO is easy from anywhere |
| CB4 | The OFDO has round-the-clock food availability |
| CB5 | The OFDO has door-step food delivery |
| CB6 | The OFDO has diverse online payment options |
| Perceived Benefit – Value Benefit (VB) | |
| VB1 | The OFDO has value for money food |
| VB2 | The OFDO has better discounts |
| VB3 | The OFDO has better rewards and cashback |
| Food Safety consciousness (FSC) | |
| FSC1 | When purchasing meals online, I pay special attention to food safety issues |

Appendix 3

Measurement model analysis

| Construct/items | Loadings | α | CR | AVE |
|---------------------------------|-----------------|----------------------------|-----------|------------|
| Reference Group | | 0.791 | 0.847 | 0.583 |
| RG1 | 0.619 | | | |
| RG2 | 0.747 | | | |
| RG3 | 0.838 | | | |
| RG4 | 0.830 | | | |
| Positive Online Comments | | 0.878 | 0.894 | 0.741 |
| POC1 | 0.680 | | | |
| POC2 | 0.945 | | | |
| POC3 | 0.932 | | | |
| POC4 | Deleted | | | |
| Perceived Risks | | 0.724 | 0.793 | 0.572 |
| Psychological Risk | | 0.813 | 0.790 | 0.571 |
| PSR2 | 0.685 | | | |
| PSR3 | 0.977 | | | |
| PSR4 | 0.539 | | | |
| Personal Risks | | 1.000 | 1.000 | 1.000 |
| PR1 | 1.000 | | | |
| PR2 | Deleted | | | |
| Financial risk | | 1.000 | 1.000 | 1.000 |
| FIN1 | Deleted | | | |
| FIN2 | 1.000 | | | |
| Perceived Benefit | | 0.647 | 0.849 | 0.738 |
| Convenience Benefit | 0.852 | | 0.887 | 0.529 |
| CB1 | 0.656 | | | |
| CB2 | 0.698 | | | |
| CB3 | 0.749 | | | |
| CB4 | 0.676 | | | |
| CB5 | 0.800 | | | |
| CB6 | 0.749 | | | |
| CB7 | 0.754 | | | |
| Value Benefit | 0.876 | | 0.915 | 0.729 |
| VB1 | 0.804 | | | |
| VB2 | 0.892 | | | |
| VB3 | 0.870 | | | |
| VB4 | 0.846 | | | |

Measurement model analysis (continue)

| Construct/items | Loadings | α | CR | AVE |
|----------------------------------|----------|----------|-------|-------|
| Food Safety Consciousness | | | n/a | n/a |
| FSC1 | SIM | | | |
| Purchase Behaviour | | 0.749 | 0.858 | 0.669 |
| PB1 | 0.878 | | | |
| PB2 | 0.837 | | | |
| PB3 | 0.732 | | | |

Note: SIM=Single Item Measure

Appendix 4

Weight and significance (formative construct)

| Latent Variable | Indicator ^a | Weights | t-values ^b | VIF |
|-------------------|--------------------------|---------|-----------------------|-------|
| Perceived Risks | Psychological Risk (PSR) | 0.280 | 0.510 | 1.791 |
| | Personal Risks (PR) | -0.411 | 0.683 | 1.610 |
| | Financial risk (FIN) | 0.957 | 1.712* | 1.264 |
| Perceived Benefit | Convenience Benefit (CB) | 0.689 | 5.375** | 1.296 |
| | Value Benefit (VB) | 0.467 | 3.193** | 1.296 |

Note(s): * $p < 0.05$; *** $p < 0.001$



The Interaction of Receptive Poetics and Psycholinguistics: On the Way to the Synergetic Effect

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ABSTRACT

The connection between traditional literary methods and psychological science has long been of interest to researchers, particularly the problem of interaction of poetics as a science of artistry with psycholinguistics is especially relevant. The prospects of this approach are explained by the fact that language as the main building material of literature is an act of mental activity. The purpose of this paper is to substantiate the synergetic effect of the interaction of receptive poetics and psycholinguistics in the study of the literary text artistry. The depiction of the expressive system of Pavlo Tychyna's landscape miniature *The Rain* has been done by way of studying the recipient's psychology of text perception. In the poetic text, many techniques have been identified that evoke figurative representations in the recipient's mind, thus forming a complete visual picture. It has been analyzed how the picture of rain gradually emerges in the reader's imagination: from the first drops to the strengthening and subsidence, ending with a cathartic state. It has been observed how figurative representations generate the accordant emotional states. The particular attention is paid to the functionality of the tool termed as the principle of the reverse funnel. The analysis of P. Tychyna's poem *The Rain* with the use of the tools both of receptive poetics

and psycholinguistics has demonstrated high efficiency of such a binary approach, thus confirming its promising perspectives in contemporary philological research.

Keywords: Art, artistry of the literary text, literary text, psycholinguistics, receptive poetics, reverse funnel effect, synergy

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INTRODUCTION

One of the most successful ways to reveal the poetics of a literary work is to model its impact on the recipient. This modeling is to study the functionality of expressive and influential means from the psychology perspective. In that light, the connection between traditional literary methods and psychological science has always been the focus of the science of literature. This problem has led to the emergence of many methodological approaches, but not all of them have demonstrated their research effectiveness. It is relevant both to traditional philological approaches, which, for example, are represented by Vinogradov (1959), as well as attempts to involve specific statistical methods for solving this cultural and humanitarian problem, originally initiated by academician Kolmogorov (2015).

In addition to these approaches, since the end of the XIX century and to the present day, another two approaches have been developed, with each of them having its own way to unravel the mysteries of artistry of a literary work. They have been developing intensively, creating powerful and extensive scholarly discourses.

The first of those approaches was founded by Russian formalist school (so-called OPOJAZ, Society for the Study of Poetic Language) that was represented by the names of V. Shklovsky, B. Eikhenbaum, Yu. Tynianov, and others. This school had a significant impact on the further development of theoretical and literary ideas about the nature of a literary work.

Many of these ideas made the foundation for such a promising methodological direction as structuralism. Since the middle of the twentieth century, it attracted much attention both in western literary studies (Tz. Todorov & R. Barthes) and in the Soviet ones (the Tartu-Moscow Semiotic School led by Ju. Lotman). Their works were of a high theoretical level and, as a result, they made a substantial contribution to the future theoretical concept of a literary work as a systemic integrity. At the same time, they demonstrated their ineffectiveness in the process of the analysis of a particular literary work. If we try to understand the reasons for this failure, we can draw a conclusion that it lies in the concentration of research attention on identifying, in the words of Yu Barabash, “these elusive structures” (1972, p. 203).

To find out that the structuralists followed the same methodological principles, it is enough to read the course book for students *Analysis of the Poetic Text. Verse Structure* by Lotman (1972), in which poetic works are analyzed in such terms as rhythm and meter, rhyme, composition, while the question of the poetic imagery as the main source of the artistic energy of a literary work was disregarded by both the “formalists” and the structuralists as their followers. Their focus on a text was so palpable that they ignored other approaches to discovering ways of generating the energy of artistic influence, for the first thing the psychological ones. This point explains a certain antipsychologism of the Russian formalism school that manifested itself in its declared principle of ignoring non-textual factors (such as the author, his/her

worldview, talent) and in its biased attitude to the literary theory by A. Potebnja and the Kharkiv Linguistic School headed by him. For instance, Eikhenbaum directly called for “the exemption from the principles of psychological theory” (1924, p. 10).

Highlighting the antipsychologism of the Russian formalism school and the structuralism, it should be admitted that owing to their critical works, the systemological theory of a literary work could originate. Over time, their attempts to study the structure of a literary work were transformed into its understanding as systemic integrity, a functioning system. The main concepts of the systemological theory of a literary work include the system-forming factor (an artistic idea of a literary work) and the device (an element of the artistic system of a literary work, an indiscrete unit of the form that performs a particular artistic function) (Klochek, 2020, pp. 8-18).

The second approach, which in some specified sense was the opposite of the first one, was generated by the process of active psychologization of the humanities that took place in the last decades of the nineteenth century. It was the time that psychological science was manifested in its branches. Its main achievements were “on the surface” and could be easily captured by the consciousness of a reader.

The process of psychologization of the humanities was most salient in the doctrine by A. Potebnja who was not only the founder of the psychological direction in Slavic linguistics, but also used psychological

approaches to the study of fiction (Potebnja, 1894, 1905). Eight volumes of the collection of scientific works *Questions of the Theory and Psychology of Creativity* (Lezin, 1907, 1909, 1910, 1911, 1913, 1914, 1915, 1916, 1923), in which A. Potebnja’s students and followers of his theory published their research findings (D. Ovsianiko-Kulikovsky, B. Lezin, A. Gornfeld, and others), testify to the high level of scientific efficiency that was achieved through the use of specific tools of psychological science to study the problems of linguistics and literary criticism.

Two works that are directly relating to the problem of studying the artistry of a literary work using a psychological approach need special attention. The first work *La critique scientifique* by Hennequin (1888) substantiates a literary research field called aesthetic psychology. The French scholar argued that above everything else a literary interpreter should find out the features of emotions evoked in the process of perception of a literary work, and then explore the devices that generate them.

The second work is the well-known treatise *From the Secrets of Poetic Creativity* by Franko (1981). The importance of this prominent work is that I. Franko was the first in the world literary studies who convincingly expressed the need to apply psychological approaches to unraveling the mysteries of artistry, as well as showed in detail how to explain the process of generation of aesthetic emotions by a literary text on the example of analysis of a number of T. Shevchenko’s poetic works.

Franko's complete analysis of poetic texts clearly shows that the moment of appearance of imagery representations in the reader's mind is accompanied by aesthetically colored emotionality. In this case, unveiling the mysteries of a fiction work rests on its potential of evoking visionary images in the reader's mind.

Thus, the main methodological principle to reveal the components of artistry used by I. Franko was to model the impact of a literary text on the recipient based on the psychology of an artistic perception. This principle is the key one for receptive poetics that was formed on the basis of the systemological theory of a literary work. Its methodological essence is to model the process of recipient's perception of an artistic text.

In such a way, receptive poetics as a methodological construction combines research principles developed by the two approaches we have considered: systemological theory and psychological view of a literary text study. The systemological theory was formed on the basis of the Russian formalism school and structuralism. The main idea of this theory is to recognize the device as an element of the expressive system of the work, "a minimum unit capable of relatively independent implementation of a particular function" (Blauberg & Judin, 1973, p. 185). If the device is defined, then the next step is to study and describe its expressive function, in other words, its impact on the consciousness of the recipient. At the same time, this can be done only with the possibilities of

psychological science. This is the processes of generation and perception of language, hence its impact that are studied by such a branch of psychology as psycholinguistics. Thus, the research issue of synergetic interaction of poetics as a study of artistry and psycholinguistics arises.

Although the interaction between psycholinguistics and literary studies boosts excellent prospects, this correlation is not the subject of systematic study. This phenomenon can be explained by the fact that in comparison with the era of the late nineteenth and early twentieth centuries, when the science of literature and psychology were being formed, they had an increased ability to interact. Later, with their full development, when they concentrated mainly on specific problems, the interaction between them became less intense. At the same time, skillful extrapolation of research findings obtained in such areas of psycholinguistics as the theory of language production and the theory of language perception can provide better understanding about many issues related to the artistry of a literary work that have long been in the focus of literary critics' attention, determine, and suggest effective ways to their solution. For instance, the psycholinguistic concept of the process of text production (utterance, verbal product), developed by L. Vygotsky, A. Leontiev, A. Luria, allows to analyze the artistic text from new methodological perspectives for researching the realization of the author's concepts in a literary text (artistic language) that constitute a motivation impetus for the artistic work

production as a lingual expression. The developments made in the field of speech perception can be successfully applied in the study of a literary text by means of the method of receptive poetics. The problem of human verbal skills that is the focus of increased attention in psycholinguistics contains many tips for literary critics who are interested in creative verbal talent of writers.

Despite obvious perspectives of such interaction of literature and psycholinguistics, their correlation is not sufficiently researched; papers devoted to this problem are comparatively few and touch upon different aspects, such as the meaning of literature for psycholinguistics (Gibbs & Colston, 2019), employing psycholinguistic approach for analyzing literary devices (Rasse et al., 2020; Suvorova, 2020), characters (Hodunok, 2018; Mahlberg et al., 2014), specific of narration/writing (Bieliekhova & Tsapiv, 2019). This tendency shows growing research interests of literary studies to the psycholinguistic methods, but, in fact, this kind of research is not of a systematic character. More specifically, the synergetic effect between receptive poetics and psycholinguistics has not been studied deeply.

The purpose of the paper is to substantiate the possibilities and the impact of the real, successful, and synergetic interaction of receptive poetics and psycholinguistics from the perspective of the artistry studies. This objective requires the solution of the following tasks: to develop the methodology for analysis of a literary text from the

perspective of receptive poetics based the use of psychological tools, to describe cognition possibilities of the approach that combines the principles of receptive poetics and the tools of psychological science for a poetic work analysis.

METHODOLOGY

The main research principle of receptive poetics is to reconstruct the perception of a literary work; such a reconstruction should explain the generation of an artistic meaning. It is important to keep in mind the concept of the device as a further indivisible unit of the expressive system of a literary work and its poetics. By way of generating an artistic meaning, the devices can be divided into linguistic, compositional, and rhythmic. The task of the interpreter of the artistry of a literary work is to identify these devices. The main building material for fiction is language: on one side, it is a mental activity and, on the other side, all expressive devices are lingual, i.e. they belong to the field of linguistics.

Given that the modeling of artistic expression and influence of a literary text on the recipient requires a psychological approach (this is convincingly evidenced in the above-mentioned treatise by I. Franko), it is advisable to resort to psycholinguistics, one of the main tasks of which is to study psychological mechanisms and processes of reception, interpretation, comprehension, and generation of speech.

In order not only to identify the expressive devices (tools, techniques) in a literary text, but also to explore their

functions in creating an artistic influence on the recipient, it is necessary to use the close reading approach that allows in detail to study the functioning of a literary work as a system.

It is clear that the close reading approach should be used effectively in the analysis of short passages of a literary text. That is why our choice is made in favor of P. Tychyna's landscape miniature *The Rain*, one of the four poems of the Ukrainian poet's cycle *Enharmonic*. Since the paper is aimed at the Anglophone readers, we turn to its English translation by M. M. Naydan, whose "interpretations impress their accuracy" (Foka, 2013, p. 186), i.e. they are fully adequate and very close to the original in content and style.

FINDINGS AND DISCUSSION

The discussion focuses on the illustration of the application of the methodology mentioned above on the basis of the analysis of P. Tychyna's poetic text *The Rain*.

The Analysis of P. Tychyna's Poetic Miniature *The Rain* from the Psycholinguistic Perspective

P. Tychyna's poem *The Rain* is a heavily coded literary work: every word generates a stream of associations in the reader's mind that creates a whole picture. Let us model this perceptual process from the receptive poetics perspective.

On the water, in someone's hand,
Snakes writhe... A dream. To the
bottom.

It blew, it puffed, it poured out
grain –
And sparrows began to bound!..

"Run away!" something
whispered to the shores.
"Lie down..." something shook
the pines.
A tiny cloud dropped lace
petticoats
Onto the meadows.

(Tychyna, 2020, p. 71)

The disclosure of this literary work poetics, i.e. the identification of the ways of depicting and expressing the content (and hence, the ways of influencing the reader's mind), should be done with reference to the psychology of perception. This approach defines the further use of the theory and data from the field of the psychophysiology of perception.

One of the tools that are used in the process of the analysis of the highly informative text is the principle of the reverse funnel effect. It is based on the idea that the initial parts of the nervous system receive much more signals from the surrounding reality than the higher ones. This is clearly explained in Saliamon's comment of the reverse funnel effect: "The initials links of the senses receive more signals than their nerve guides lead to the central nervous system, while the initial parts of the central nervous system receive more signals than the higher ones" (Saliamon, 1971, p. 102). Here is Vygotsky's explanation of this phenomenon:

Sherrington compared our nervous system to a funnel that is turned its wide hole to the world and its narrow hole to the action. The world flows into a person through a wide hole in the funnel with a thousand calls, delights, and irritations, and only a tiny part of them is carried outside and flows out through the narrow hole. (1965, p. 323)

For instance, there are many objects of the outer world around a person, but he/she consciously sees only a small part of them. That is why human perception can resemble a funnel, the wide hole of which includes many signals from the surrounding world, but only a small part of them is reflected in the mind, put differently, rather, not all signals from this reality “pour out” through the narrow hole of the funnel. Their huge number does not reach the higher parts of the central nervous system.

Imagine an individual who is watching the beginning of the rain by a river or a lake. His/her visual, auditory, olfactory, and tactile receptors receive a large number of signals. At this time, within the field of the observer’s view, there is a surrounding material world, such as a shore, lake, trees, grass, clouds, but not all these objects are reflected in his/her mind.

Tychyna points out the minimum part of the impressions that can be observed at the beginning of the rain. For the reader, every detail becomes the basis for reproduction a great number of visual, auditory, and other images in his/her mind; and these details go through a process that is reversed to the funnel.

The reader can visualize the rain with many details. It started suddenly. Before it started, all nature had tensed in some anxious anticipation. The wind blew the smell of the rain and the water stirred slightly. For a moment, there was a struggle between the past, calm state, which had penetrated the river to the bottom, and the future one, which was already coming. The clouds completely covered the sky. It got gloomy. The wind blew harder. At once, the water space darkened, stirred in vague anticipation: something alive, strange, and eerie filled its depths. With a new gust of wind, the first raindrops fell on the water and began to beat lightly on it, as if sparrows jumped, cheerfully picking up the millet scattered by someone.

When the first raindrops fell on the water, meadows, fields, and groves, nature was especially agitated; trees, reeds, and even meadow flowers swayed in the wind: “Take cover, people, each his own way!”

When the rain fully powered up, the wind died. Calm nature started drinking the healing moisture that is so indispensable to its life.

It is clear that every reader has his/her own picture of the rain, while perceiving the process depicted in the miniature, because his/her imaginative representations arise under his/her individual experience. Nevertheless, it does not object to the fact that the text still directs the development of the reader’s visions, imposing some certain restrictions on the amplitude of their individual fluctuations.

The reverse funnel effect that is so saliently manifested in the perception of

the miniature *The Rain* characterizes the essence of artistry in a most general way. The action of the reverse funnel effect (i.e. the force of emergence of the specific and emotionally saturated images) is not the same in the perception of different texts. It is obviously determined by the way of the verbal text special organization. Therefore, we will analyze in detail the text of the miniature in order to identify the basic principles in its organization that define the capacity of the reverse funnel effect.

The first phrase is difficult for comprehension, being very mysterious and puzzling: “On the water, in someone’s hand, / Snakes writhe...” (Tychyna, 2020, p. 71).

The recipient sees no logic: why do snakes writhe on the water and in someone’s hand? But the reader cannot take a cursory glance at the above quoted lines and move on to the perception of the further, more logically sound and therefore more comprehensible parts of the literary text. In this case, the perception of the miniature will not be deep and the reader faces the task of overcoming the antilogism of the phrase to decode its original meaning.

Psychology explains the mechanism of text perception of this difficult type. The numerous experiments conducted by psychologist Nikiforova have showed that in order to fully understand a difficult phrase, the recipient needs to activate his/her figurative representation. The researcher draws the following inference: “In those cases, when the structure of a phrase is complex or when there is no similar idea in the reader’s experience, he/she

constructs this idea and such a construction often occurs as a detailed and conscious process” (Nikiforova, 1947, p. 137). The way to understand the first phrase of the analyzed miniature lies precisely through the construction of such an idea that would refute its antilogism. That is the main reason why the reader’s imagination is activated. The image is constructed gradually: the water space was slightly agitated, as if in its depths, in someone’s hand, snakes began to writhe. It should be taken into consideration that the created image is not isolated; it is organically fused with other figurative representations that accompany its emergence and coexist with it since the very beginning. These accompanying images come from the title of the literary work *The Rain*, determining their content (they reproduce certain features of this phenomenon, such as a rain bearing cloud, sudden darkening, and the smell of ozone). The quantity and quality of such extra associative images may be different for every recipient, but they exist because the main image cannot be constructed without them.

So far, while explaining the mechanism of the miniature’s first phrase reproduction, we mean the appearance of a visual picture, but not its emotional content. Meanwhile, this visual picture has emotional charge. It is not the typical logic of the poetic image, which is interpreted by G. Hilmi in an interesting way, who argues that the information that the reader has got, decoding the first difficult phrase, is directly related to emotion. In Hilmi’s view, “information and

emotion are inseparably connected in the human mind. The emotion accompaniment sounds in a person all his/her life” (1967, p. 112). The other thing is that the semantic structure of the first phrase is organized in such a way that it carries a specific emotional charge, evoking in the reader’s mind a vivid visual image. It is mainly created with the word “snake” that is central for understanding the whole phrase because a figurative representation can be easily built after its perception. In the monograph *The Word As a Physiological and Therapeutic Factor* by Platonov, based on the rich factual data, it is proved that “the word [...] can generate psychological reactions, corresponding its semantic meaning” (1957, p. 20). The word “snakes” belongs to strong stimuli; it suggests a negative emotional reaction, mainly, anxiety, and fear. Hence, there is the mood of suspenseful expectation that is evoked in the reader’s mind by that phrase.

Psychology also points to other possible approaches to the analysis of the first phrase of the miniature. Simonov draws attention to the role of the novelty of the irritation that is, in his opinion, “both an extremely powerful and an under-researched factor of higher nervous activity” (1962, p. 54). There are some key concepts: the image is resorted to with the necessity to understand a difficult phrase (Nikiforova, 1947); the novelty of irritation is one of the features of real art (Simonov, 1962); orientating reflex catalyzes the reverse funnel effect (Saliamon, 1971). These positions of the researchers are identical. Therefore, the application of each of them in the analysis

of the phrase “On the water, in someone’s hand, snake writhe...” will lead to the same conclusion.

The analyzed phrase carries an important functional load: “the poet deliberately creates difficulties to our imagination to excite it, to spark off that very anxiety, tension, and the same uncertainty in the reader’s soul” (Franko, 1981, p. 67).

The two sentences are followed by the first phrase: “A dream. To the bottom” (Tychyna, 2020, p. 71). The psychophysiological mechanism of these words perception is the same as the first two lines of the miniature, that is, the difficulties of decoding their meaning evoke the reverse funnel effect. However, there is another reason, quite different from the one mentioned above that enables the reader comprehend the literary text deeply. The sentences stir and hold the reader’s attention not only due to their complexity that is responsible for the orientating reflex, but also due to their generalized nature that is accentuated by the author. In the external aspect, they seem to be quite distant from the meaning of the previous phrase. This underlined independence of each of the two words (“dream” and “bottom”) is an excellent stimulant for the intensification of figurative representations. The reader is forced to “look closely” at the semantic load of these words. With such an in-depth “look,” he/she begins to see much more meanings in these sentences than if the same words were part of ordinary sentences. Tychyna violates the automaticity of the reader’s perception of the text and thus achieves the desired effect.

The above said claim is confirmed by Nikiforova's experiments that show the following result: while comparing the frequency of occurrence of images during perception of a separate word and the same word in a context, the word perceived in a generalized way, without a context, evokes images much more often (Nikiforova, 1947, p. 137).

In the external level, the sentences "A dream" and "To the bottom" are not connected with the previous phrase "On the water, in someone's hand, / Snakes writhe..." (Tychyna, 2020, p. 71); in the inner level, deeply-semantic, they are inherently tied. There is no other way because both text fragments are integral parts of the entire highly organized art system.

The first phrase of the miniature ("On the water, in someone's hand, / Snakes writhe..." (Tychyna, 2020, p. 71) gives a picture of a slight excitement of the water space and generates a disturbing mood in the reader; at the same time, the following sentences ("A dream. To the bottom") on the contrary, mean the tranquility of nature that has permeated the river "to the bottom." The same subject is characterized in the opposite way. This idea still has its own logic. The poet succeeded in conveying the moment when nature begins to take on anxious mood, the moment when the struggle between the calm passing away state and the coming anxious state begins. These two sentences ("A dream" and "To the bottom") embedded into the text give the sense of the nature's state before rain.

After the first two lines of literally puzzling complexity, it is easier for the reader to perceive a visual image: "It blew, it puffed, it poured out grain – / And sparrows began to bound!.." (Tychyna, 2020, p. 71).

The rain started. The first drops fell on the water.

For all its transparency and simplicity, this piece of the poetic text is a complex metaphor. Isolated from the context, it is not able to give the desired visual image: the first raindrops fell on the water and, like sparrows, jumped, picking up grain scattered by someone.

The motive of anxiety evoked in the reader's mind by the first sentence of the poetic text is particularly reinforced in the following lines: "Run away!" something whispered to the shores. / "Lie down..." something shook the pines" (Tychyna, 2020, p. 71).

The disturbing motive reaches its apogee in these lines.

After these lines, somewhat difficult to perceive, there is a simple metaphoric image: "A tiny cloud dropped lace petticoats / Onto the meadows".

The miniature has an interesting composition. Using cinematic terminology, we can notice that all visual images of the first stanza are presented in the close-up view: "On the water, in someone's hand, / Snakes writhe... A dream. To the bottom. / It blew, it puffed, it poured out grain – / And sparrows began to bound!..".

The camera "stares" intently into the "microcosm" of nature. At first, the same object (water space) is seen in a still frame.

It reflects the most significant changes in nature: it has become gloomy and its transparency is disappearing; the wind has begun blowing and the water has been covered with small ripples; the first raindrops have begun falling down, as if “sparrows began to bound.”

In the second stanza, there are other plans. The close-up view changes into the middle one: the shore and the swaying of the pines are showed: “Run away!” something whispered to the shores. / “Lie down...” something shook the pines” (Tychyna, 2020, p. 71).

The poetic work under study ends with a general plan, the nature is looked upon from the high spatial point of view. This is a panoramic frame: “A tiny cloud dropped lace petticoats / Onto the meadows”.

The poet directs the reader’s attention, using the plan-changing. The nature’s picture is presented in several visual plans. In the first instance, the reader looks closely at its material world, and then, the “camera” moves away from the shown objects and covers a wider horizon. The reader’s look is directed from a partial (close-up) view to a general (panoramic) one. This change of views creates a special convexity of the picture, its spatial perspective.

Tychyna creates a clear artistic description of a natural phenomenon in its development within two four-line stanzas. For instance, the motive of anxious emotions is not only maintained throughout the text, but also is developed in a predetermined direction. The nature was waiting for the rain and the anxious motive appeared at

the time when the first raindrops fell; the wind blew abruptly and the same motive that had only emerged, sounded louder when nature itself turned to the protagonist: “Run away!...” (Tychyna, 2020, p. 71) and then “Lie down...”. But as soon as the first disturbing minutes of summer rain passed, the motive of anxiety disappeared and the nature calmed down. The miniature ends with a typically cathartic state.

The high information capacity of the poetic text of the miniature under study is defined by the special organization of its verbal material. Tychyna’s poetic techniques are almost invisible for the inobservant reader. If the recipient reads the miniature *The Rain* slowly, he/she gets a sight of an extremely complex functioning system of a highly organized artistic text, in which all details are submitted to the main goal of literature: the expression of the content.

CONCLUSIONS

The analysis of P. Tychyna’s poetic landscape miniature *The Rain* with the application of psycholinguistic approaches convincingly demonstrates its effectiveness in the study of the artistry of the literary text. In this context, the interaction of receptive poetics and psycholinguistics is seen as extremely promising research perspective in the area of contemporary philology.

This analysis has made it possible to test the effectiveness of some psychological tools involved in order to understand the mechanism of the creation of artistic impact. One of such tools is the reverse funnel effect. Its application provides for understanding

the process of artistic vision generation and emotionally colored visual images. The application and testing the potential of this psychological tool in practice give ground to include it into the methodological arsenal for studying the artistry of the literary text, thus considering it an effective research tool. The purposeful interaction of literary critics and psycholinguists will help identify other tools that are successful in investigating the factors of a literary work artistic impact. This approach will give a great opportunity to achieve a synergetic effect in the interaction of receptive poetics and psycholinguistics.

To model the functions of many expressive techniques, the researcher of the poetics of a literary work lacks psychological tools. It is extremely rare for psychologists to work on problems relevant to researchers of poetics. Therefore, the question of organizing the interaction of literary critics and psychologists is particularly relevant. The issue of the interaction of literary critics and psychologists is extremely topical. With this objective in mind, literary critics would have to create special programs for psychological research in poetics. There are many questions that are of high interest to literary critics, the answers to which are of psycholinguists' competence. At the same time, the interaction of literary studies and psycholinguistics is valuable not only for literature. The attentiveness to literature issues opens new perspectives for psycholinguists in the study of human language activity because artistic language is the most developed language system

that has a huge arsenal of expressive and influential means. It has had a powerful impact on the development of human language activity, hence on its intellectual development.

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Art and Real Life: Trauma and Reconciliation in *The Garden of Evening Mists* by Tan Twan Eng

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ABSTRACT

This essay discusses the employment of selected art forms and their effectiveness in portraying trauma and reconciliation in Tan Twan Eng's novel, *The Garden of Evening Mists* (2012), employing the concepts of trauma by Caruth (1996), focusing on the inadequacy of language to articulate trauma. The trauma model features most prominently by Caruth argues that traumatic events are never known directly. Any knowledge of these past events is only a form of reproduction of the original. Therefore, trauma is a 'paradoxical experience;' what is most traumatic is that which does not appear in conscious memory—this inability to know challenges the reliability of language to represent the full extent of trauma. However, Tan's novel shows that the problem of representing trauma can be countered in forms of art that function as a medium to convey and release silenced trauma. While trauma escapes language, personal memories become collective memories when commemorated in art forms. Letting go of the past is achieved by bringing it to the present in art forms. Tan's work significantly adds to the analysis of trauma in literary works. By employing the dominant tropes of Japanese art forms in the novel, Tan employs strategies that demonstrate that literature and art can narrate silenced experiences and traumatic historical events and escapes articulation.

Keywords: Art, memories, monuments, trauma

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INTRODUCTION

The Japanese Occupation of parts of Asia during World War II has contributed to a turbulent period not seen in the living memory of this region. Moreover, the impact and senselessness of violence and atrocities committed against innocent civilians in

Korea and China have resulted in an uneasy relationship between these countries.

Although there was initially a denial of this wartime violence perpetrated by the Japanese, documentation of Japanese violence and trauma has emerged in the 20th century through various forms of mass media. Chief among these are books written from extensive research into the matter. Chang (1997), for instance, has shed light on the atrocities of Japanese militarism in Nanking. Elsewhere, Soh (2008) has documented the tragedy of mostly Korean women forced into prostitution during this dark period of history.

Malaysian creative writers in English, as early as the 1940s, have capitalised on the backdrop of the Japanese Occupation of Malaya to narrate or re-create narrations through their imaginations based on history. Among the earliest writers to draw on the Japanese Occupation period was Chin Teik Ooi (1948) in *Red Sun over Malaya: John Man's Ordeal*.

Malaysian literature in English can represent various traumas,¹ whether collective or personal. The definition of national trauma may not be any single event. Nevertheless, National policies and treatment of early immigrants to Malaya and the prolonged effects of World War II have lasting effects that still haunt Malaysia's landscape. These hauntings provide the impetus for writers to reimagine trauma

¹ Caruth (1996) defines trauma as responses to unexpected negative events so intense that they cannot be fully grasped at the time of occurrence. They have a long-lasting effect on the psyche of the one who experiences it as they return later in repeated flashbacks and nightmares, p. 91.

and re-enact them into meaningful literary works capable of reconnecting historical trauma of the past for the knowledge and understanding of the present generation. For instance, collective and national trauma in early Malaysian literature in English can be found in Lloyd Fernando's work. *Green is the Colour* (1993) and *Scorpion Orchid* (1976) explore the aftermath of racial riots in Malaya and Singapore, respectively (Fernando, 1976, 1993).

More contemporary Malaysian writers, namely Tash Aw, Rani Manicka and Tan Twan Eng, have foregrounded their creative works against the backdrop of the Japanese Occupation of Malaya. These recent generations of writers seek to re-imagine the period through collective memories passed down from previous generations.

The Garden of Evening Mists by Tan Twan Eng, first published in 2012, is set during the Japanese occupation and subsequent Emergency period. The Japanese Occupation, according to Tan, is a "largely ignored and unknown period of Malaysia's past" (Lim, 2017, p. 15).

Saxena (2019) describes the overlap of trauma and nostalgia in Tan's novel, in which the intertwining acts of forgetting and remembering are equally important. She rightly points out that Tan's novel "opens a discursive space for multidirectional memory that avoids the markers of nationality" (p. 175), promoting awareness that the trauma experienced is not confined to boundaries as most of the characters' lives have been profoundly affected by different wars: Magnus lost his eye in the Boer war

in South Africa, Aritomo was exiled from Japan and Tatsuji had been a kamikaze pilot. Their narratives, along with Yun Ling's, thus serve as versions of histories in the dominant discourse that have been obscured.

Pellano (2015) traces how Yun Ling, as a war survivor handles the "subdued loathing" or 'ressentiment'. This hatred, which is internalised, is traced from the moment of conception that progresses to dissipation to investigate how a survivor copes with the trauma of war, which includes seeking justice, forgetting as a way to repress memories, seeking to immortalise memories as the fulfilment of a promise, and finally the liberation of the resentment by subjecting her body to be "a site of her past" (p. 172). The *horimono* is read as a triumph of Yun Ling's resentment, implying Aritomo's denunciation of Japan.

While Saxena (2019) emphasises nostalgia which will forever be linked to loss, indicating the difficulty of healing, this essay expands on the idea that while reconciliation may be seen as far-fetched, the employment of Japanese aesthetics by Tan as agents of healing in the novel provides the option of reconciliation. Furthermore, the exploration of Tan's novel in the light of trauma studies serves as an alternative illustration of Caruth's framework of trauma as the belated experience of the traumatic event itself and the inadequacy of language to convey the experience, thus relegating the "speaking" and healing to the Japanese aesthetics employed in the novel.

In the novel, a young law graduate, Yun Ling, seeks out the landscape artist of a Japanese garden located at Cameron

Highlands, Nakamura Aritomo. Yun Ling's mission is to build a garden in honour of her sister, who was tortured and died in a Japanese comfort camp during World War II.

Yun Ling and her sister Yun Hong were held prisoners in a Japanese labour camp during the Japanese occupation. In this camp, Yun Ling lost her two fingers and her sister as the Japanese committed mass murders when they began to lose the war. Yun Ling must live the rest of her life with the guilt of having escaped being raped daily and finally murdered. As Aritomo correctly said: "You are still there, in the camp. You have not made it out" (Tan, 2012, p. 282). Time has passed, yet Yun Ling has been unable to move on, trapped by the haunting guilt and grief of the trauma.

The torture at the camp was so intense that both sisters often had to fabricate a site to which they could escape. This site is a beautiful Japanese garden in Kyoto that they had visited before the Japanese Occupation. By recreating the garden in their minds, they retreat to an imaginary place "no one can take [them] away from" (Tan, 2012, p. 271). They distracted themselves from the daily horrors of the camp by focusing on past beauty and forming a safe sanctuary and a make-belief world as their freedom and rights are violated.

When the guard had beaten her for not bowing, it was to this garden she had escaped, where there were "flowering trees everywhere, the smell of water ..." (Tan, 2012, pp. 57–58). It was also to this garden that Yun Ling mentally escaped when her fingers were severed as punishment for stealing food:

I screamed and screamed as he brought the blade down and chopped the last two fingers of my hand. The screaming seemed to go on and on. In the seconds before I blacked out, I found myself walking in a garden in Kyoto. (Tan, 2012, p. 271)

This escapism and distraction, ironically, are what cause the trauma to continue to linger, prolonging its effects. Caruth refers to it as “the *missing*” of the traumatic experience that “paradoxically, becomes the basis of the repetition of the nightmare” (Caruth, 1996, p. 62). So then, the story of Yun Ling’s trauma becomes “the narrative of a belated experience” accompanied by long-lasting impact (p. 7). This nightmare of the escapism to the fabricated and imaginary site haunts Yun Ling, turning the original fabricated fantasy into a promised site that needs to be built. The imaginary must be transformed into the real to create a monument for the release of memories, grief and guilt. The past haunts the present, and the past has become the present; resulting in a fragmented self; one which is “buried alive,” trapped in the past, as illustrated in the excerpt below:

There is some part of me still trapped there, buried alive with Yun Hong and all the other prisoners. ... A part of me which I had to leave behind. ... Perhaps, if I could go back to the camp and release that part of me, it might make me feel complete once more. (Tan, 2012, p. 268)

Since she cannot go back to the camp, there needs to be a replacement of the site of trauma in the form of a monument that she could revisit to put her sister’s death at rest. This sense of clutter in her mind is countered by introducing the concept of emptiness in evolving Japanese garden in harmony with Zen Buddhism, which produces gardens with less clutter, “paring down their designs almost to the point of emptiness” (Tan, 2012, p. 90). Yun Ling reflects on the desirability of emptiness, imagining “the possibility of ridding [herself] of everything [she] had seen and heard and lived through” (p. 90). Creating Yugiri will help Yun Ling empty herself by transferring her heart’s grief and guilt onto Yugiri.

It will be established that *sakkei* (borrowed scenery), *which* is employed to build Yugiri and the *horimono*² crafted onto Yun Ling’s back, are used by Tan to depict the articulations of trauma to generate healing and reconciliation. The paradoxical question is that trauma escapes language, and trauma needs to be spoken to find healing. How then is reconciliation possible? With Yugiri as the main trope, Tan skilfully employs the concept of *shakkei*, *horimono* and other art forms to depict the idea of perspective, teasing out the prominent sense of impermanence the reader can experience throughout the entire novel. The shifting of stability is emphasised by Yugiri—where the boundaries between the negative and positive, male and female, darkness and light are blurred (Tan, 2012). The sense that the passing of time is inevitable is

² Concepts of *shakkei* and *horimono* will be explained further when referred to in later parts of this article.

evoked through the changes in nature and the passing seasons (even in tropical Malaya), mirroring that stability is elusive and constantly eludes Yun Ling as she seeks to find the site on which her sister had died and buried to commemorate her sister's life. The losing battle against time is imminent; Yun Ling's pain and memories will soon pass like all other things in life.

This essay explores the employment of art to convey trauma and reconciliation. In trauma and reconciliation, the impermanence, the inevitable passing of time and its accompanying fluidity that contributes to the reinterpretation of what is perceived as 'reality' are highlighted. The question of perspective created through Aritomo's art forms that create illusions of the real is always at play throughout the novel, reflecting the total inability to know trauma at the moment of occurrence and the belatedness of the traumatic effects cause repetitions of the trauma (Caruth, 1996). The features of art created by Aritomo "are based on illusion, visible only when the right conditions are present" (Tan, 2012, p. 183). The art forms in this novel, consisting mainly of *Shakkei* and *horimono*, are employed effectively in conveying the themes and enhancing the effects and the sense of impermanence and deception, speaking of the repetitive nature of trauma.

METHODOLOGY

The novel is chosen to treat trauma and reconciliation by Tan Twan Eng. The study of this novel within the framework of trauma theory established by Caruth unearths the

employment of art forms in literary works as the writer capitalises on the inability of language to represent trauma. The art forms in the novel help express trauma that is otherwise buried. Furthermore, Tan shows that the art forms employed in the novel assist in reconciliation and healing. In depicting the paradox of the unspeakable nature of trauma and the necessity to speak to find healing and reconciliation, *The Garden of Evening Mists* is a fine illustration of trauma theory established by Caruth being employed in literary studies to address trauma and find reconciliation.

This article mainly uses textual analysis and references to trauma theory and memory studies to investigate the dominant themes in the novel. Concepts of trauma by Caruth (1996) will be employed, focusing on the inadequacy of language to articulate trauma. The trauma model features most prominently by Caruth argues that traumatic events are never known directly. Any knowledge of these past events is only a form of reproduction of the original. Therefore, trauma is a 'paradoxical experience'; the paradox is "that the most direct seeing of a violent event may occur as an absolute inability to know it" (Caruth, 1996, pp. 91-92). This inability to know limits the ability of language to represent the full extent of trauma. However, Tan shows in his novel that the inability to process a traumatic event can find expression in art forms. The problem of representing trauma is countered in forms of art used in *The Garden of Evening Mists*. These forms of art function as a medium to convey and release silenced

trauma. Though Caruth's model did not emphasise healing, this article shows that Tan's work uses art forms as narrative tools to bring about reconciliation and healing.

In order to explore the way Tan's novel gives voice to personal trauma and transforms it into collective trauma possible for reconciliation, this essay highlights the techniques employed by Tan, in particular, two art forms: *shakkei* and *horimono*. The narrative of trauma in Tan's work depicts trauma as the belated experience expounded by Caruth. Caruth's idea of trauma as the "oscillation ... between the story of the unbearable nature of an event and the story of the unbearable nature of its survival" (Caruth, 1996, p. 7) is highlighted as the unbearable dilemma of Yun Ling, who survived the Japanese camp. The re-enactment of the traumatic events is painful but necessary in healing and reconciliation. The art forms introduced by Tan and their connection to trauma and reconciliation form the core of the analysis.

The techniques and literary devices such as nature and the dominant metaphor of the garden employed by Tan are highlighted as significant vehicles to narrate and evoke senses that highlight the effects of the themes. In addition, art concepts as depicted in the novel focus on exploring their significant contribution to the novel's success. The results shall be discussed in the following segment.

RESULTS

This article discusses the art forms employed by Tan and their effectiveness in depicting

trauma and reconciliation by enhancing the sense and theme of impermanence and the passing of time. The art forms in this novel, consisting mainly of *Shakkei* and *horimono*, are employed effectively in conveying the themes and enhancing the effects and the senses of impermanence and deception. Letting go of the past is achieved by bringing the past to the present in the form of monuments.

While the narration of trauma escapes language, *The Garden of Evening Mists* contributes significantly to the analysis of trauma in literary works, proving that art can function as a medium to convey and release silenced trauma. By employing the dominant tropes of Japanese art forms such as *Yugiri* and *horimono*, Tan conveys healing, reconciliation, and redemption. Tan's novel is a good illustration of the concept of trauma from conception, belatedness, healing, and reconciliation, countering the problem of language featured in Caruth's trauma model by using art forms to speak the unspeakable. It shall be further discussed in the next section.

DISCUSSION

Trauma

Trauma and Shakkei—Lessons on Impermanence. The concept of *Shakkei*, which is the Art of Borrowed Scenery, was introduced early in the novel as the art of "taking elements and views from outside a garden and making them integral" (Tan, 2012, p. 34) in a creation. It creates a masterpiece by borrowing "the mountains, the wind, the clouds, the ever-changing

light” (p. 36) to achieve the desired effect. Even the mists could be elements of *Shakkei* employed by Aritomo. As a result, this creation is never static, depending on the changing effects of light and other natural elements. Tan introduces the concept of *Shakkei* in Aritomo’s gardening style as a “form of deception” (p. 150). Nothing is what it seems. It is subject to interpretation and reinterpretation, depending on the perspective and emotional state of the viewer. The *Shakkei* of Yugiri speaks not only of impermanence and passing of time but of perspective and deception.

Through the concept of *Shakkei* as the main motif of the book, Tan successfully conveys that in life, just as in art, we borrow everything; we own nothing, as even the moonlight is borrowed (Tan, 2012). Borrowed scenery in art reflects real life and, in this instance, the life and memories of Yun Ling. Yugiri serves as a metaphor for the novel’s main themes as both Aritomo and Yun Ling, in their ways, share a sense of loss, are trapped in the past and looking for a way forward to exorcise the ghosts of their memories. Aritomo has lost his family, his association with Japan, and his grandfather, whom he yearns for as he gazes at the stars with Yun Ling. Both lives are made up of memories. For Aritomo, it was that of his wife Asuka, who died at childbirth, and for Yun Ling, it was memories of her sister. Both are holding on to memories they cannot and will not forget.

Yun Ling’s lessons under Aritomo were designed to teach her the art of letting go. She had always had that feeling; she

confessed to Tatsuji that Aritomo had other reasons for wanting to teach her (Tan, 2012). For instance, *Kyudo*, the Japanese archery that Aritomo taught her, shows her that it is possible to stay in the present moment where she is not living in the past. The offer to take her on as his apprentice is to return her to be “the girl who had once walked in the gardens of Kyoto with her sister” (p. 88). The skills taught to her by Aritomo are the skills to heal, forget, and move on. A matter of perspective “was in everything he taught [her]” (p. 119). Yun Ling shows she has mastered this concept of borrowing by telling Aritomo:

A garden borrows from the earth, the sky, and everything around it, but you borrow from time. Your memories are a form of *shakkei*. You bring them in to make your life here less empty. Like the mountains and the clouds over your garden, you can see them, but they will always be out of reach. (Tan, 2012, p. 153)

In the above excerpt, Tan employs nature to convey the significance of impermanence. Nature is the best teacher that the passing of time is inevitable. The onset of the monsoon shows the passing of time. Aritomo is fighting the passing of time, sensing the urgency to make a *horimono* as his joints get painful and swollen (Tan, 2012).

Both nature and art are evoked to convey the temporality of all things, even things as majestic and solid as the mountains. Watching the mountains on the horizon, Yun

Ling wonders if they go on forever, to which Aritomo replies that these mountains, too, will fade away, like all things (Tan, 2012). By evoking the constant changes in nature, Tan instils the sense that the garden, the relationship between Yun Ling and Aritomo and everything associated with life will not last. This sense of impermanence that continuously permeates the novel provides relief and dread: relief that the pain of Yun Ling's memories will eventually recede but dread for her impending total loss of memories, including that of her sister's life and her relationship with Aritomo. This dilemma between remembering and forgetting will be explored in the next section.

Remembering and Forgetting. Diagnosed with aphasia, brain disease and facing the prospect of losing her memories, Yun Ling paradoxically strives to retain what she will eventually lose—her memories. She reaches for her fleeting memories, like “snatching a leaf spiralling down from a high branch” (Tan, 2012, p. 34), unsure if she can catch it. Forgetting and remembering are not antithesis but mirror images. Both happy and traumatic memories are portrayed in relation to each other. One is beautiful and is sought after in conscious attempts to bury the other. Tan once again evokes nature to illustrate the impermanence and shifting nature of memory, both the voluntary kind and the kind recalled. Memory is portrayed as shifting and fluid, “like patches of sunlight in an overcast valley, shifting with the movement of the clouds” (p. 309).

Borrowed Scenery conveys the philosophy of time borrowed while living on this earth. Yun Ling is acutely aware that her time and memories of her sister, which she had tried to preserve and relinquish simultaneously, are borrowed and need to be returned. Aritomo's and Yun Ling's borrowed situation and memories are reflections of each other and the rest of humanity. In Yun Ling's case, the return is imminent. The prospect of not remembering is terrifying, like a “ghost, trapped between worlds, without an identity, with no future, no past” (Tan, 2012, p. 310). Unknown to Yun Ling at this point of the novel, the passing of time and eventually of memory is inevitable, as illustrated in Yugiri. The garden metaphor is used to illustrate the passing of time and lives. As Yun Ling learns by being an apprentice of Aritomo, “A garden is composed of a variety of clocks ... Some of them run faster than the others, and some of them move slower ... Every single plant and tree at Yugiri grew, flowered, and died at its own rate” (p. 324).

Limitations of time were set loose when the first man and first woman were banished from the garden of Eden (Tan, 2012, p. 325). In the end, it was only Frederick and her left; “the last two leaves still clinging on the branch, waiting to fall. Waiting for the wind to sweep us into the sky” (p. 343). Just as Yun Hong had passed on, all the others have passed on and now remain “only a memory” (p. 346).

Yugiri gives Yun Hong's memory prominence and lifts her out of the oblivion of being buried unnamed. Yun Hong's memory will be immortalised, whereas Yun Ling's will be relegated to oblivion: “It is

right that Yun Hong will be remembered as I gradually forget and, in time, become forgotten” (Tan, 2012, p. 347).

Yun Ling’s and Aritomoto’s world touches but momentarily, exhibiting the in-between-ness that is the state of borrowing with the act of returning imminently. Tan uses the figure of Aritomo himself as a borrowed scenery as he is always dressed in traditional clothes (Tan, 2012, p. 35) and appears in the garden to be viewed as part of the garden whenever visitors arrive. In the same way, in retrospect, he had offered himself to be borrowed by Yun Ling for a time to build the garden, and Yun Ling had to involuntarily return him when the garden was completed. The concept of Borrowed Scenery merges both art and life together until there is no clear distinction. Yun Ling wondered if there was a time when Aritomo could no longer distinguish “what was real and what were only reflections in his life” (p. 120). To Aritomo, life is art, and art is life.

We are reminded early in the novel of the existence of Mnemosyne—the goddess of memory and her twin sister—the goddess of forgetting (Tan, 2012, p. 45). Remembering and forgetting are twins (p. 131). The sense of impermanence created by Tan reinforces the finding in memory studies that memory is a narrative rather than a “replica of an experience that can be retrieved and relived” (Sturken, 1997, p. 7). It is possible to select and re-transcribe the narrative.

The paradoxical journey of Yun Ling in fighting to retain the memories of her sister and fighting to forget her painful memories,

and in the end, to let go becomes part of the sense of impermanence and instability of life in this novel. The state of nothingness with no memory is the path that Yun Ling is journeying. Yun Ling says, “I have spent most of my life trying to forget, and now all I want is to remember” (Tan, 2012, p. 309).

She is aware that the essence of a person lies in her memories: “What is a person without memories?” (Tan, 2012, p. 33). At the end of the book, Yun Ling reminisces: “Before me lies a voyage of a million miles, and memory is the moonlight I will borrow to illuminate my way” (p. 348). Memory thus leads the way though she will soon lose it all. Therefore, it is important to Yun Ling that Yugiri serves as a monument after she has lost all her memories. From personal memories, her sister will be a collective memory. The narrative of historical trauma shall live on lest anyone should forget. Her sister will be public history made possible by the monument from her personal history. The monument will not only make her memory of her sister public and collective but become a monument to the thousands that perished as a result of the Japanese Occupation. The monument will function as a form of reconciliation, as we shall see in the next section.

Reconciliation

Yugiri as a Monument.

Yun Ling: “But I won’t be able to remember everything.”

Aritomo: “The garden will remember it for you.” (Tan, 2012, p. 93)

A monument is an enactment of memory meant to endure through the ages, to honour and remember the past. Monuments speak to future generations of history to counter forgetfulness and the passing of time. The garden is evoked to convey the passing of time, even memories, both painful and happy ones. What is constantly illustrated in the novel is that nothing stays as a change in life is constant and sure. Impermanence is etched like the 'soon-to-be-forgotten temple' (Tan, 2012, p. 283). Paradoxically, as much as Yugiri illustrates the passing of time, Yugiri too was designed to combine different eras, giving it a sense of timelessness. It is designed to preserve the illusion of the passing of time and to preserve memories.

Yun Ling's building of Yugiri represents the desire to recreate the beauty that was before their lives were interrupted by trauma and to find healing. The building of Yugiri is to realise the fantasy and dream she had shared with her sister and confront her sister's death. More importantly, confronting her *repetitive* trauma and guilt of surviving constitutes a "betrayal" while her sister died. Recounting the time at the camp, Yun Ling says: "I would have done everything I could to trade places with her. And I should have" (Tan, 2012, p. 268). To not be trapped in the repetitive past and the fantasy of the future, Yun Ling must complete the garden to awaken to the reality of her sister's death and confront the now.

Yugiri is the site where the imaginary ceases and the real meet and collide. The encounter with the real and imaginary garden they shared must take place. On the

grounds of Yugiri, the death of Yun Hong and all the repressed grief and guilt are confronted. Both the fantasised and the real garden becomes the site of trauma. The past, the future and the present are converged in the reality of the imaginary turned physical garden.

The idea of a Japanese garden as a monument to remember history is a stark irony to the atrocities the Japanese invaders have inflicted on the sisters' lives. Through Yugiri, the irreconcilable worlds of torture and healing are brought together. The Japanese gardener and the Japanese garden as monuments to heal the darkness of the Japanese invasion could reveal Tan's intention to counter binary thinking. The man who has the extraordinary ability to turn the imaginary garden into reality is a Japanese, the race that had inflicted untold agony on both sisters. Yun Ling cannot avoid associating Aritomo with her torturers as she is constantly reminded that Aritomo had been Hirohito's gardener, "the man who had caused [her] so much pain, who had brought [her] so much loss" (Tan, 2012, p. 152). In taking on the apprenticeship to build the garden, Yun Ling is taking on the journey to be objective and "put aside (her) prejudices" (p. 95). Time and again, in her encounter with Aritomo, she is forced to face her trauma, speak of it, acknowledge it, and find acknowledgement of it. The success of Yugiri points to the total understanding/infiltration of her mind by Aritomo. Yugiri thus becomes a testament to the union of their soul. It is a site of confrontation and union between two people

with traumatic histories which had deemed them irreconcilable.

Yugiri helps to divert attention from the seemingly important haunting memories and grudges that cling on tenaciously. The motif of memory and oblivion dominates the novel and reaches its convergence in Yugiri, which almost denotes sacredness and exclusivity. Even the light “seemed softer, older” (Tan, 2012, p. 207). Yun Ling says, “The turns in the track disoriented not only our sense of direction, but also our memories, and within minutes, I could almost imagine that we had forgotten the world from which we had just come” (p. 207). Even the meaning of Yugiri, which is ‘evening mists,’ suggests a degree of vagueness and oblivion. Yugiri is the site of what could have been had it not for the war and what it would be in future. It is a monument of torture and suffering but also healing and reconciliation.

Site of Torture Vs Site of Reconciliation.

We are confronted with the paradoxical physical site of the camp of torture and Yugiri. Both are ephemeral and temporal. As Yun Ling explains, “The garden has to reach inside you. It should change your heart, sadden it, uplift it. It has to make you appreciate the *impermanence of everything in life*” (Tan, 2012, p. 175, emphasis mine).

Both sites are not within grasp, but both are contesting for her attention simultaneously. One is blown up and unchangeable, and the other is subject to change. One signifies torture, violence, and trauma. The other signifies healing and beautiful memories. One is physically

destroyed but can be found in the tattoo on her body. The other has yet to be built. Yugiri serves as a replacement for the camp she could not bring herself to let go. By giving attention to Yugiri, Yun Ling rejects painful memories she had held on to.

Yugiri is the site of timelessness. It is the site of convergence of the past, present and future. Ricoeur (2004) establishes a correlation between memories and mourning—mourning is a “painful exercise in memory” (p. 7). In building the garden, Yun Ling releases her trapped fragmented self. The site where Yun Hong died does not hold any more significant meaning. The site of the camp and all that it had represented recedes to the past where it rightfully belongs. Yugiri takes over as her way of commemorating Yun Hong in the present and the future. The garden becomes the bearer of the pain she has been carrying. Pain and memory become concretised as a monument.

The garden as a testimony of the unspoken atrocities is not merely an attestation of trauma but serves to bring the past to the present, here and now. The building of the garden in the present will hopefully withstand the onslaught of the future is a form of testimony that displays not only victimisation at the camp but also past promises and their fulfilment. Yugiri becomes the unifying factor between the past and the future, hate and love, torture and pleasure, private and public, memories and forgetting. In Yugiri, there exists a reconciliation between trauma and healing, beautiful and traumatic memories,

past, present and the future. Yun Hong no longer needs to be trapped in her memory and the past. In Yugiri, she is accorded a proper place for mourning, commemorated in real, physical space and the present. Simultaneously, Yun Ling's memories can be transformed into public memories, as the next section shall show.

From Private to Public Memories. Thus far, Yun Ling's reticence had ensured that the memories remained hers alone. However, with Yugiri as a monument, the unspoken memories and grief will henceforth be muted. Yun Ling's decision to open up Yugiri to the public not only in memory of her sister but also in memory of the works of Aritomo is a testament to healing, forgiveness and letting go. She releases the burden she carried for the past decades by releasing her story.

Although making Yugiri public is in direct contrast to Aritomo's wish (Tan, 2012), Yun Ling asserts her agency in making this decision. As monuments are built to make personal trauma public, her trauma and memories have become collective and national. Her trauma is no longer hers alone to bear. Memories and dreams shared with her sister that were private are now accessible to others. Likewise, Aritomo's art is no longer hers alone to cherish. Yugiri becomes a site where generations could be invited to participate as witnesses of a traumatic history.

Making Yun Hong's memory public is to unsilence the atrocious deeds, to share the trauma as a historical monument which

simultaneously becomes a form of personal liberation for Yun Ling. In order to tell, share and sustain history, it is necessary to convert personal history into national monuments as history takes the place of a concrete garden. Monumental constructions join the past to the present, demonstrating "the relation between narrative and history, art and memory, speech and survival" (Felman & Laub, 1992, p. xiii). Yugiri is Yun Ling's speech about her trauma. Remembrance of history is both a duty and a responsibility. Everyone is invited to be a participant who sees, feels, understands, and shares the pain and not merely a bystander. Both Yugiri and the *horimono* become monuments that testify to enduring memories and reconciliation.

Horimono and Yugiri—Sites of Reconciliation. Running parallel to Yugiri, the *horimono* that Aritomo carves onto Yun Ling's back reinforces the concept of art as a way of remembrance and a monument. The garden signifies the beauty, dreams, and aspirations that the two sisters had hoped for, what could have been but could not be done in the sisters' lifetime together because of the severe disruption to their lives. However, on the other hand, the *horimono* symbolises the past that she was unable to let go.

According to King, "there are two contrasting models of memory within psychoanalytic theory that inform the different ways in which the memory processes are reconstructed in narrative" (2000, p. 11). The first is attributed to

Freud's analogy of recovering the buried past and the archaeological site's excavation. The second is related to the novel's 're-transcription' of memory. The metaphoric process of excavating began when Yun Ling came under the tutelage of Aritomo.

Horimono is a long and painful process, requiring patience and determination. The process of the *horimono* and building the garden is symbolic of the long and progressive excavation of the buried past secrets, guilt and shame between Yun Ling and Aritomo. As Aritomo says, the *horimono* draws out not only blood but reveals the "thoughts hidden inside that person" (Tan, 2012. p. 229). Yun Ling, correctly sensing that Aritomo could read the guilt of betrayal she had been carrying for so long, confessed that she did whatever she could live, including betraying others in the camp. Her body becomes a canvass to be engraved with history and its remembrance. As history takes place on her skin, personal history is extracted from her heart. Aritomo's history and secrets in the form of art are transferred and merged with that of hers. The art of *horimono*, just like the art of *Shakkei* in the building of the garden, serves as a soul-searching untangling of the guilt of betrayal she had been living with and as a form of 're-transcription' of her memories. These two art forms run parallel in the novel to untangle the knots of guilt and longing that had trapped Yun Ling and, to a certain extent, Aritomo.

The *horimono* that Aritomo inscribed onto Yun Ling's back depicts an image of Hou Yi wearing a Japanese *hakama*,

shooting an arrow into the sun. According to Seneca Pellano (2015), how Aritomo interprets this Chinese legend discloses the denunciation of his nation. In the *horimono* lies Japanese art and Chinese culture synthesised by Aritomo, the artist's mind. As observed by Tatsuji, the *horimono* on Yun Ling would be "one of the most important discoveries in the Japanese art world... Imagine: Emperor Hirohito's gardener, the creator of taboo artwork. On the skin of a Chinese woman, no less" (Tan, 2012, p. 313).

The sun symbolises the Japanese empire. The *horimono* symbolises admitting guilt, forgiveness, and reconciliation. Art then becomes a unity site between the inflictor of pain and the victim—'re-transcribes' the relationship between two persons having mutual national hostility towards each other.

Furthermore, allowing Aritomo to inscribe onto her allows him to write over her scars and rewrite her painful history. Art then 're-transcribes' her history. Her entrusting to Aritomo to etch his art onto her skin points to total yielding and trust though it can also be seen as an invasion. By submitting her body to be inscribed new meaning onto her past experiences, the suggestion of sensuality is evident. According to Wilson, "Yun Ling's body becomes the sacred site of remembrance," and the act of *horimono* is "symbolically sexualised" (2018, p. 59). Aritomo was leaving his permanent imprint on her "night after night" (Tan, 2012, p. 334). Frederick's sexual possessiveness and jealousy reinforced it: "I don't want to see

what he did to you” (p. 334). Aritomo’s claim is suggested as she ensures no one else sees the *horimono*. Thus, he had relegated her to a lifetime of celibacy.

The *horimono* as a form of art serves as a symbol of forgiveness, reconciliation, and unity. Pellano (2015) opines that creating a *horimono* on a Chinese war survivor implies that Aritomo’s loyalty to the Japanese empire is destabilised as it indicates Aritomo’s stand of condemnation of Japan’s war atrocities. On the other hand, despite Aritomo being a Japanese with a questionable past, Yun Ling’s yielding signifies total willingness to trust and commit. However, this trust and commitment are far from one-sided. Aritomo is yielding up his secrets and surrendering his reticence by inscribing his art, knowledge, and information onto her body. By inscribing his well-kept secrets onto her back, he is transferring a load of his secrets onto her though he knows she will not be able to see or understand until the time is ripe. This mutual exchange and yielding speak of surrender, healing and reconciliation.

Additionally, the long, drawn-out *horimono* process becomes a season of letting go of her past and her memories. In addition to the indecipherable signs and the blank rectangle, which is suggestive of the location of the camp where she and her sister had been held, the *horimono* depicts the places that Yun Ling had been to during and after the Japanese Occupation, such as the Majuba Tea House, the garden of Yugiri and the temple in the mountains. The blank rectangle space signifies a place of absence

and oblivion. It signifies forgetting and releasing her memories. It further signifies that what took place years ago is no longer significant with the erecting of Yugiri, the monument that testifies to enduring memories and reconciliation. With her advancing disease, which will soon ravage her memories, Yun Ling needs to let go of her memories voluntarily by deciding not to have the *horimono* preserved after she dies. With the garden in place, Yun Ling’s decision to let the *horimono* fade away upon her demise instead of preserving it suggests that the only monument of her sister is that of their fantasy that has now become a reality—the Japanese garden. She says, “The garden must continue to exist. For that to happen, the *horimono* must be destroyed after my death” (Tan, 2012, p. 331).

With Yugiri in place, Yun Ling does not need to hold on to her memory on the verge of losing. The transmission of the burden is complete. She does not need to continue living her life with the sole purpose of fulfilling the promise she made to her sister. Instead, she chooses to put the brutal history and memory of the Japanese invasion to rest, placing it in oblivion to allow the happy moments she had shared with her sister to gain significance. True to the concept of *Shakkei*, she had borrowed the memory from the past to illuminate her way so that she could move forward.

CONCLUSION

The paradoxical question introduced in the introductory part of this essay is that since trauma escapes language yet needs to be

spoken to find healing, how is a reconciliation of this paradox possible? Tan shows that this is possible in the intertwined relationship between remembering and forgetting and the concrete bearing the testimony of the abstract. Personal memories, when commemorated in art forms, become collective memories. Letting go of the past is achieved by bringing it to the present in the form of art. In this way, Tan's work significantly adds to the theory of trauma in literary works. As illustrated in the novel, art can function as a medium to convey and release silenced trauma, binding memories with the present through monuments to bear witness to the "unrepresentable" (Luckhurst, 2008, p. 81). By employing the dominant tropes of Japanese art forms such as *Yugiri* and *horimono*, Tan successfully shows the interaction between art and literary works of trauma to convey healing, reconciliation, and redemption.

The Garden of Evening Mists brings together art, history and literature that invites us to participate in our country's past and its haunting histories as we stand on the grounds of those who had gone before us. Tan employs strategies that demonstrate that literature and art can narrate experiences that resist telling, such as traumatic historical events beyond one's comprehension. A comparative study of the treatment of historical trauma in Tan's works with that of other contemporary Malaysian historical literature writers like Tash Aw will be viable for future studies. Close examination of such literary works complements and enhances history as they offer alternate viewpoints not found in official historical texts.

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Struktur dan Unsur Metafora dalam Puisi Invokasi *Biau* Masyarakat Iban

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ABSTRAK

Biau (doa) merupakan puisi tradisional invokasi masyarakat Iban yang dilafazkan semasa upacara persembahan sajian atau *miring* untuk menyeru dan memohon keberkatan Petara (dewa-dewi). Kajian ini bertujuan mengenal pasti struktur lapisan bahasa dan unsur yang membentuk metafora dalam puisi tradisional *biau*. Berasaskan pendekatan kualitatif, kaedah tinjauan secara deskriptif digunakan untuk mengkaji tiga buah puisi *biau* iaitu *Biau Piring Bedara* (Doa Persembahan Sajian Korban), *Biau Piring Gawai Tuah* (Doa Persembahan Sajian Perayaan Gawai Tuah) dan *Biau Piring* (Doa Persembahan Sajian) yang diambil daripada buku *Sampi Enggau Biau*. Data dalam kajian ini dianalisis menggunakan pengekodan terbuka dan substantif. Dapatan kajian menunjukkan seruan pembukaan, bertabik dan struktur pengenalan diri diucapkan sebagai pengenalan dalam *biau*. Dalam bahagian isi pula, lapisan bahasa yang digunakan ialah tujuan, seruan, pernyataan persembahan sajian (*piring*) dan suruhan. Puisi *biau* diakhiri oleh doa restu. Unsur yang membentuk metafora dalam struktur *biau* pula terdiri daripada flora dan fauna, benda bukan hidup dan alam semula jadi yang disesuaikan dengan kehidupan masyarakat Iban.

Kajian ini berupaya mengekalkan budaya, adat dan tradisi dalam kalangan masyarakat Iban di Sarawak. Generasi muda juga dapat menimba pengetahuan baharu dan mengasah kepakaran pengamal ritual sedia ada dalam melafazkan puisi tradisional.

Kata kunci: *Biau*, lapisan bahasa, masyarakat Iban, puisi tradisional, unsur metafora

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The Structure and Elements of Metaphor in the Invocation Poem of Biau of the Iban People

ABSTRACT

Biau (prayer) is a traditional poem of invocation of the Iban people recited during an offering ceremony or miring to call and request for the blessings of Petara (Gods). This study aimed to identify the structure of language and the elements of metaphors in biau. The qualitative approach, specifically the descriptive exploratory method, was employed to study three pieces of biau, namely Biau Piring Bedara (Sacrifice Offer Prayer), Biau Piring Gawai Tuah (Gawai Tuah Festival Presentation Prayer) and Biau Piring (Presentation Prayer) taken from the book Sampi Enggau Biau. The retrieved data were analyzed using open and substantive codings. The study showed that initial invocations, salutations and self-declaration were among the structures used to introduce biau. The structures within the poem's body part include the sense of purpose, calling, offering (piring) and commanding. The biau is ended with prayers for blessings. Of such, elements that form the metaphors in the biau structure consist of flora and fauna, non-living things and nature, which are closely adapted to the life of the Iban community. This study helps preserve the culture, customs and traditions among the Iban community in Sarawak. The younger generation, including the ritual practitioners, will be able to increase their knowledge and sharpen their existing skills in reciting such traditional poems.

Keywords: Biau, elements of metaphor, Iban community, strata of language, traditional poem

PENGENALAN

Masyarakat Iban merupakan kaum majoriti di Sarawak dan kumpulan etnik yang mempunyai budaya serta adat tradisi yang diturunkan daripada nenek moyang secara lisan (Buma, 1987). Tradisi lisan masyarakat Iban amat menitikberatkan kepercayaan kepada *Petara* (dewa-dewi) kerana *Petara* dapat memberikan kesejahteraan hidup kepada mereka (Masing, 1981; Sandin, 1980). *Biau* merupakan puisi tradisional masyarakat Iban dalam kategori invokasi. Invokasi merupakan permohonan, biasanya kepada Tuhan, untuk mendapatkan pertolongan ataupun perlindungan

(Showren, 2014). *Biau* digunakan dalam upacara kesyukuran untuk meminta keberkatan (Saleh & Ensiring, 2001). Selain itu, *biau* digunakan untuk mengalu-alukan kedatangan tetamu yang datang ke rumah panjang bagi mengelakkan malapetaka berlaku melalui mimpi ataupun burung *Khinatan* (Masing, 1981).

Biau disampaikan melalui upacara *miring*. Gambaran tentang kosmos dapat dihubungkan dengan persembahan sajian (*piring*) yang diamalkan oleh masyarakat Iban (Zeppel, 1994). *Piring Bedara* ialah upacara ritual bagi masyarakat Iban. *Bedara* ialah upacara ritual korban untuk mengutuskan permintaan kepada *Bunsu*

Petara iaitu golongan dewa-dewi (Masing, 1981). *Piring Gawai Tuah* pula ialah persembahan sajian diiringi oleh *biau* untuk *Petara Anda Mara* (Dewa Kekayaan) manakala *Biau Piring* ialah upacara *miring* kepada *Petara* (dewa-dewi) masyarakat Iban seperti *Senggalang Burung*, *Raja Sempulang Gana* dan *Selampandai*.

Pernyataan Masalah

Biau (doa) merupakan amalan dan kepercayaan tradisional yang diamalkan oleh masyarakat Iban untuk memohon keberkatan dan kesejahteraan hidup di rumah panjang. Namun demikian, perubahan kepercayaan moden telah mengubah kepercayaan tradisi kaum Iban (Asmah Omar, 1981) dan menjadikan amalan ini semakin terpinggir. Selain itu, pemikiran kaum Iban turut berubah selaras dengan perkembangan ilmu pengetahuan sejak penjajahan Barat yang akhirnya menolak kepercayaan tradisi (Jabu, 1989). Perubahan ini menjadikan generasi muda menghadapi kesukaran dalam memahami maksud yang terdapat dalam *biau* (Sandai, 2015). Kesukaran ini berlanjutan sehingga ke peringkat pendidikan secara formal apabila puisi tradisional Iban diperkenalkan dalam kurikulum bahasa Iban (Sandai et al., 2019). Sehubungan itu, kajian ini bertujuan mengenal pasti struktur dan unsur metafora dalam *biau*.

Objektif Kajian

Objektif kajian ini adalah seperti yang berikut:

- i) mengenal pasti lapisan bahasa yang

membentuk struktur dalam puisi invokasi *biau*.

- ii) menganalisis unsur yang membentuk metafora dalam puisi invokasi *biau*.

Persoalan Kajian

Bagi mencapai objektif kajian, terdapat beberapa persoalan yang ingin dikupas. Persoalan khusus kajian ini adalah seperti yang berikut:

- i) Apakah lapisan bahasa yang membentuk struktur dalam puisi invokasi *biau*?
- ii) Bagaimanakah unsur membentuk metafora dalam struktur puisi invokasi *biau*?

Tinjauan Literatur

Lakoff dan Johnson (1980) dalam teori linguistik kognitif mengetengahkan bahawa gaya bahasa meliputi satu domain (*target domain*) untuk disampaikan kepada hubungan domain lain (*source domain*). Perkara ini mempengaruhi pola pemikiran manusia yang mempelajari bahasa dari pelbagai perspektif dengan mengkaji corak konseptualnya. Oleh itu, sebahagian besar teorinya berasaskan kepada pelbagai konsep psikologi seperti psikologi persepsi, psikologi kognitif, dan psikologi gestalt (Evans & Green, 2006). Begitu juga dengan kajian ini, struktur lapisan bahasa dalam pelafazan puisi invokasi *biau* yang disampaikan oleh *Lemambang* (pengamal ritual) lahir daripada pemikiran kognitif yang dimiliki oleh beliau dengan kepakaran dan kebolehan yang ada.

Struktur ialah cara mempersembahkan sesuatu perkara yang terbina atau dibentuk melalui pelbagai bahagian, aspek atau unsur supaya dapat membentuk suatu sistem atau pola (Aminnudin Saimon & Zaitul Azma Zainon Hamzah, 2019). Maka, lapisan bahasa dalam kajian ini mewujudkan sistem struktur yang terdapat dalam *biau*. Lapisan bahasa ini membentuk tiga bahagian utama iaitu pengenalan, isi dan penutup *biau*. Banseng et al. (2021) telah melakukan analisis lapisan bahasa bagi puisi invokasi *sampi* masyarakat Iban. Lapisan bahasa tersebut dijadikan panduan dalam dapatan kajian ini terutamanya melibatkan pembentukan struktur *biau*. Berdasarkan struktur tersebut, muncul bahasa-bahasa klasik yang melengkapkan keindahan bahasa puisi. Kebanyakan bahasa dalam puisi tradisional Iban bersifat kiasan. Bahasa kiasan digunakan untuk menyampaikan mesej dalam puisi tradisional Iban supaya penyampaiannya lebih menarik dan menunjukkan kesopanan semasa menyampaikan mesej kepada *Petara* (Banseng & Sandai, 2017). Bahasa kiasan ini juga dikenali sebagai metafora.

Dalam pada itu, kajian yang dilakukan oleh Haron Daud (2001) tentang mantera di Nusantara juga mengupas tentang pembentukan kata-kata dan ayat. Mantera ialah puisi tradisional yang dikatakan mempunyai hubungan dengan makhluk ghaib. Teks pengucapan mantera digunakan untuk menyatakan sesuatu atau menyampaikan tujuan. Berdasarkan bentuk mantera, terdapat kerangka binaan iaitu permulaan, bertabik, pernyataan atau

pendakwaan diri, seruan, suruhan dan penutup. Bahasa yang digunakan dalam mantera terdiri daripada diksi dan bahasa figuratif (kiasan). Selain itu, kajian makna yang dilakukan Yadafle et al. (2020) terhadap puisi di Indonesia juga menunjukkan penggunaan bahasa kiasan dalam mantera yang mempunyai unsur puisi seperti rima dan irama yang dianggap mengandungi kekuatan kuasa ghaib.

Asmah Omar (2005) menjelaskan definisi metafora tidak hanya terbatas sekadar bunga-bunga bahasa atau bahasa yang indah tetapi lebih dalam daripada pengertian itu. Metafora merupakan penggunaan kata untuk menghasilkan maksud lain daripada maksud tersirat (Rahman Shaari, 1993). Bagi Keris Mas (1988) pula, bahasa metafora ialah kiasan yang digunakan untuk menjelaskan konsep abstrak dengan menggunakan konsep konkrit. Namun, idea yang digunakan dalam kiasan ialah satu konsep yang sukar untuk didefinisikan. Unsur metafora yang digunakan dalam puisi bertujuan mengekspresikan pemikiran dan luahan perasaan kepada pendengar (Akastangga, 2020). Begitu juga kajian yang dilakukan oleh Indaty et al. (2018) yang meneliti struktur dan fungsi bahasa yang terdapat dalam puisi. Dapatan menunjukkan sebahagian puisi lisan tersebut menggunakan gaya bahasa seperti simile, metafora, personifikasi dan hiperbola.

Dalam kajian ini, metafora merupakan unsur bahasa kiasan yang digunakan oleh *Lemambang* (pengamal ritual) merangkumi unsur flora dan fauna, benda bukan hidup dan alam semula jadi. Unsur flora dan

fauna ialah benda yang bernyawa dan saling berinteraksi antara satu sama lain untuk meneruskan kelangsungan hidup seperti pokok, haiwan, tumbuhan dan manusia termasuklah unsur alam semula jadi. Manakala, unsur bukan hidup pula terdiri daripada benda atau alat yang dibuat dan dihasilkan oleh manusia seperti besi, baju dan jam tangan.

METODOLOGI

Kajian ini menggunakan reka bentuk kualitatif secara deskriptif. Kajian kualitatif digunakan untuk menerangkan secara mendalam bagi mencapai sesuatu objektif penyelidikan (Othman Lebar, 2017). Data kajian ini diambil daripada sebuah buku iaitu buku *Sampi enggau Biau* disusun oleh Robert Menua Saleh dan Janang Ensiring (2001). Terdapat tiga buah *biau* yang dipilih iaitu *Biau Piring Bedara* (Doa Persembahan Sajian Korban), *Biau Piring Gawai Tuah* (Doa Persembahan Sajian Perayaan Gawai Tuah) dan *Biau Piring* (Doa Persembahan Sajian). Kajian ini hanya terhad kepada tiga buah puisi tradisional *Biau* iaitu *Biau Piring Bedara* (Doa Persembahan Sajian Korban), *Biau Piring Gawai Tuah* (Doa Persembahan Sajian Perayaan Gawai Tuah) dan *Biau Piring* (Doa Persembahan Sajian). Data sekunder ini digunakan kerana upacara ritual yang melafazkan *biau* semakin berkurangan. Bagi mengesahkan lapisan bahasa yang dianalisis, seorang *Lemambang* (pengamal ritual) dijadikan sebagai pakar rujuk.

Data dianalisis menggunakan pengekodan terbuka dan substansif. Kaedah

pengekodan terbuka digunakan untuk mengenal pasti struktur lapisan bahasa dalam puisi invokasi *biau*. Manakala, unsur yang membentuk metafora menggunakan kaedah pengekodan substansif. Bahasa kiasan tersebut diklasifikasikan kepada unsur alam dan bukan alam (Cameron & Low, 1999). Selain itu, bahasa kiasan metafora menggabungkan sesuatu objek berdasarkan pengaruh alam sekeliling yang disesuaikan dengan benda hidup dan bukan hidup (Deignan, 2005). Oleh itu, kajian ini menganalisis benda hidup, benda bukan hidup dan alam semula jadi yang terdapat dalam bahasa kiasan metafora.

Pengekodan terbuka dilakukan melalui data teks *biau* yang telah diterjemahkan oleh *Lemambang*. Semasa melakukan pengekodan terbuka, data dianalisis dengan mengenal pasti dan menandakan teks *biau* kepada tiga bahagian iaitu struktur lapisan bahasa, jenis ayat dan unsur membentuk metafora dalam puisi invokasi *biau*. Setelah data ditandakan mengikut bahagian tertentu, barulah pengekodan substansif dilakukan. Fasa ini melibatkan kerja-kerja memecahkan dan mengkategorikan teks *biau* mengikut aspek tertentu berdasarkan senarai semak iaitu struktur lapisan bahasa, jenis ayat dan unsur membentuk metafora. Kerangka senarai semak yang digunakan diadaptasi daripada kajian Banseng dan Sandai (2017) yang berdasarkan Teori Linguistik Kognitif. Aspek lapisan bahasa kiasan dan jenis ayat diteliti untuk mengenal pasti pembentukan struktur gaya bahasa dalam pelbagai bidang (Lakoff & Johnson, 1980). Oleh itu, kerangka tersebut diselarikan dengan

objektif yang ingin dikaji iaitu analisis lapisan bahasa dan unsur metafora dalam puisi invocasi *biau*.

DAPATAN KAJIAN

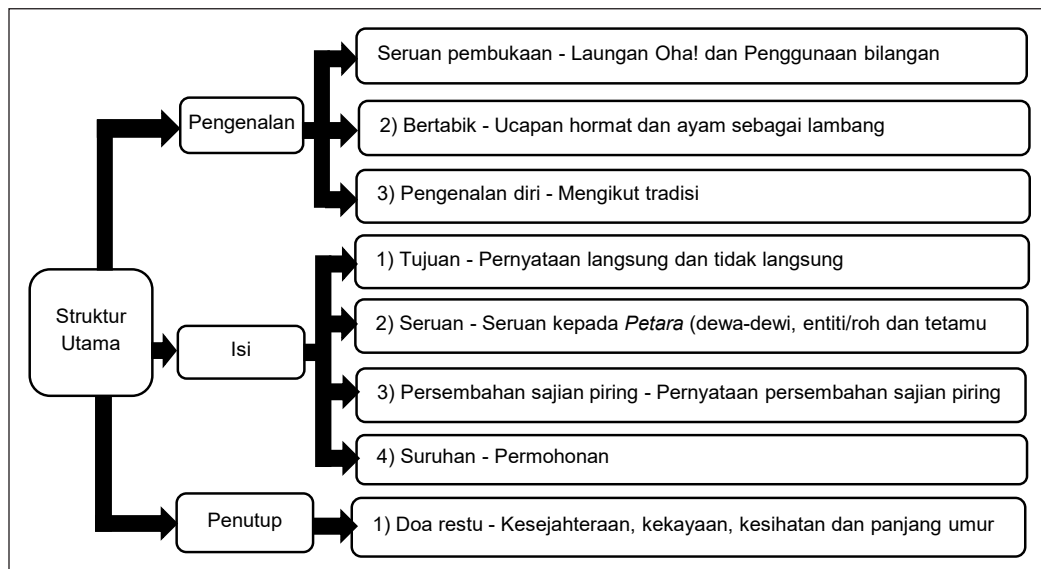
Lapisan Bahasa dalam Pembentukan Struktur Biau

Kajian ini mendapati bahawa terdapat beberapa lapisan bahasa yang membentuk tiga bahagian utama dalam struktur *biau*. Ketiga-tiga buah *biau* yang dikaji menunjukkan lapisan bahasa yang sama. Ringkasan struktur lapisan bahasa tersebut ditunjukkan menerusi Rajah 1.

Lapisan Bahasa dalam Bahagian Pengenalan Biau. Terdapat tiga lapisan bahasa dalam pengenalan *biau* iaitu seruan pembukaan, bertabik dan pengenalan diri. Seruan pembukaan dalam *biau* didapati menggunakan laungan “Oha!” sebanyak tiga kali dan penggunaan bilangan “Sa!

Dua! Tiga! Empat! Lima! Nam! Tuujuuh!” untuk memanggil *Petara* (dewa-dewi). Bertabik ialah ucapan hormat kepada *Petara*. Bertabik dimulai dengan penggunaan ayam jantan sebagai lambang penghormatan dan kata alu-aluan kepada *Petara*. Lapisan bahasa ini didapati dalam ketiga-tiga *biau* yang dikaji seperti Jadual 2. Bagi pengenalan diri pula, *Lemambang* membuat pengakuan kepada *Petara* tentang pengamalan ritual yang dilakukannya diiringi oleh puisi invocasi *biau* (doa) seperti *ningatkan adat* (mengingatkan adat tradisi) dan *pengawa asal kami* (perbuatan turun temurun). Jadual 1 menunjukkan dapatan yang diperoleh dalam pengenalan *biau*.

Lapisan Bahasa dalam Bahagian Isi Biau. Bagi bahagian isi *biau* pula, lapisan bahasa terdiri daripada tujuan, seruan, persembahan sajian (*piring*) dan suruhan. Tujuan dinyatakan secara langsung iaitu



Rajah 1. Struktur lapisan bahasa dalam puisi tradisional Biau

Jadual 1

Lapisan bahasa dalam bahagian pengenalan puisi tradisional Biau

| Lapisan Bahasa | Biau | Contoh |
|-----------------|--------------------|---|
| Seruan | <i>Biau Piring</i> | <i>Oha! Oha! Oha!</i> |
| | <i>Bedara</i> | (Terjemahan: Laungan Oha sebanyak tiga kali) |
| | <i>Biau Piring</i> | <i>Oha! Oha! Oha!</i> |
| | <i>Gawai Tuah</i> | (Terjemahan: Laungan Oha sebanyak tiga kali) |
| Bertabik | <i>Biau Piring</i> | <i>Sa! Dua! Tiga! Empat! Lima! Nam! Tuujuuh!"</i> |
| | | (Terjemahan: Laungan penggunaan bilangan nombor satu sehingga tujuh) |
| | <i>Biau Piring</i> | <i>Peda kita bulu manuk ke dipegai aku tu nyau nyelalai iku beiku besi</i> |
| | <i>Bedara</i> | (Terjemahan: Lihatlah bulu ayam yang kupegang ini aneh sekali ekornya berekor besi) |
| | | <i>Iku manuk kelabu nyau merundu umba rumbai</i> |
| | | (Terjemahan: Ekor ayam kelabu melambai-lambai) |
| | | <i>Kaki manuk serama baka ke nemu nanya kita ke besaruk duduk langgung berintai</i> |
| | | (Terjemahan: Kaki ayam serama seolah-olah menyapa kalian yang duduk berhimpun berbaris) |
| | | <i>Tu kena aku miau kita duduk bekedugau berintai</i> |
| | | (Terjemahan: Ini yang kuguna untuk merestui dan memberkati kalian yang duduk berbaris) |
| | <i>Biau Piring</i> | <i>Laban aku ke miau piring tu enggau manuk biring manuk menaning</i> |
| | <i>Gawai Tuah</i> | (Terjemahan: Sebab aku yang mendoakan sajian persembahan ini dengan ayam jantan tiada cela) |
| | | <i>Manuk labang sematung tapang</i> |
| | | (Terjemahan: Ayam jantan yang bulunya semua putih) |
| | | <i>Manuk jelayan manuk ensiriban</i> |
| | | (Terjemahan: Ayam jantan berbulu hitam keperangan) |
| | | <i>Manuk papit manuk kunchit</i> |
| | | (Terjemahan: Ayam jantan bercorak hitam keperangan dan putih) |
| | | <i>Manuk engkechung manuk tuntung</i> |
| | | (Terjemahan: Ayam berbulu hitam bercampur putih) |
| | | <i>Manuk banda manuk bekaka</i> |
| | | (Terjemahan: Ayam berbulu putih bercampur coklat) |
| | <i>Biau Piring</i> | <i>Aku miau manuk biring manuk menaning</i> |
| | | (Terjemahan: Aku mendoakan dengan ayam jantan tiada cela) |
| | | <i>Sematung tapang manuk pabang</i> |
| | | (Terjemahan: Ayam jantan yang bulunya semua putih) |
| | | <i>Ijau belalat tuntung rapat burik leka tuntung belaja</i> |
| | | (Terjemahan: Ayam berbulu putih bercampur hitam) |
| | | <i>Burik leka tuntung belaja labang lebus engkechung terus</i> |
| | | (Terjemahan: Berbintik biji beracun dan berbulu coklat bercampur putih) |
| Pengenalan diri | <i>Biau Piring</i> | <i>Berani mih aku tu baka besi sepuh laja</i> |
| | <i>Bedara</i> | (Terjemahan: Beranilah aku ini seperti besi direndam racun) |
| | | <i>Nyulur mih aku tu baka paku ke tumbuh enda dibaja</i> |
| | | (Terjemahan: Suburlah aku seperti paku pakis tidak dibaja) |
| | | <i>Pang mih aku tu baka kepayang rendam selama</i> |
| | | (Terjemahan: Berbau pahitlah aku seperti kepayang direndam semalaman) |

Jadual 1 (sambungan)

| Lapisan Bahasa | Biau | Contoh |
|----------------|-------------------------------|---|
| Pengenal diri | <i>Biau Piring Bedara</i> | <i>Besumbuk mih aku tu baka kantuk daun rinda</i> (Terjemahan: Tumbuh subur lah aku seperti pucuk berdaun lebat) <i>Baka ke mansang deka surut baka ke duduk enda kekebut</i> (Terjemahan: Seperti ke depan hendak berundur, seperti duduk tidak bergerak) |
| | <i>Biau Piring Gawai Tuah</i> | <i>Aku tu ngingatka adat pungkak Rentap</i> (Terjemahan: Aku mengingat adat terdahulu Rentap) <i>Nunda adat bai aki kitai simpi laki Bejuri</i> (Terjemahan: Mengikuti adat datuk kita Simpi suami Bejuri) |
| | <i>Biau Piring</i> | <i>Sida Ragai Lang enggau Peter Nyaruk datai ditu</i> (Terjemahan: Mereka Ragai Lang dan Peter Nyaruk datang di sini) |
| | | |

untuk memberkati persembahan sajian (*piring*) yang disediakan semasa ritual. Perkataan yang biasa digunakan oleh *Lemambang* untuk menunjukkan tujuan adalah seperti *tu kena aku miau* (ini yang aku gunakan untuk merestui doa), *udah biau aku* (sudah aku lafazkan), *laban aku ke miau* (sebab aku hendak melafazkan doa) dan *kebuah aku ke miau tu* (tujuan aku melafazkan doa ini). Seruan pula digunakan untuk menyeru *Petara* dan menyeru semua yang hadir ke ritual tersebut. Persembahan

sajian (*piring*) turut dinyatakan oleh *Lemambang* bagi menyempurnakan upacara ritual tersebut. Sajian yang disediakan adalah seperti buah pinang, daun sirih, ketupat, rokok daun nipah, telur ayam, bertih beras dan kuih penyaram serta bahan lain. *Lemambang* juga menggunakan bahasa suruhan untuk menyeru kuasa *Petara* memberkati persembahan sajian (*piring*) yang disediakan. Dapatan lapisan bahasa yang terdapat dalam bahagian isi *biau* dinyatakan dalam Jadual 2.

Jadual 2

Lapisan bahasa dalam bahagian isi puisi tradisional Biau

| Lapisan Bahasa | Biau | Contoh |
|----------------|-------------------------------|---|
| Tujuan | <i>Biau Piring Bedara</i> | <i>Tu kena aku miau kita duduk bekedugau berintai</i> (Terjemahan: Ini yang kuguna mendoakan kalian yang duduk berhimpun berbaris) <i>Miau sida ke nembiak enggau sida ke tuai</i> (Terjemahan: Mendoakan yang muda dan tua) |
| | <i>Biau Piring Gawai Tuah</i> | <i>Laban aku ke miau piring tu enggau manuk biring manuk menaning</i> (Terjemahan: Kerana aku mendoakan persembahan sajian dengan ayam jantan tiada cela) |
| | <i>Biau Piring</i> | <i>Kebuah aku ke miau tu</i> (Terjemahan: Sebab aku mendoakan ini) <i>Laban ngayanka ading ngayanka piring</i> (Terjemahan: Sebab aku telah menyediakan sajian persembahan lengkap) |
| | | |

Jadual 2 (sambungan)

| Lapisan Bahasa | Biau | Contoh |
|-----------------------------|-------------------------------|--|
| Seruan | <i>Biau Piring Bedara</i> | <p><i>Nya alai sida ke mit diatu enti besai ila kada enda sida iya enti besekula tau pandai</i> (Terjemahan: Oleh itu, mereka yang muda diharapkan jika bersekolah menjadi pandai.)</p> <p><i>Pangkat besai megai kitai tulihka lubang pengelantang</i> (Terjemahan: Pangkat tinggi bersama kita mendapatkan lubang kesenangan)</p> |
| | <i>Biau Piring Gawai Tuah</i> | <p><i>Dulu aku ngangauka Endu Dara Menti</i> (Terjemahan: Terdahulu aku menyeru Ratu Dara Menti)</p> <p><i>Ke bediri tenjik-tenjik bunsu lamba tiang medang</i> (Terjemahan: Yang berdiri tegak ratu tiang segala tiang)</p> <p><i>Dara lampah mua bunsu tangga tuchum ketawa laka dikengkang</i> (Terjemahan: Dewi berwajah indah ratu tangga segala tangga tersenyum ketawa)</p> <p><i>Kumang Dayang Jinap pagi chelap lemai angkat bunsu atap lading gerunggang</i> (Terjemahan: Entiti Ratu Dayang Jinap pagi sejuk petang panas ratu atap segala atap)</p> <p><i>Kumang Sedai Dara pandai bunsu pintu ke bedaru bandir tapang</i> (Terjemahan: Entiti Ratu Sedai Dara pandai ratu pintu segala pintu)</p> <p><i>Endu Kumang Dayang Jawai bunsu tikai pandan bekuang</i> (Terjemahan: Entiti Ratu Dayang Jawai ratu tikar segala tikar pandan)</p> |
| | <i>Biau Piring</i> | <p><i>Laban aku ka ngangauka Nawi ke bediri tenjik-tenjik</i> (Terjemahan: Kerana aku menyeru Nawi yang berdiri tegak)</p> <p><i>Bunsu Lamba Tiang Medang</i> (Terjemahan: Ratu tiang segala tiang)</p> |
| | <i>Biau Piring Bedara</i> | <p><i>bunsu leka pinang belubang</i> (Terjemahan: ratu buah pinang berlubang)</p> <p><i>Kumang Santih Dara Milih bunsu sirih betumbuk takang</i> (Terjemahan: Entiti Ratu Santih Dara Milih ratu sirih segala sirih menjalari pokok)</p> <p><i>bunsu kapu kerubung kerang</i> (Terjemahan: Raja kapur cangkerang kerang)</p> <p><i>bunsu daun semakau dagang</i> (Terjemahan: Raja daun tembakau dagang)</p> <p><i>bunsu daun ruku apung nyemilang</i> (Terjemahan: Raja daun rokon nipah gemilang)</p> |
| Persembahan sajian (piring) | <i>Biau Piring Bedara</i> | <p><i>Laban ngayanka ading ngayanka piring</i> (Terjemahan: Sebab menghidangkan sajian persembahan piring)</p> <p><i>Piring pulut piring letup piring penganan piring penyaram</i> (Terjemahan: Sajian nasi pulut sajian bertih padi sajian kuih penganan sajian kuih penyaram)</p> <p><i>Nya alai nuan Kumang Mantah Dara Bungah</i> (Terjemahan: Oleh itu, engkau Ratu Mantah Dara Bungah)</p> <p><i>Bunsu buah pinang belubang</i> (Terjemahan: Ratu buah pinang berlubang)</p> <p><i>Tumu pagi bejeluti jaku bungah</i> (Terjemahan: Awal pagi bergurau senda)</p> |
| | <i>Biau Piring Gawai Tuah</i> | |

Jadual 2 (sambungan)

| Lapisan Bahasa | Biau | Contoh |
|----------------|-------------------------------|--|
| Suruhan | <i>Biau Piring Gawai Tuah</i> | <p><i>Berandau enggau ambai di Kachit Mangah empelah ke ampah pun rang</i> (Terjemahan: Berbual dengan kekasihmu <i>Kachit Mangah</i> terlalu seronok ke tulang pipi)</p> <p><i>Kumang Lemuk Dara Gauk</i> (Terjemahan: Ratu <i>Lemuk Dara Gauk</i>)</p> <p><i>Bunsu sirih siduk betumbuk pun takang</i> (Terjemahan: Ratu sirih segala sirih menjalari pokok)</p> <p><i>Tumu pagi bejeluti jaku subuk</i> (Terjemahan: Awal pagi berbisik)</p> |
| | <i>Biau Piring</i> | <p><i>Laban ngayanka ading ngayanka piring</i> (Terjemahan: Sebab menyediakan sajian persembahan)</p> <p><i>Piring pulut piring letup</i> (Terjemahan: Sajian piring nasi pulut dan bertih padi)</p> <p><i>Piring penganan piring penyaram</i> (Terjemahan: Sajian kuih <i>penganan</i> sajian kuih penyaram)</p> |
| | <i>Biau Piring Bedara</i> | <p><i>Kita nya orang simbai bunsu sempandai datai ari tatai balai nyabung</i> (Terjemahan: Kalian orang ternama saudara entiti <i>sempandai</i> datang dari balai laga ayam)</p> <p><i>Embing bunsu telanjing datai ari tekenching panchur wong laban kita nya betuaika sawa tampung tedung</i> (Terjemahan: Entiti <i>Embing</i> datang dari air terjun sebab kalian diketuai ular sawa separuh tedung)</p> <p><i>Ari kaban besilih jari enggau Renggan seduai Tutong Tuai orang di Gelong Batu Besundang</i> (Terjemahan: Dari saudara salaman jari dengan Renggam dan Tutong ketua orang di Gelong Batu Besundang)</p> |
| | <i>Biau Piring Gawai Tuah</i> | <p><i>Laban kita kena idang aku nganti pengabang sigi dirintaika aku nganti temuai</i> (Terjemahan: Sebab kalian dihidangkan aku menunggu tetamu memang disenaraikan menunggu pelawat)</p> <p><i>Sida ke ninga pesau ninga kangau ninga padah ninga tunggah kami sehari tu</i> (Terjemahan: Mereka yang mendengar seruan mendengar panggilan mendengar laungan mendengar undangan kami hari ini)</p> <p><i>Kita tu mih asuh kami bisa asuh kami landa</i> (Terjemahan: Kalianlah disuruh kami berbisa disuruh kami berpengaruh.)</p> <p><i>Asuh kami ngasi asuh kami sidi di jari lepa dua</i> (Terjemahan: Disuruh kami sakti disuruh kami ajaib di jari tapak dua)</p> |
| | <i>Biau Piring</i> | <p><i>Nya alai kita diau ditu</i> (Terjemahan: Oleh itu, kamu di sini.)</p> <p><i>Laban kita endang ngintai temuai datai diadang nganti pengabang</i> (Terjemahan: Sebab kamu memang mengintai tetamu datang diharapkan menunggu pelawat)</p> <p><i>Ninga tesau ninga kangau kami seharitu</i> (Terjemahan: Dengar seruan dengar panggilan kami hari ini)</p> <p><i>Nya alai kita endang empu pengawa empu kerja</i> (Terjemahan: Oleh itu, kalian yang menganjurkan upacara kerja)</p> |
| | | |

Jadual 2 (sambungan)

| Lapisan Bahasa | Biau | Contoh |
|----------------|--------------------|--|
| | <i>Biau Piring</i> | <i>Nya alai ke diatu dih</i> (Terjemahan: Oleh itu, sekaranglah) <i>Kita tu meh asuh kami bisa asuh kami landa</i> (Terjemahan: Kalianlah disuruh kami berbisa disuruh kami berpengaruh) <i>Ke peduman ke jematan</i> (Terjemahan: Menjadi pedoman jambatan) <i>Ke titi ke panti antu ke ninga sada</i> (Terjemahan: Menjadi titi penghubung entiti yang mendengar doa) |

Lapisan Bahasa dalam Bahagian Penutup Biau. Pada bahagian penutup pula ialah doa restu. *Lemambang* akan menutup persembahan sajian (*piring*) dengan melafazkan penutupan puisi invokasi *biau* (doa) untuk meminta *Petara* memberikan kesejahteraan hidup, kekayaan, kesihatan dan panjang umur. Jadual 3 merupakan struktur lapisan bahasa dalam puisi invokasi *biau*.

Sebagai rumusan, struktur yang terdapat dalam ketiga-tiga *biau* yang dikaji adalah sama pada ketiga-tiga bahagian utama iaitu pengenalan, isi dan penutup. Pada bahagian pengenalan, lapisan bahasa yang terdapat dalam ketiga-tiga *biau* ialah seruan pembukaan, bertabik dan pengenalan diri. Seruan pembukaan dalam *Biau Piring Bedara* dan *Biau Piring Gawai Tuah* menggunakan laungan ‘O ha!’ manakala *Biau Piring* menggunakan bilangan. Bertabik pula ialah ucapan hormat dengan menggunakan ayam sebagai lambang. Seterusnya diikuti oleh pengenalan diri melalui warisan tradisi. Bahagian isi puisi *biau* menunjukkan penggunaan lapisan bahasa tujuan, seruan, persembahan sajian (*piring*) dan suruhan. Tujuan dinyatakan secara langsung dan tidak langsung

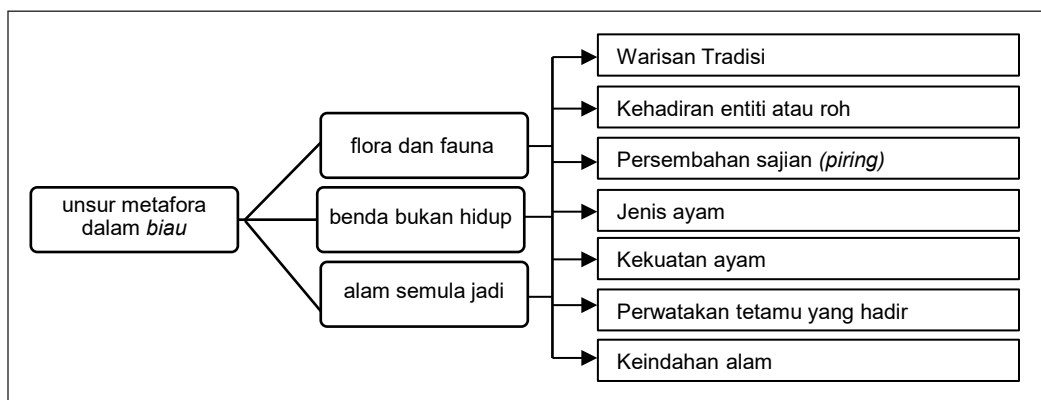
dalam puisi *biau*. Seruan pula untuk menyeru *Petara* (dewa-dewi), entiti dan roh serta orang ramai yang hadir dalam ritual. Persembahan sajian (*piring*) turut dinyatakan dalam semua *biau* yang dikaji. Lapisan bahasa suruhan pula merupakan permohonan kepada *Petara* (dewa-dewi) untuk menunaikan permintaan mereka. Pada bahagian penutup, terdapat lapisan bahasa doa restu. *Lemambang* memohon agar kehidupan masyarakat Iban direstui melalui kesejahteraan, kekayaan, kesihatan dan umur yang panjang.

Unsur Metafora dalam Biau

Pelbagai unsur metafora yang digunakan oleh *Lemambang* (pengamal ritual) semasa melafazkan puisi invokasi *biau* (doa) dalam persembahan sajian (*piring*). Antara unsur yang terdapat dalam kajian ini ialah unsur flora dan fauna, benda bukan hidup dan alam semula jadi. Kesemua unsur ini digunakan sebagai lambang atau simbol untuk menyatakan warisan tradisi, kehadiran entiti atau roh, persembahan sajian (*piring*), jenis ayam, kekuatan ayam, perwatakan tetamu yang hadir ke persembahan sajian (*piring*) dan keindahan alam. Rajah 2 merupakan

Jadual 3
Lapisan bahasa dalam bahagian penutup puisi tradisional Biau

| Lapisan Bahasa | Biau | Contoh |
|----------------|----------------------|--|
| Doa restu | <i>Biau</i> | <i>Nya alai gayu guru kita ngaduka semua pengawa pemansang</i> |
| | <i>Piring Bedara</i> | (Terjemahan: Oleh itu, sihat umur panjang kalian yang mengadakan semua perkara menuju kemajuan) <i>Betampung-tampung nyentukka pengujung nadai ke timpang</i> (Terjemahan: Bersambung-sambung sehingga ke penghujung tanpa cacat cela) |
| | <i>Biau</i> | <i>Ambika kami bulih pengelantang bulih penyenang</i> |
| | <i>Piring</i> | (Terjemahan: Supaya kami mendapat kesejahteraan mendapat kesenangan) |
| | <i>Gawai</i> | <i>Ambika kami betuchung baka bukit bekebung baka langit</i> |
| | <i>Tuah</i> | (Terjemahan: Supaya kami tinggi umpama bukit luas umpama langit) <i>Tediri pegari nyadi raja nyarak tampak</i> (Terjemahan: Berdiri menyerlah menjadi raja di sebalik terang) <i>ambika gerai selama iya</i> (Terjemahan: Supaya sihat selamanya) <i>Chelap embap gayu guru panjai umur nguan menua</i> (Terjemahan: Sejahtera sihat umur panjang tinggal di dunia) |
| | <i>Biau</i> | <i>Kami ngereja pengawa piring ke seharitu ngambika kami gerai nyamai</i> |
| | <i>Piring</i> | (Terjemahan: Kami melakukan persembahan sajian hari ini supaya kami sihat sejahtera) <i>Lantang senang gayu guru</i> (Terjemahan: Selesa senang sihat walafiat) <i>Sida ke bisi pengawa</i> (Terjemahan: Mereka yang bekerja) <i>Ngambi ka pangkat sida nambah ari ke udah</i> (Terjemahan: Agar pangkat mereka bertambah dari sebelumnya) <i>Gaji besai ari selama</i> (Terjemahan: Gaji besar dari sebelumnya) <i>Ngambika kitai sama gayu guru</i> (Terjemahan: Supaya kita sama sihat) <i>Gerai nyamai</i> (Terjemahan: Sihat sejahtera) <i>Sama-sama nuju jalai pemansang</i> (Terjemahan: Bersama menuju ke arah kemajuan) |



Rajah 2. Unsur metafora dalam puisi tradisional Biau

penerangan unsur metafora dalam *biau* dan penggunaan unsur tersebut dalam metafora. Manakala, Jadual 4 menunjukkan contoh metafora yang mempunyai unsur-unsur tersebut.

Warisan Tradisi. Sebelum membuat permohonan, pengamal membuat pendakwaan diri dengan menyatakan mereka mewarisi amalan *sampi* mengikut adat secara tradisi yang diturunkan daripada nenek moyang zaman berzaman. *Lembang* menggunakan unsur flora dan fauna seperti paku-pakis dan pucuk tumbuhan berdaun. Gaya metafora langsung atau perbandingan yang menyebut dua hal berbeza tanpa menggunakan kata-kata perbandingan kepada unsur alam dan bukan alam (Deignan, 2005). Contoh metafora tersebut seperti yang ditunjukkan pada Jadual 4.

Jadual 4
Unsur metafora warisan tradisi

| Unsur | Contoh unsur | Contoh penggunaan unsur dalam <i>biau</i> |
|-----------------|------------------------|---|
| flora dan fauna | Paku pakis | <i>Nyulur mih aku tu baka paku ke tumbuh enda dibaja,</i> (Terjemahan: Suburlah aku seperti paku-pakis yang tumbuh tidak dibaja) |
| | Pucuk tumbuhan berdaun | <i>Besumbuk mih aku tu baka kantuk daun rinda,</i> (Terjemahan: Tumbuh pucuk berdaun lebat) |

Jadual 5
Unsur metafora kehadiran entiti atau roh

| Unsur | Contoh unsur | Contoh penggunaan unsur dalam <i>biau</i> |
|-----------------|---------------|--|
| Flora dan fauna | Pinang | <i>Dara meraya kumbang Melisa bunsu leka pinang belubang</i> (Terjemahan: Dara manja Dewi Melisa ratu buah pinang berlubang) |
| | Ayam kepayang | <i>Endu Tematu Tali betabu bunsu telu indu manuk kepayang</i> (Terjemahan: Entiti Tematu Tali bergulung ratu telur ayam kepayang) |
| | Sirih | <i>Bunsu sirih siduk betumbuk pun takang</i> (Terjemahan: Ratu sirih segala sirih mejalari pokok) |

Kehadiran Entiti atau Roh. Persembahan sajian (*piring*) diiringi dengan lafaz *biau* bertujuan menjemput *Petara* (dewa-dewi) serta entiti dan roh supaya turut serta dalam persembahan tersebut. Metafora atau bahasa kiasan juga dapat memberi gambaran makna tersirat tentang sifat manusia (Aini Karim & Muhamad Fadzllah Zaini, 2017). Oleh itu, pengamal *biau* menggunakan metafora yang berunsurkan flora dan fauna untuk mewakili entiti atau roh dan kesaktian mereka berdasarkan Jadual 5.

Persembahan Sajian (*Piring*). Metafora juga digunakan untuk menyampaikan persembahan sajian (*piring*) yang disediakan semasa mengamalkan *biau*. Ritual dilakukan agar *Petara* (dewa-dewi) memberikan perlindungan sepanjang perjalanan mereka mencari kekayaan dan kebahagiaan (Derek, 1970). Oleh itu, masyarakat Iban membuat persediaan bahan yang digunakan sebelum

persembahan sajian sehingga mengibaratkan persembahan tersebut sebagai nasi pulut, bertih padi dan kuih. Unsur ini merupakan benda bukan hidup kerana berbentuk makanan. Metafora melambangkan sajian yang telah sedia untuk dipersembahkan kepada *Petara* (dewa-dewi) seperti yang ditunjukkan dalam Jadual 6.

Jenis Ayam. Bagi masyarakat Iban, ayam jantan dipercayai dapat menghindari malapetaka dan mimpi buruk atau *omen*. Masyarakat Iban juga percaya ayam yang pelbagai jenis mempunyai kuasa luar biasa

dan kekuatan berbeza. Hal ini demikian kerana, masyarakat Iban mempunyai pengalaman dalam aktiviti laga ayam. Oleh itu, mereka dapat mengetahui pelbagai jenis ayam yang sesuai digunakan semasa melafazkan *biau*. Penggunaan unsur alam dipercayai mempunyai hubungan erat antara alam sekeliling iaitu melalui konsep flora dan fauna (Muhamad Fadzllah Zaini, 2015). Pelbagai jenis ayam yang membawa maksud berbeza digunakan seperti ayam jantan putih, ayam jantan serama pelbagai warna dan ayam sabung jantan seperti yang ditunjukkan dalam Jadual 7.

Jadual 6

Unsur metafora persembahan sajian (piring)

| Unsur | Contoh unsur | Contoh penggunaan unsur dalam biau |
|-------------------|-------------------------|---|
| Benda bukan hidup | Nasi pulut, bertih padi | <i>Piring pulut piring letup</i> (Terjemahan: Sajian nasi pulut bertih padi) |
| | Kuih-muih | <i>Piring penganan piring penyaram</i> (Terjemahan: Sajian kuih penganan kuih penyaram). |

Jadual 7

Unsur metafora jenis ayam

| Unsur | Contoh unsur | Contoh penggunaan unsur dalam biau |
|-----------------|---------------------------------------|--|
| Flora dan fauna | Ayam jantan putih | <i>Manuk labang sematung tapang</i> (Terjemahan: Ayam jantan yang bulunya semua putih) |
| | Ayam jantan serama/ pelbagai warna | <i>Manuk jelayan manuk ensiriban</i> (Terjemahan: Ayam jantan berbulu hitam keperangan) <i>Manuk papit manuk kunchit</i> (Terjemahan: Ayam jantan bercorak hitam keperangan dan putih) <i>Manuk engkechung manuk tuntung</i> (Terjemahan: Ayam berbulu hitam bercampur putih) <i>Manuk banda manuk bekaka</i> (Terjemahan: Ayam berbulu putih bercampur coklat) <i>selanjau manuk tawai tu</i> (Terjemahan: Ayam sabung jantan ini) |
| | Ayam jantan sabung | <i>selanjau manuk sabung</i> (Terjemahan: Ayam sabung jantan) <i>selanjau manuk tuntung iku bekelapung</i> (Terjemahan: Ayam jantan sabung berekor hitam putih) <i>manuk biring manuk menaning</i> (Terjemahan: Ayam jantan tiada cela) |

Kekuatan Ayam. Ayam yang digunakan dalam ritual *biau* juga digambarkan oleh metafora. Unsur benda bukan hidup dan alam semula jadi digunakan bagi menyatakan kekuatan ayam tersebut. Metafora tentang kekuatan ayam ini dibentuk atas faktor persekitaran kognitif dan pengalaman yang berbeza dari aspek budaya dan adat resam (Rozaimah Rashidin, 2015). Justeru, masyarakat Iban yang menggambarkan kekuatan ayam semasa persembahan sajian (*piring*) telah mewujudkan kepelbagaian unsur iaitu benda bukan hidup dan alam semula jadi metafora dalam penyampaian struktur *biau*. Contoh metafora tersebut ditunjukkan pada Jadual 8.

Perwatakan Tetamu yang Hadir. Tradisi lisan masyarakat Iban amat menitikberatkan kepercayaan (Masing, 1981; Sandin, 1980). Persembahan sajian (*piring*) diadakan untuk menghubungkan orang Iban dengan *Petara* (Anom, 2014). Manusia mempunyai gambaran kosmos atau alamnya sendiri mengikut kepercayaan yang diperturunkan dari zaman nenek moyang (Asmah Omar, 2012). Begitu juga dengan masyarakat Iban yang percaya tentang kewujudan kosmos kepada *Petara* melalui persembahan

sajian (*piring*). *Petara* dalam budaya orang Iban mempunyai hubungan dengan fenomena alam yang mempunyai fungsi dan kuasa mengikut hubungannya dengan manusia (Derek, 1970). Pengamal ritual menggambarkan perwatakan tetamu yang datang dengan metafora yang membawa maksud memuji kelengkapan dan persediaan tetamu yang hadir dalam ritual *biau*. Metafora ini dapat dilihat melalui Jadual 9.

Keindahan Alam. *Petara* (dewa-dewi) dalam budaya orang Iban mempunyai hubungan dengan fenomena alam yang terdiri daripada burung, tanah, air, dan pokok (Derek, 1970). Unsur alam semula jadi digunakan oleh *Lemambang* (pengamal ritual) untuk menggambarkan sesuatu perkara di samping mengindahkan bahasa yang digunakan semasa menyampaikan *biau*. Pengamal *biau* menyatakan keindahan alam membawa maksud keindahan alam sekeliling di bumi dan di dunia *Petara*. Keindahan alam ini disampaikan kepada tetamu untuk menunjukkan ritual *biau* dan permintaan mereka direstui. Keindahan alam tersebut berunsurkan flora, fauna dan alam semula jadi seperti yang ditunjukkan pada Jadual 10.

Jadual 8
Unsur metafora kekuatan ayam

| Unsur | Contoh unsur | Contoh penggunaan unsur dalam <i>biau</i> |
|------------------------------------|---------------------------|---|
| Benda bukan hidup | Besi | <i>Peda kita bulu manuk ke dipegai aku tu nyau nyelalai iku beiku besi</i> (Terjemahan: Lihatlah bulu ayam yang kupegang ini aneh sekali ekornya berekor besi) |
| | Kelabu melambai-lambai | <i>Iku manuk kelabu nyau merundu umba rumbai</i> (Terjemahan: Ekor ayam kelabu melambai-lambai) |
| Flora dan fauna (anggota badan) | Leher | <i>Peda bulu manuk pipit antu chukup lagu ngarungka rekung</i> (Terjemahan: Lihatlah bulu ayam pipit hantu cukup indah menyeliputi leher). |

Jadual 9

Unsur metafora perwatakan tetamu yang hadir

| Unsur | Contoh unsur | Contoh penggunaan unsur dalam <i>biau</i> |
|-------------------|---------------|--|
| Benda bukan hidup | Baju kemeja | <i>dada udah dijala kemija baju bungai</i> (Terjemahan: Dada sudah dijala baju kemeja berbunga) |
| | Sarang pinang | <i>raban pengendang sarang pinang</i> (Terjemahan: Kumpulan pembawa gendang sarang pinang) |
| | Tanduk topi | <i>Kita nya agi tinggi di suli tanduk labung</i> (Terjemahan: Kalian lebih tinggi dari tanduk topi) |
| | Atap | <i>kita nya di awak panau pabung</i> (Terjemahan: Kalian di puncak atap) |
| Alam semula jadi | Air terjun | <i>Embing bunsu telanjing datai ari tekenching panchur wong</i> (Terjemahan: Dipimpin ratu sungai datang dari air terjun) |

Jadual 10

Unsur metafora keindahan alam

| Unsur | Contoh unsur | Contoh penggunaan unsur dalam <i>biau</i> |
|-----------------------------------|--------------------------|--|
| Flora dan fauna, alam semula jadi | Pokok ketapang | <i>baka lamba tapang mikai</i> (Terjemahan: Seperti pohon ketapang besar) |
| | Hulu sungai | <i>Tumbuh di entigis ulu sungai benyawa rengai-rengai</i> (Terjemahan: Tumbuh di hulu sungai berbunyi nyaring) |
| | Musang hutan, air terjun | <i>munyi nyawa enturun ruding tekenching panchur wong</i> (Terjemahan: Bunyi suara musang hutan ibarat deruan air terjun) |
| | Ular | <i>sawa tampung tedung</i> (Terjemahan: Sawa separuh tedung) |
| | Bintang | <i>kebung pagar bintang</i> (Terjemahan: Luas dipagar bintang) |
| | Bulan purnama | <i>penama bulan kembang</i> (Terjemahan: Bulan purnama penuh) |
| | Bunga keembung | <i>letup penangkup bungai kejumpang</i> (Terjemahan: Penutup tudung bunga keembung) |
| | Bukit | <i>tuchung rabung bukit Lingga</i> (Terjemahan: Puncak tertinggi Bukit Lingga) |
| | Bukit, langit | <i>betuchung baka bukit bekebung baka langit</i> (Terjemahan: Tinggi seperti bukit luas seperti langit) |
| | Lebah | <i>tekusai munyi maning</i> (Terjemahan: Bertempiaran bunyi lebah) |

Kesimpulannya, puisi *biau* banyak menggunakan unsur flora dan fauna, benda bukan hidup dan alam semula jadi dalam pembentukan metafora. Unsur flora dan fauna lebih banyak digunakan dalam menyatakan warisan tradisi, jenis ayam dan kekuatan ayam. Benda bukan hidup terdiri daripada bahan buatan yang digunakan

dalam kehidupan masyarakat Iban. Unsur tersebut digunakan untuk menyatakan persembahan sajian (*piring*). Manakala gabungan kesemua unsur digunakan untuk menyatakan perwatakan tetamu yang hadir. Unsur alam semula jadi juga digunakan bagi memuji keindahan alam yang terdapat dalam puisi *biau*.

PERBINCANGAN

Kajian mendapati struktur lapisan bahasa yang terdapat dalam puisi invokasi *biau* merangkumi tiga aspek utama iaitu pengenalan, isi dan penutup. Dapatan kajian juga menyokong teori linguistik kognitif yang melihat bahawa bahasa merupakan suatu lambang kepada sesebuah struktur bahasa untuk menyampaikan makna tertentu. Terdapat tujuh aspek yang membentuk struktur dalam puisi *biau* (doa) seperti seruan pembukaan, bertabik, pengenalan diri, tujuan, seruan, persembahan sajian (*piring*), suruhan dan doa restu. Bahagian pengenalan merangkumi seruan permulaan, bertabik dan pengenalan diri. Manakala, bagi bahagian isi pula termasuk tujuan, seruan, persembahan sajian (*piring*) dan suruhan. Pada bahagian penutup pula ialah doa restu.

Struktur dalam *biau* hampir sama dengan puisi invokasi *sampi* yang telah dinyatakan oleh Banseng et al. (2021). Persamaan ini boleh dilihat berdasarkan lapisan bahasa yang digunakan pada setiap bahagian utama puisi. Namun demikian, puisi invokasi *biau* lebih mengutamakan ayam dan sajian (*piring*) kerana ayam dan persembahan sajian itu adalah perlu semasa upacara tersebut dilaksanakan.

Teori Linguistik Kognitif menyentuh tentang gaya bahasa yang pelbagai untuk menyampaikan sesuatu perkara melalui percakapan lisan (Lakoff & Johnson, 1980). Bagi Aini Karim dan Muhamad Fadzllah Zaini (2017) pula, struktur bahasa digunakan untuk memberi gambaran makna tersirat. Namun demikian, pembentukan

kata-kata dan ayat mempunyai hubungan dengan makhluk ghaib (Haron Daud, 2001). Selari dengan itu, Haron Daud menyatakan setiap pelafazan teks puisi tradisional digunakan untuk menyatakan sesuatu atau menyampaikan tujuan. Dapatan tersebut selari dengan kajian oleh Nurul Aminah Basharuddin dan Hasnah Mohamad (2014) yang mendapati puisi tradisional mempunyai lapisan bahasa yang pelbagai untuk menyampaikan mesej kepada orang lain. Hal ini jelas menunjukkan bahawa, pemikiran seseorang dapat digambarkan melalui karya seni perlambangan bahasa secara lisan dan bertulis.

Setiap struktur yang terdapat dalam puisi invokasi *biau* memperlihatkan keindahan bahasa kiasan atau metafora untuk menyampaikan mesej dalam puisi tradisional masyarakat Iban. Metafora tersebut menjadikan *biau* lebih menarik dan menunjukkan kesopanan kepada *Petara* (dewa-dewi) (Banseng & Sandai, 2017). Unsur yang membentuk metafora dalam puisi *biau* berlandaskan unsur flora dan fauna, benda bukan hidup dan alam semula jadi seiring dengan kehidupan dan budaya tradisi masyarakat Iban. Sehubungan itu, dalam Teori Linguistik Kognitif turut menyentuh tentang gaya bahasa yang pelbagai bagi menyampaikan sesuatu perkara melalui percakapan lisan. Antara lain ialah struktur metafora daripada domain sumber ke domain sasaran (Lakoff & Johnson, 1980). Sistem konseptual dalam metafora pula dapat memberi perlambangan kepada sesuatu objek atau perkara melalui ungkapan bahasa (Croft & Cruse, 2004).

Fungsi kognitif metafora ialah gaya bahasa kiasan langsung atau perbandingan yang menyebut dua hal berbeza tanpa menggunakan kata-kata perbandingan kepada unsur alam dan bukan alam (Deignan, 2005). Justeru, unsur metafora digunakan sebagai medium untuk meluahkan perasaan, perbandingan sifat atau perlakuan dan tingkah laku manusia (Muhamad Fadzllah Zaini, 2015). Mohamad Midiyana dan Mohammad Fadzeli Jaafar (2015) menyatakan unsur metafora menjadi bahasa ungkapan kepada penulis atau pengarang dalam beberapa hasil karya sastera kerana setiap bahasa mempunyai sistem tersendiri. Dalam pada itu, dapatan kajian ini turut menyokong ideologi Siti Norashikin Mohd Khalidi et al. (2017), bahawa unsur bahasa kiasan merupakan kaedah, gaya dan kebijaksanaan untuk menyampaikan idea. Oleh itu, penggunaan unsur yang terdapat dalam kajian ini saling berkaitan dengan alam sekeliling pengamal *biau*. Unsur-unsur ini digunakan untuk menyatakan warisan tradisi, kehadiran entiti atau roh, persembahan sajian (*piring*), jenis ayam, kekuatan ayam, perwatakan tetamu bahasa kiasan yang dikenal pasti dalam struktur *biau*.

Pelafazan puisi invokasi *biau* oleh *Lemambang* mempunyai hubungan dengan kuasa ghaib selaras dengan gambaran kosmos atau alamnya sendiri mengikut kepercayaan yang diperturunkan dari zaman nenek moyang (Asmah Omar, 2012). Begitu juga dengan masyarakat Iban yang percaya tentang kewujudan kosmos kepada *Petara* (dewa-dewi) melalui persembahan sajian

(*piring*). Persembahan sajian (*piring*) dilakukan untuk menyampaikan pelbagai tujuan kepada *Petara*. Melalui upacara *miring*, gambaran tentang kosmos dapat dihubungkan dengan persembahan sajian yang diamalkan oleh masyarakat Iban (Zeppel, 1994). *Petara* dalam budaya masyarakat Iban mempunyai hubungan dengan fenomena alam yang terdiri daripada burung, tanah, air, dan pokok. Setiap *Petara* mempunyai fungsi dan kuasa mengikut hubungannya dengan manusia (Derek, 1970).

KESIMPULAN

Struktur bahasa menjadi suatu lambang untuk mewujudkan makna kepada puisi invokasi *biau*. Pengertian dalam puisi invokasi *biau* ini dilambangkan seperti mantera iaitu terdapat kerangka binaan termasuklah permulaan, bertabik, pernyataan atau pendakwaan diri, seruan, suruhan dan penutup (Haron Daud, 2001). Dapatan tersebut selari dengan kajian yang dilakukan oleh Nurul Aminah Basharuddin dan Hasnah Mohamad (2014) yang mendapati puisi tradisional mempunyai lapisan bahasa yang pelbagai untuk menyampaikan mesej kepada orang lain. Hal ini dengan jelas menunjukkan bahawa, pemikiran seseorang digambarkan melalui karya seni perlambangan bahasa secara lisan dan bertulis.

Penyampaian maklumat dapat memperlihatkan pembentukan metafora sebagai wahana pemikiran dan kognitif seseorang yang diluahkan melalui bahasa pengucapan (Saidatul Nornis Mahali &

Mohd. Rasdi Saamah, 2013; Wong, 2013). Dalam puisi invokasi *biau*, unsur yang membentuk metafora berasaskan alam sekeliling. *Lemambang* (pengamal ritual) menggunakan flora dan fauna, benda bukan hidup dan alam semula jadi sebagai lambang kepada makna yang ingin disampaikan melalui puisi invokasi *biau*. Setiap unsur yang digunakan oleh *Lemambang* menjadi medium menyampaikan perasaan kepada *Petara* dan menyokong pendapat Muhamad Fadzllah Zaini (2015) yang menyatakan metafora sebagai medium untuk meluahkan perasaan, perbandingan sifat atau perlakuan dan tingkah laku manusia. Selain itu, penggunaan unsur alam menggambarkan hubungan erat antara alam sekeliling melalui konsep benda hidup iaitu flora dan fauna. Oleh hal yang demikian, masyarakat Iban masih mempercayai bahawa terdapat hubungan antara alam sekeliling dengan kehidupan seharian mereka.

Sebagai rumusan, kajian ini berupaya menjadi panduan kepada pengamal dalam melafazkan puisi invokasi *biau* tanpa merujuk kepada pakar. Pengamalan melafazkan puisi invokasi *biau* dalam kehidupan seharian dapat menjadi panduan kepada masyarakat Iban, khususnya dalam aspek pengetahuan dan pemahaman tentang penyampaian. Oleh yang demikian, kajian ini akan memberi impak positif terhadap usaha memelihara dan mengekalkan adat serta tradisi turun temurun dalam kalangan masyarakat Iban di Sarawak. Generasi muda juga dapat menimba pengetahuan baharu dan mengasah kepakaran sedia ada pengamal ritual dalam melafazkan puisi tradisional.

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Norms of Substitution in Translation: A French–English Case Study

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ABSTRACT

Substitution is a discoursal grammatical cohesion; it replaces an element with a substitute with the same structural function as the substituted element. This paper investigates the language norms and translation norms of substitution in the literary text; it describes the occurrence of substitution and its structural effect in translation. The investigation is done on two novels, *Madame Bovary* by Gustave Flaubert and *Strait is the Gate* by André Gide. This study follows Halliday and Hasan's theory (1976) of cohesion and Catford's (1965) theory of translation shifts. First, the whole text is read; then, data are identified, categorized, and analyzed. The investigation reveals that English uses substitution in cases where French uses other cohesive ties like reference, ellipsis, and repetition. The shift category used to achieve substitution cohesiveness is a class shift determined by language peculiarity norms of the source and target languages. The research, therefore, reveals that the translator's invisibility and the inviolability of language norms enhance the literariness and acceptability of the target text.

Keywords: Cohesion, French-English translation, language norms, shifts, substitution, translation norms

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INTRODUCTION

Translation has become more important after World War II. Therefore, linguists have considered translation one of the most important linguistic studies (Wilss, 1982). It has become an independent discipline thanks to the paper presented by Holmes in 1972 in Copenhagen. Holmes points out that the map of translation studies presents complex

problems related to “the phenomenon of translating and translations” (2000, p. 173). Therefore, descriptive translation studies (DTS) can be product-oriented, function-oriented, or process-oriented (Munday, 2016). This study is a product-oriented DTS in that it describes translation phenomena for establishing general principles. Jones (1997) points out that translation problems can be semantic, grammatical, syntactic, or metalinguistic. In the same vein, Malmkjær (2011) argues that translation is an activity that aims to render meaning from one language to another. Therefore, this paper investigates the structural and semantic problems of substitution.

The objective of descriptive studies is to investigate phenomena in translation to specify the norms that regulate and determine language translation (Lambert & van Gorp, 1985; Toury, 1985). Moreover, Lambert and van Gorp point out that translated texts “can be studied from different points of view, either in a macro-structural or in a microstructural way, focusing on linguistic patterns of various types, literary, codes, moral, religious or other non-literary patterns” (1985, p. 46). For Munday, translation studies have developed to the extent that it moves from translational operations to new approaches to “put together systematic taxonomies of translation phenomena” (2016, p. 50).

This paper investigates discursal translation problems related to substitution because there are problems concerning language norms and translation norms, which determine the occurrence of substitution in

translation. Therefore, the study will be done to describe the occurrence of substitution in terms of language and translation norms in translating literary texts from French into English.

The objectives of the paper are:

- a. to investigate the function of substitution in translation
- b. to describe language and translation norms of substitution
- c. to assess the effect of substitution in translation.

The significance of this paper is justified by the literature review, which has shown that there is a gap in knowledge concerning the language and translation norms of substitution from French into English. The literature review shows that no research has been done on the language and translation norms of substitution from French into English. Therefore, this study intends to fill in some insights into the translatability of substitution. The paper is also intended to give some knowledge about the language norms and translation norms of substitution to linguists, translators, interpreters, students, and freelance translators. This paper’s problems, significance, and objectives could not be determined without reviewing related literature on the research topic.

Literature Review

Translation Norms. Translating requires that the translator has a translation competence, which “represents knowledge

from a variety of cognitive domains acquired, stored and organized in a translator's long-term memory" (Shreve, 2012, p. 1); this competence will enable the translator to deal with norms. However, there is a difference between language norms and translation norms. The former are the options and restrictions of a given language, whereas the latter are the options in terms of methods, procedures, and strategies that the translator can use.

Translation and norms are related to descriptive translation studies, which describe phenomena, functions, and translators' manipulation. "Norms ... perform a channeling, funneling role in that they refer problem tokens, i.e., individual utterances and occurrences, to problem types, to which a given norm can be applied" (Hermans, 1991, p. 165). For Chesterman (2017), the problems of norms are terminological problems in terms of meaning and methodology of investigation. However, Bartsch (1987) argues that there is a difference between product norms and production norms. The former deals with how a product must look in terms of linguistic correctness and appropriateness, whereas the latter deals with the methods and strategies u

In translation studies, linguistic norms are linguistic aspects that describe two linguistic systems' linguistic phenomena. Along similar lines, Catford defines translation as "the replacement of textual material in one language (SL) by equivalent material in another language (TL)" (1965, p. 20). It has brought about three

different approaches and perspectives. First, differences in language systems and language norms lead traductologists like Vinay and Darbelnet (1995), Newmark (1988), and Friederich (1969) to compare the function of linguistic norms in the source language (SL) and target language (TL). Secondly, translation theorists like Neubert (1985), Neubert and Shreve (1992), Reiß and Vermeer (1991), Göpferich (1995), and Hatim and Mason (1997) deal with translation norms beyond the sentence. Second, they are more concerned with norms and conventions of text types and genres, which the translators must consider to avoid mistranslating the textual norms and conventions. Thirdly, translation theorists like Nida (1964), Koller (1979), House (1977), and Toury (1980) consider translation as a relationship between the source language and the target language; this relationship is termed equivalence. Finally, for Aulia, strategies are used in translation when there is no equivalence in the target language (TL), believing that "the consistency of the translator in using the strategy for one term in the text translated is one of the important things during doing translation" (2012, p. 9).

However, translation quality is a question of "the accuracy of the rendition or the competence of the translator" (Domínguez et al., 2015, p. 80). Toury (1995) suggests a tripartite model embodying the norm, mediating between competence and performance. In this model, norms are defined as "strategies of translation which are repeatedly opted for, in preference to

other available strategies, in a given culture or textual system” (Toury, 1995, p. 54). This model, dealing with a text, has three hierarchical stages: initial norm, preliminary norms, and operational norms, which are interrelated to render the translated text communicative.

These theories and models have brought about many questions, which “continue to provoke controversy” (Schäffner, 1999, p. 8). The continuing interest in studying translation phenomena paves the way for new questions that must be considered in traductology.

Cohesion. There is a difference between coherence and cohesion, which are the aspects that make a text a semantic unit. The former is “a network of conceptual relations which underlie the surface text,” whereas the latter is “the network of surface relations which link words and expressions in a text” (Baker, 2018, p. 235). For Gutwinski (1976), cohesion is about sentences and clauses inter-relatedness, which compose a text’s semiologic structure in paragraphs that must be developed from a key sentence. Furthermore, Hoey states that “cohesion is a property of the text” (1991, p. 12), whereas coherence is related to the reader evaluation. Like Hoey (1991), Swales (1990) argues that cohesion deals with features of a text, which can be recognized throughout the text, whereas coherence deals with logical organization and connectivity of the concepts and ideas, which help the reader’s evaluation and understanding. Other linguists point out that cohesion and coherence are inseparable

because they are interrelated. It is because cohesion deals with the text’s surface structure to signal participants’ relations, and coherence is logical guidance for the reader’s understanding (Baker, 2018; Bosch, 1989; Charolles, 1978; Halliday, 1985; Wales, 1998; Yunxing, 1996). Halliday and Hasan (1976) categorize cohesion into reference, substitution, ellipsis, conjunction, and lexical cohesion.

Substitution is a cohesive device. It is about replacing one item with another. Halliday and Hasan mention that substitution is “a relation within the text. A substitute is a sort of counter used in place of the repetition of a particular item” (1976, p. 89). Substitution does not function as a meaningful unit concerning meaning *per se*. It, therefore, deals only with the lexicogrammatical aspects to put it more clearly. There are three types of substitution: nominal substitution, e.g., one, ones, and same; verbal substitution, e.g., do/n’t, does, did/n’t, done, doing; clausal substitution, e.g., so, not.

However, Károly (2017) states that the translation’s quality and quantity of cohesion shifts are related to systemic differences between two languages and genres. For Blum-Kulka (2000), cohesion shifts are necessary for translation because of grammatical and stylistic reasons which are specific to each language and text type; she emphasizes the importance of dealing with coherence efficiently in translation since shifts in coherence will have serious effects on the potential meaning of the target text. In addition, different understandings

of culturally different audiences can cause such coherence shifts. For Catford (1965), cohesion translation has no equivalence because it necessitates the application of shifts because of language specificity. He categorizes shifts into structure shifts, class shifts, unit shifts and intra-system shifts at the level of phonology and graphology. However, Halliday and Matthiessen state that “the organization of a text is semantic rather than formal”; it is, therefore, “the process of instantiation” (2004, pp. 524-525).

Related Studies. As far as substitution is concerned, some studies have been done in translation. For example, Liu and Hwa (2016) have carried out a study on phrasal substitution for idioms, using automatic metrics and human judgments. The study reveals that the “proposed method produces grammatical paraphrases that preserve the idioms meanings, and it outperforms other methods such as sentence compression” (Liu & Hwa, 2016, p. 371). However, some studies are also investigate cohesive substitution. For example, Farghal (2017) studies textual issues relating to cohesion and coherence in Arabic-English translation. He argues that cohesion and coherence depend on the language norms, which can be affected by the translator’s unnecessary preferences. Therefore, translators must “understand the ST in terms of content and textualization before considering TT candidate counterparts” (Farghal, 2017, p. 46).

Moreover, Zhang et al. study the problem of unknown words in the substitutional translation-restoration framework “to handle the unknown words in statistical machine translation” (2013, p. 907) from Chinese into English, testing the distributional semantic model and bidirectional language model. Their study reveals that the “distributional semantic model and the bidirectional language model can both improve the translation quality” (p. 917). Correspondingly, Izwaini and Al-Omar (2019) investigate the translation of subtitling and ellipsis in Arabic subtitling; this investigation reveals a considerable number of shifts and that repetition and substitution are used more than ellipsis by the translator. In the same vein, Arhire finds, in her study about cohesive devices in translator’s training, that “it is only the stylistic effect that ultimately matters” (2017, p. 174).

Even though French and English are two languages of the same family, Indo-European languages are characterized by different language norms. However, the literature review and related studies show a gap in knowledge about the language and translation norms of the cohesive textual substitution of literary texts from French into English. Therefore, the researcher has followed the following methodology to achieve the research objectives.

METHODOLOGY

The translation is “the result of a linguistic-textual operation in which a text in one language is re-contextualized in another

language” (House, 2015, p. 2). It indicates that a suitable research methodology is needed to investigate the function of textual and linguistic features. Specifically, the methodology of this study is textual analysis research (see Chesterman, 2005). Bordens and Abbott (2011) point out that research can be done using a qualitative method, a quantitative method, or both qualitative and quantitative. This idea is also supported by Saldanha and O’Brien (2014) in analyzing translation quality assessment. Saldanha and O’Brien (2014) consider research on translated texts as product-oriented research. They argue that “research on translated texts can be carried out with a descriptive/explanatory or an evaluative approach in mind” (p. 50). This study, therefore, is descriptive qualitative research whose findings will be deduced from textual analysis of a particular text-type, novels.

This study is limited to the occurrence of cohesive substitution across sentence boundaries. Halliday and Hasan argue that “it is the inter-sentence cohesion that is significant, because that represents the variable aspect of cohesion, distinguishing one text from another” (1976, p. 9). Therefore, the investigation will be done manually; the source and target texts are wholly read. Then the data related to substitution translation are identified, collected, categorized, and analyzed. Since humans do the translated texts, a back-translation of the substitution occurrences is applied by using Google Translate to investigate if there are stylistic variant effects (see Vinay & Darbelnet, 1995).

Saldanha and O’Brien (2014) justify this data collection approach by stating that “one might wish to randomly select sentences from a large corpus of text, or it may be more appropriate to select coherent passages of text, or text that demonstrates specific linguistic features” (p. 105). Therefore, the whole texts are read, and data are identified and collected manually from 13 extracts of texts, which demonstrate specific linguistic features of substitution. These extracts are found on *Madame Bovary*, pages 114, 121, 124, 172, 237, 238, 382, and 408 of the source text, which corresponds to pages 85, 91, 94-95, 144, 212, 213, 366, and 394 of the target text; *la Porte Etroite* on pages 519, 539, 522, 547, 559 of the source text, which correspond on pages 35, 63, 41, 74, and 92 of the target text.

Data analyses on substitution, discussed by Moindjie (2003) in his M. A. thesis, are used to show the norms of substitution in translation. The theory used to support this research is Halliday and Hasan’s (1976) theory on cohesion in English and Catford’s (1965) theory on translation shifts. First, the data are compared to identify differences and similarities. After that, the researcher evaluates the translatability and effects of substitution. Finally, some extracts embodying the phenomena of substitution are produced in the discussion; the page numbers of related occurrences of the language and translation norms of substitution in the translation are provided in the discussion. The source text is labeled FST, and the target text is labeled ETT.

The corpora of this study consist of two novels and their translations. They are Flaubert's *Madame Bovary* (1965 & 1957), translated by Francis Steegmuller, and Gide's *La Porte Étroite* (1958), and *Strait is the Gate* (1952), translated by Dorothy Bussy. The two novels are opted to carry out this study; the choice of *Madame Bovary* and *La Porte Étroite* is not made at random. They are chosen because they are literary masterpieces of modern French literature whose contributions to French literature are greater than any other novels. This research methodology is effective; it has resulted in the following results.

RESULTS

Table 1 and Table 2 show the results of the French and English language cohesive

aspects norms of substitution following Halliday and Hasan's (1976) theory of cohesion and Catford's (1965) theory of translation shifts. The results reveal that cohesive ties like reference, ellipsis, and repetition are used in ST rather than substitution. In contrast, another cohesive tie, substitution, is used in the TT to achieve cohesiveness. In addition, the category of shift that is found to function with substitution is a class shift, which is determined by language norms rather than translation norms. The research also reveals that the translator's invisibility and inviolability of language norms enhance literariness and acceptability. These results are fully discussed in the following discussion of this paper.

Table 1

Cohesive norms and cohesive substitution norms in Madame Bovary

| FST | Cohesive norms | ETT | Substitution cohesive norms | Category of translation shift |
|--------------------------|------------------|---------------------------------------|-----------------------------|-------------------------------|
| <i>Il en est de même</i> | Personal pronoun | Mountain scenery does the same | Nominal substitution | Class shift |
| Acheter un autre | Ellipsis | Another one | Nominal substitution | Class shift |
| Celui-là | Demonstrative | this one | Nominal substitution | Class shift |
| C'est vrai! | Demonstrative | I feel the same | Nominal substitution | Class shift |

Table 1 (*Continue*)

| FST | Cohesive norms | ETT | Substitution cohesive norms | Category of translation shift |
|--------------------------|------------------|------------------------|-----------------------------|-------------------------------|
| <i>Cette acquisition</i> | Demonstrative | The new one | Nominal substitution | Class shift |
| <i>C'est vrai</i> | Demonstrative | I feel the same | Nominal substitution | Class shift |
| <i>Comme celui-ci</i> | Demonstrative | The husky ones | Nominal substitution | Class shift |
| <i>La dernière</i> | Ellipsis | Every last one | Nominal substitution | Class shift |
| <i>Il est vrai</i> | Personal pronoun | It does | Verbal substitution | Class shift |
| <i>C'est comme moi</i> | Demonstrative | So would I | Clausal substitution | Class shift |
| <i>C'était dans...</i> | Demonstrative | So it says | Clausal substitution | Class shift |

DISCUSSION

Summary of Madame Bovary

Madame Bovary is a story about Charles Bovary and his wife Emma, a beautiful farm girl raised in a convent; Emma is a victim of her sentimental imagination. Although she is married to a kind, educated, unambitious doctor, she still hankers for the romantic adventures she used to read about in sentimental romantic novels. She becomes bored and unhappy with the middle-class life in which she lives. Therefore, she starts having disastrous love affairs with young men, Rodolphe and Léon, who are compatible with her romantic imagination. She borrows much money for her new love adventures. However, her love affair with Rodolphe and Leon is

unsuccessful because they abandon her after exploiting her. Such a sentimental deception increases her boredom and depression. Unable to pay her debts, she decides to commit suicide by swallowing arsenic, and she dies a painful death. Her husband is grieved for her sudden death; he struggles to pay her debts and take care of their child, Berth. However, after discovering his wife's secret love affair letters, he cannot withstand such behavior; he dies of grief, leaving their child a complete orphan.

Substitution in Madame Bovary

This section discusses the norms of substitution cohesiveness. The analysis is done on three substitution sub-categories: nominal, verbal, and clausal.

Nominal Substitution. In investigating this category, it is found that substitution is seldom used in the ST. Moreover, other cohesive ties like demonstrative reference and repetition are often used in the ST instead of substitution, which is mostly used in the TT, for example:

Mais ils vont me déchirer le tapis, continuait-elle en les regardant de loin, son écumoire à la main.

- Le mal ne serait pas grand, répondit M. Homais, vous en achèteriez un autre !

- Un autre billard ! Exclama la veuve.

- Puisque celui-là ne tient plus, madame Lefrançois; je vous le répète, vous vous faites tort! Vous vous faites grand tort. (Flaubert, 1965, p. 114)

“But they’re going to ruin my table,” she said, staring over at them across the room, her skimming-spoon in her hand.

“That wouldn’t be much of a loss,” replied Monsieur Homais. “You’d buy another one.”

“Another billiard table!” cried the widow.

“But this one’s falling apart, Madame Lefrançois! I tell you again; it’s shortsighted of you not to invest in a new one! (Flaubert, 1857/1957, p. 85)

Back translation

« Vous en achèteriez un autre. »

« Mais celui-ci est en train de s’effondrer ... »

The underlined words on the above extracts revealed that different cohesive ties are used in the ST like ellipsis and demonstrative reference, e.g., “*un autre*” and “*celui-là*,’ which cohere with ‘*le tapis*.’ On the other hand, the TT could cohere with the word ‘table’ using the nominal substitute, ‘one.’ It replaces the occurrence of the same noun outside its sentence. So, the relations of the cohesive ties are different in that in the ST, the relation is semantic, whereas, in the TT, it is lexico-grammatical. The Google back translation justifies that the ST used cohesive ties, ellipsis, and demonstrative reference are retained, which indicate that there is no stylistic variant. The following is another example:

Mais Hippolyte, n’osant à tous les jours se servir d’une si belle jambe, supplia Mme Bovary de lui en procurer une autre plus commode. Le médecin, bien entendu, fit encore les frais de cette acquisition. (Flaubert, 1965, pp. 237-238)

But Hippolyte didn’t dare use such a beautiful leg every day, and he begged Madame Bovary to get him another that would be more suitable. Naturally, Charles paid for the new one as well. (Flaubert, 1857/1957, pp. 212- 213)

Back translation

Naturellement, Charles a également payé le nouveau.

It is found that a reiteration on the form of a general word, ‘acquisition,’ is used in the ST

to cohere with ‘*jambe*,’ but the substitution, ‘one,’ is used in the TT. However, the Google back translation replaces the substitution with an ellipsis which is not used in the ST; this stylistic variant does affect the meaning of the ST. Such cases occur elsewhere on pages 124, 172, and 408 of the ST, corresponding to pages 95, 144, and 394 of the selected passages. The investigation of the selected passages reveals that no nominal substitution has been found in the ST, whereas it occurs in the TT. It indicates no word-for-word translation of this sub-category of substitution from French into English; a class shift is used due to language norms and peculiarity to achieve the cohesive function.

Verbal Substitution. This category is found to occur only in the TT. There is one occurrence of verbal substitution, and that shows that this subcategory is used sparingly, for example:

*Madame sans doute, est un peu lasse?
On est si épouvantablement cahoté dans
notre Hirondelle!*

*- Il est vrai, répondit Emma; mais le
dérangement m’amuse toujours; j’aime
à changer de place. (Flaubert, 1965, p.
121)*

Madame is a bit tired, I presume? Our old Hirondelle does such a frightful lot of bumping and shaking!”

“It does,” Emma answered. “But I always love travelling anyway. I enjoy a change of scene.” (Flaubert, 1857/1957, p. 91)

Back translation

«*C’est vrai,*» répondit Emma.

It is found that agreement is expressed in the French text differently. It is done using a personal pronoun, ‘*il est vrai*,’ which can be alternatively written *c’est vrai*. In this case, the second speaker of the above extract agrees. That idea cannot be expressed using the verb, ‘*faire*.’ The personal pronoun, ‘*il*,’ coheres with the preceding sentence, ‘*on est si épouvantablement cahoté dans notre Hirondelle!*’ In comparison, in the TT, the verb “does” is substituted by the auxiliary “does” in the second sentence. Therefore, the lack of an oral substitute that can play the role of an auxiliary in French is the cause of the non-utilization of verbal substitution in the ST. The Google back translation accurately replaces the verbal substitution of the ST with a demonstrative reference, ‘*ce*,’ this is, of course, a cohesive aspect that does not affect the meaning. A demonstrative reference replaces the personal reference since both can convey the same meaning and cohesive function. A class shift is used due to language norms and peculiarity to achieve the cohesive function in the TT.

Clausal Substitution. The last category, the causal substitution, exists in the ST and the TT. There is one occurrence of clausal substitution in the ST, found on page 122, corresponding to page 93 of the TT, in which the word *le même* is used as a substitute. By contrast, three clausal substitutions on pages 94 and 366 are found in the TT. In any case, the TT is found using more

clausal substitutions, compared to the ST, for example:

Ma femme ne s'en occupe guère, dit Charles; elle aime mieux, quoiqu'on lui recommande l'exercice, toujours rester dans sa chambre, à lire.

- *C'est comme moi, répliqua Léon...* (Flaubert, 1965, p. 124)

"My wife never gardens," said Charles.

"She's been advised to take exercise, but even so she'd much rather stay in her room and read."

"**So** would I," said Léon. (Flaubert, 1857/1957, p. 94)

Back translation

« *Moi aussi* », dit Léon

In the ST, it is found that there is a pronoun that coheres, in the bottom sentence, with the preceding sentence. In this case, "*ce*" is not a substitution for a clause, but it is a reference that refers to the previous sentence. The Google back translation does not contain the demonstrative reference used in the ST; this stylistic variant is because there is more than one option in the French language norms as far as this case is concerned, which is a semantically equivalent set expression of agreement, '*moi aussi*.' It occurs elsewhere on pages 121 and 382 of the ST, corresponding to pages 91 and 366 of the TTS, where a reference is used instead of substitution in the ST. On the other hand, there is a clausal substitute in the TT that coheres, in the bottom sentence, with

the top sentence. 'So,' in this case, is not a reference, but it is a substitute that replaces its previous clause. It also happens in the following example:

- *On ne songe à rien, continuait-il, les heures passent. On se promène immobile dans les pays que l'on croit voir, et votre pensée, s'enlaçant à la fiction, se joue dans les détails ou poursuit le contour des aventures. Elle se mêle aux personnages; il semble que c'est vous qui palpitez sous leur costumes.*

- *C'est vrai! C'est vrai! Disait-elle.* (Flaubert, 1965, p. 124)

"I am absolutely removed from the world at such times," he said. "The hours go by without my knowing it. Sitting there I'm wandering in countries I can see every detail of—I'm playing a role in the story I'm reading. I actually feel I'm the characters—I live and breathe with them."

"I know!" she said. "I feel the same!" (Flaubert, 1857/1957, p. 95)

Back translation

« Je ressens la même chose! »

Ce ' is a personal reference used by the second speaker in the above source extract to cohere with what the first speaker said. The second speaker confirms that by using a cohesive demonstrative reference tie. Nevertheless, it is found that there is no word-for-word translation of clausal substitutions. The second speaker confirms

what is said using a clausal substitution, 'the same.' The confirmation of the second speaker in the TT is stronger than the one of the ST because what is said by the first speaker is true and shows that he has the same sentiment as him. The Google back translation retains the same meaning by using repetition instead of the demonstrative reference used in the ST. This stylistic variant does not affect the meaning since another equivalent is given due to the language norms of the French language. So, the use of clausal substitutes in the TT instead of certain reference occurrences of the ST is one of the factors that may cause the frequent use of substitution in the TT. In brief, as far as translation is concerned, the shifts that occur in the form of substitution in the TT are not a factor that distorts neither

the meaning nor the cohesion of the text since it is within the norms of the languages and since it achieves a cohesive function.

The objectives of this study are substitution function, norms and effects. The substitution function is cohesiveness, but in French, this category of cohesiveness is realized by different cohesive devices like reference, ellipsis, and repetition due to the lack of cohesive substitution devices. In addition, the category of shift that is found to function with substitution is a class shift, which is determined by language norms rather than translation norms. The effect of the translator's invisibility and inviolability of language norms has enhanced literariness and acceptability.

Table 2

Cohesive norms and cohesive substitution norms in "La Porte Etroite," "Strait is the Gate

| FST | Cohesive norms | ETT | Substitution cohesive norms | Category of translation shift |
|---|------------------|--|-----------------------------|-------------------------------|
| <i>Il est de même</i> | Personal pronoun | The same | Nominal substitution | Class shift |
| <i>... tu lui parles de cela?</i> | Demonstrative | ...when you speak to her so? | Clausal substitution | Class shift |
| <i>Je ne lui parle jamais de cela!</i> | Demonstrative | I never speak to her so | Clausal substitution | Class shift |
| <i>Il me l'a dit</i> | Personal pronoun | She told me so | Clausal substitution | Class shift |
| <i>Cela ne te paraît peut-être pas...</i> | Demonstrative | you don't think so | Clausal substitution | Class shift |
| <i>Je sens que cela vaut mieux</i> | Demonstrative | I feel it better so | Clausal substitution | Class shift |
| <i>Déjà je m'en doutais...</i> | Personal pronoun | I had already begun to suspect so | Clausal substitution | Class shift |

Summary of *La Porte Etroite* (Strait is the Gate)

The novel is about lost love; the characters are Alissa Bucolin, Jerome Palissier, and Juliette. Alissa and Juliette are two sisters who fall in love with Jerome, their cousin. Although Alissa rejects sentimental love and worldly life, she loves Jerome. Therefore, she tries to spoil the sensual love between Jerome and Juliette by trying to convert Jerome to sainthood and then making a Platonic love with him. Furthermore, she marginalizes education, culture, and literature; she focuses only on religious readings. Finally, she enters seclusion until her death. Nevertheless, Jerome still loves Alissa, and Juliette still loves Jerome. However, the concretization of such expected love for either Alissa or Juliette is impossible because Alissa is dead, and Juliette is already married with five children. This love failure is because Jerome cannot recognize Juliette's real love for him.

Substitution in *La Porte Etroite*/Strait is the Gate

This section embodies nominal, verbal, and clausal substitution, investigated in *Strait is the Gate*. However, two cohesive substitution ties, nominal, and verbal substitution, are not found in the ST and TT.

Nominal and Verbal Substitutions. No verbal substitution has been found to occur in *Strait is the Gate*. Therefore, the writer and the translator have not used it. According to language norms, nominal and

verbal substitution do not occur in French because they are not among the cohesive ties of the language. Instead, they are used in English and among the cohesive norms of the language.

Clausal Substitution. The substitution occurrences are found in this book to be more in the TT than in the ST. It is also found to happen in *Madame Bovary*. The investigation of substitution in *La Porte Etroite* does not reveal any substitution occurrences in the ST. Therefore, there is no need to sub-categorize it here. However, one subcategory of substitution, a clausal substitution, is found to occur in the TT. It is because the ST is found to use other cohesive ties rather than substitution, for example:

Mais, je suspends tout mon avenir après elle, mais tout ce que je pourrais être sans elle, je n'en veux pas...

– *Qu'est-ce qu'elle dit lorsque tu lui parles de cela?*

– *Mais je ne lui parle jamais de cela!*
(Gide, 1958, p. 519)

“Why, it is upon her that I hang my whole future.

Why, I want none of the things that I might be without her-”?

“And what does she say when you speak to her **so**?”

“I never speak to her **so**!” (Gide, 1909/1952, p. 35)

Back translation

« *Et que dit-elle quand tu lui parles alors?* »

« *Je ne lui parle jamais ainsi!* »

A demonstrative cohesive reference tie in the above examples, '*cela*' is used to cohere the sentences of the second speaker with that of the first speaker in the ST. By contrast, it is found that the substitute 'so,' which substitutes a clause, is used by the translator. The google back translation has failed to translate the clausal reference, 'so' because it cannot recognize the context since 'so' has many meanings. The Google back translation translates 'so' into '*alors*' and '*aussi*,' whose meanings in this context are not convenient. In the above context, the meaning of 'so' is 'like this,' which is in French '*de cette manière*.' This Google stylistic variant affects the meaning due to the context. For more clarification, take, for example:

« *Mais, Jérôme, cela ne se peut pas. Mais elle ne l'aime pas! Mais elle me l'a dit ce matin même. Tâche de l'empêcher, Jérôme! Oh! Qu'est-ce qu'elle va devenir?* » (Gide, 1958, p. 539)

"Oh, Jerome! It mustn't be. She doesn't love him! Why, she told me so only this very morning! Try to prevent it, Jerome! Oh what will become of her?" (Gide, 1909/1952, p. 63)

Back translation

« *Pourquoi, elle ne me l'a dit que ce matin même!* »

In the above French example, there is a personal reference cohesive tie, '*l'*' used in the third sentence to refer to the second sentence. Nevertheless, a different cohesive tie, a substitution, is used to cohere with the other sentence in the target extract. 'So' is used to substitute for the occurrence of the second sentence, and it is thus cohesive. The Google back translation retains the personal reference used in the ST and has not shown any stylistic variant. It is found that such an occurrence does not affect the meaning and coherence of the text. Instead, it enhances them using different surface cohesive ties. Such cases occur elsewhere in the text on pages 522, 547, and 559 of the ST, corresponding to pages 41, 74, and 92 of the TT. In short, the phenomena concerning the function and norms and substitution are found to occur also in both corpora of this investigation. A class shift is used due to language norms and peculiarity to achieve a cohesive function.

The objectives of this study are substitution function, norms, and effects. The above discussion reveals that all the objectives have been achieved. The function of substitution is to use cohesive devices are cohesive; however, in French, substitution does not exist, and cohesiveness is realized by different cohesive ties like reference, ellipsis, and repetition. In addition, the category of shift that is found to function

with French cohesive devices and English substitution is a class shift, which is determined by language norms rather than translation norms. Finally, the translator's invisibility and inviolability of language norms enhance literariness and acceptability. The discussion on all the corpora used in this research has, therefore, revealed a consolidated conclusion.

CONCLUSION

The analyses in *Madame Bovary ST and TT* and *La Porte Étroite ST and Strait is the Gate TT* denote that substitution is used only in the English target texts; other cohesive ties like ellipsis, and repetition are used in the French source texts. The category of shift the translators have used is a class shift, determined by language norms.

In the description of substitution language norms, the investigation reveals that the lack using substitution in the ST is caused by the French language norms, which use cohesive ties like a personal reference, demonstrative reference, and repetition instead of substitution due to the French language norms for formulating tags, agreement/ disagreement, and additions to remarks. It indicates that the translator must consider some language norms because the shifts of cohesive ties are determined by language norms and not by translation norms in translating from French into English. Thus, the study shows no word-for-word translation occurrences in translating some cohesive ties from French into English in most cases. The shift is required by the English language norms, whose substitution

cohesive ties are various compared to French. Therefore, the translator must be aware of the language norms of substitution, which require the use of shifts.

The objectives of this paper are achieved because this study has contributed to the notion that language norms rather than translation norms determine substitution shifts. The study indicates that translators use the cohesion shift category as a class shift. It also reveals that the French language is more demonstrative than English which is more substitutional. These stylistic variants which occur are found not to affect the meaning since the translators have not abused the language norms of both languages; the translator's invisibility and inviolability of language peculiarity norms enhance the literariness and the acceptability of the TT. Therefore, this study does not support the cohesion concept described by Arhire (2017), asserting that what matters in translating cohesion is the stylistic effect. This study refutes that and asserts that what matters in translating cohesive ties, namely substitution from French into English, is language norms (the options which the language allows), which prevail over the translator's style.

Even though the two aspects are both cohesive aspects, the findings also reveal that, in translation, Halliday and Hasan's (1976) theory of cohesion cannot be applied systematically and literally because some of its co-hyponyms and, in this case, demonstrative reference, ellipsis, repetition, and substitution depend on language norms and not on translation norms in

French-English translation. However, the research reveals that class shift, which is one of the categories of translation shifts of Catford's (1965) theory functions well with substitution in translating from French into English. Since this is a case study on the translation of novels from French into English, the study recommends that other studies be done on other text types to get a general concept of the function of substitution in translation.

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Factors Affecting Crime Rate in Malaysia Using Autoregressive Distributed Lag Modeling Approach

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ABSTRACT

An increase in the crime rate may jeopardize a country's development and economic growth. Thus, understanding the relationship between crime and a few determinants is crucial in sustaining the economic growth in Malaysia. The four determinants used in this research are economic growth, population, education level, and inflation rate. The data covers the period from 1984 to 2019, and Autoregressive Distributed Lag (ARDL) modeling approaches were used in this research. The findings showed that only the population has a significant positive impact on crime rates for long-term and short-term relationships. Meanwhile, economic growth and education level have a significant long-term positive effect on the crime rate. On the other hand, the inflation rate did not significantly impact the crime rate in long-term and short-term relationships. Interestingly, it was found in the findings that the crime rate and population showed a bidirectional causal relationship indicating that the past population values are useful for a better prediction of the current crime rate and vice versa. Thus, the Malaysian government should encourage people to cooperate with the enforcement authorities to deter crime for future environmental safety effectively.

Keywords: ARDL modeling approach, cointegration, crime rate, Granger causality

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INTRODUCTION

An unlawful act that harms other people, societies, or countries is described as a crime, which the authorities or governments can punish. However, since each country has its own set of rules, the definition of crime varies from one region to another. According to the Department of Statistics Malaysia

(DOSM) data, the total number of crime cases reported in 2017, 2018, and 2019 was 99168, 88662, and 83475 incidents, respectively, as shown in Figure 1. However, the total number of crimes decreased from 2010 to 2019. It may have occurred due to the government's introduction to the Crime Reduction Initiatives under the Government Transformation Program (GTP) a few years ago. According to Deputy Prime Minister

Datuk Seri Dr. Ahmad Zahid Hamidi in 2016, the crime index had dropped by almost 50% since implementing the government's initiatives. However, he admitted that, even though the crime index in Malaysia has decreased by half, the public is still aware of the situation. Hence, the government will continually update its statistics and initiative programs for better caution.

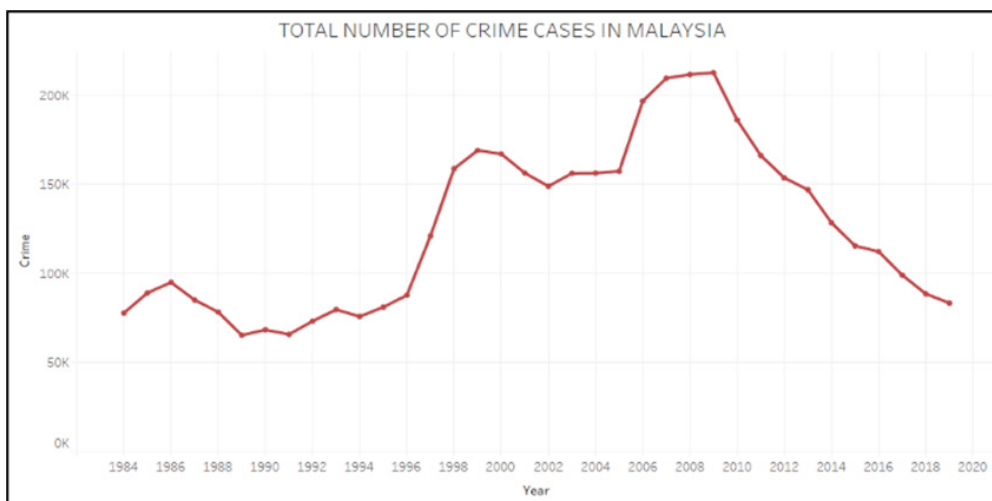


Figure 1. The total number of crime cases in Malaysia from 1984 to 2019

It can be seen in Table 1 that statistics from the Numbeo database revealed that the crime index in Malaysia for mid-year 2021 is 57.29, while the safety index is 42.71. The finding indicates that Malaysia has the highest crime index rating in Southeast Asia, followed by Cambodia, Myanmar, and Vietnam. However, although it has the highest crime index rating, crime levels

between 40 and 60 are considered moderate. Meanwhile, the safety index of Malaysia is considered moderately safe. According to Kathena and Sheefeni (2017), most developing countries with higher crime rates could be due to economic growth, and the crime index in these countries is strongly associated.

Table 1

Crime index and safety index in Southeast Asia in 2021 mid-year

| Rank | Country | Crime index | Safety index |
|------|-------------|-------------|--------------|
| 1 | Malaysia | 57.29 | 42.71 |
| 2 | Cambodia | 51.13 | 48.87 |
| 3 | Myanmar | 46.51 | 53.49 |
| 4 | Vietnam | 46.19 | 53.81 |
| 5 | Indonesia | 45.93 | 54.07 |
| 6 | Philippines | 42.46 | 57.54 |
| 7 | Thailand | 39.35 | 60.65 |
| 8 | Brunei | 29.00 | 71.00 |
| 9 | Singapore | 27.96 | 72.04 |

Source: Numbeo (2021)

Despite this, many people worldwide are still concerned about the rise in criminal activity, which is a serious problem that needs to be immediately addressed since it affects a wide range of people. Criminal victims may experience financial and property losses and mental health problems such as stress, paranoia, anger, depression, and anxiety. Based on Federal Government Expenditure (2021) on the development expenditure, the economic sector remains the largest share of development expenditure at 57.1%; however, the social and security sectors take about 37.2%, divided into 26.1%, and 11.1%, respectively. Since the rise in crime rate may jeopardize the country's development and economic growth, thus the government expenditure on security services needs to be increased. A higher crime rate will portray Malaysia as insecure regarding economic and social activities and future investment.

Various econometric techniques have been used in investigating the relationship between crimes and other economic and non-economic factors, including Arif et al. (2017), Rahman and Prasetyo (2018), Hamid and Bitran (2021), Anser et al. (2020), Schargrotsky and Freira (2021), Rosenfeld et al. (2019), Eva (2021), and Peng et al. (2021), among others. According to Hassan et al. (2016), inflation is one of the determinants of crime and occurs when price levels increase continuously. However, inflation did not have an impact on crime rates. The findings revealed that an increase in poverty, economic growth, and urbanization would increase the crime rate in the long and short run. The result also found a two-way direction between urbanization and crime rate, as well as urbanization and economic growth.

Khan et al. (2015) have investigated the relationship between the crime rate

in Pakistan and the unemployment rate, poverty rate, GDP, and enrolment rate. The data covers the period from 1972 to 2011. The findings showed that all variables except enrolment rate positively affect the crime rate in the long run. Therefore, good economic growth and higher revenue would raise the chances of crime such as theft due to the enormous volume of stolen goods and less time at home. Besides, in poverty and higher unemployment, mental illness and high level of stress arise, thus, motivating people to become criminals.

On the other hand, education showed an insignificant negative impact on crime in both long-term and short-term relationships. This finding implied that higher-educated people are more realistic, averse to risk, and have excellent job opportunities in the legal sector. Additionally, the researchers mentioned that criminal offenders are typically from low income and educational backgrounds, implying that criminal activities can be reduced in rural and urban regions by encouraging education and expanding work opportunities.

Based on the theory on crime by Gary Becker, an increase in income inequality has a robust effect of increasing the crime rates. Similar studies by Chintrakarn and Herzer (2012) have stated that theoretically, the sign of the effect of income inequality on crime is ambiguous. However, the author suggested that income inequality may positively be associated with the level of protection from crime. This finding was similar to a study by Arif et al. (2017), whereby the income inequality and crime

rate of Asian countries showed a significant and positive relationship. On the other hand, Rahman and Prasetyo (2018) have found that income inequality has a negative and significant effect on the crime rates in Indonesia.

Rahman and Prasetyo (2018) have investigated the effects of unemployment, education, wages, and case completion rates on the crime rate in Indonesia. The panel data covers the period between 2012 and 2016. The findings indicated that the unemployment, education, and case completion rates insignificantly affect the crime rate in Indonesia. As expected, the wages have a negative and significant effect on the crime rate in Indonesia. Another study conducted by Anser et al. (2020) has examined the effect of poverty, income inequality, and social expenditure on the crime rate using a panel data approach. The panel data consists of 16 countries between 1990 and 2014. The findings showed that while income inequality and the unemployment rate contribute to a rise in crime, trade openness contributes to a fall in the crime rate. Social expenditures did not affect the crime rate indirectly. For example, increasing health and education expenses will increase the income rate. An increase in per capita income will lower the poverty rate and lower the crime rate. The result showed that the crime rate declined from 2010 to 2014 as health and education expenses improved.

Meanwhile, Ahad (2016) has applied the ARDL modeling approach to examine the factors affecting the crime rate in

Pakistan. The cointegration test confirmed a long-run relationship between the crime rate and income inequality, poverty, and inflation. He found significant evidence that income inequality and poverty positively affect crime in the long and short run. However, inflation showed a significant positive impact on crime in the long run but positive insignificance in the short run. Increased income inequality and inflation rates will result in higher commodity prices, causing people to engage in criminal activity to meet their needs. Thus, the government is recommended to minimize income inequality by raising the minimum wage.

Habibullah et al. (2014) have examined the long-term association between the unemployment rate and three types of crime in Malaysia: violent crime, property crime, and total crime rates. Violent crimes are represented by murder, attempted murder, armed kidnapping, robbery, rape, and assault. At the same time, daylight burglary, night burglary, motorcycle theft, and any types of thefts are classified as property crimes. The result showed that the long-term association between unemployment and murder, robbery, assault, daylight burglary, night burglary, and theft of motorcycles does exist. The crime rate will decline when the unemployment rate decreases. However, this study explained that the unemployment rate negatively correlates with murder, robbery, assault, and motorcycle theft, typically during the recession. It could be due to a higher unemployment rate being influenced by a recession and unemployed people preferring to stay in their homes, thereby decreasing the chances of crime.

Regarding the negative impact on crime, it is crucial to lessen the crime rate by identifying the relationship between crime and various potential factors to maintain its long-term economic growth. Therefore, this research aims to investigate the long-term and short-term relationships between the crime rate in Malaysia with the selected socio-economic factors by using the autoregressive distributed lag (ARDL) model. Consequently, the government and related authorities can effectively use the research findings to formulate a new policy to prevent many criminal cases in Malaysia.

The remaining paper is organized as follows: a section for materials and methods which provides the data and methodology, another section for results and discussion summarizes the findings, and the last section is the conclusion.

MATERIALS AND METHODS

This research aims to conduct the ARDL modeling approach to investigate the impact of selected socio-economic factors on the crime rate in Malaysia. These variables are gross domestic product (GDP), population (POP), education (EDU), and inflation rate (INF). This research will perform logarithmic (log) transformation data throughout the analysis to produce more reliable and consistent results. Hassan et al. (2016) stated that the log transformation for all variables was performed to generate more effective and reliable estimated findings. Since time series data is usually non-linear, transforming the variable into the log is the most suitable. It can linearize

the series before proceeding with the model estimation, and the results can be easily interpreted. In addition, it is simpler to deal with linear models as compared to non-

linear models (Lazim, 2011). The summary of the data description and the data sources is presented in Table 2.

Table 2
Summary of data description

| Variables | Description | Source |
|-----------|---|-----------------------------------|
| LCRM | Log of Total number of Crime Cases | Department of Statistics Malaysia |
| LGDP | Log of Gross Domestic Products (current US\$) | The World Bank |
| LPOP | Log of Urban Population Growth (annual %) | The World Bank |
| LEDU | Log of Secondary School Enrollment (% gross) | The World Bank |
| LINF | Log of Inflation, consumer price (annual %) | The World Bank |

Autoregressive Distributed Lag Modeling (ARDL)

Prior to estimating the ARDL modeling approach, it is necessary to test the stationarity of the data to avoid spurious effects (Guza et al., 2018) by conducting a unit root test. Even though the ARDL model does not require a unit root test, it cannot be implemented if all variables are integrated of order two, $I(2)$; however, all variables are permitted to be integrated of order zero; $I(0)$, order one; $I(1)$, or a mixture of both orders. Therefore, an effective way of checking the accuracy of the conclusion is to compare the different findings from different tests, as mentioned by Nkoro and Uko (2016). Therefore, Augmented Dickey-Fuller (ADF), Phillips-Perron (PP) test,

and Kwiatkowski-Phillips-Schmidt-Shin (KPSS) were used in this research.

Dependent variables, which are described by lagged values themselves, are identified as “autoregressive” (AR), whereas successive lags of the independent variables are defined as “distributed lag” (DL) components. Abu (2017) eloquently stated that the ARDL model allows the variables to have various optimal lags, and implementation of the model is easier as it requires a single-equation setup. In addition, the ARDL method is more efficient and less sensitive to small sample sizes between 30 to 80 observations compared to other traditional cointegration tests. After determining the stationarity of the data, an ARDL bounds test was performed based

on an unrestricted error correction model (UECM) to study the association between the crime rate and the four socio-economic variables. The UECM model is formulated as follows:

$$\begin{aligned} \Delta LCRM_t &= c + \beta_1 LCRM_{t-1} + \beta_2 LGDP_{t-1} + \beta_3 LPOP_{t-1} + \beta_4 LEDU_{t-1} + \beta_5 LINF_{t-1} \\ &+ \sum_{i=1}^p \alpha_{1i} \Delta LCRM_{t-i} + \sum_{i=1}^q \alpha_{2i} \Delta LGDP_{t-i} + \sum_{i=1}^r \alpha_{3i} \Delta LPOP_{t-i} + \sum_{i=1}^s \alpha_{4i} \Delta LEDU_{t-i} \\ &+ \sum_{i=1}^u \alpha_{5i} \Delta LINF_{t-i} + \varepsilon_t \end{aligned}$$

Where Δ is the first-difference operator, c is the constant term, p, q, r, s, u is the optimal lagged value, $\alpha_1, \alpha_2, \alpha_3, \alpha_4, \alpha_5$ are the short-run dynamics of the model, $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ is the long-run coefficients, and ε_t is the error term. Therefore, it will produce an F-statistic value, compared with the Narayan (2005) critical value, and the hypothesis testing is stated as follows.

$H_0: \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = 0$ (There is no cointegration exists)

$H_1: \beta_1 \neq \beta_2 \neq \beta_3 \neq \beta_4 \neq \beta_5 \neq 0$ (There is cointegration exists)

The obtained F-statistic value is less than the lower bound, implying no long relationship among the variables. Conversely, there is good reason to suggest long-term relationships among the variables if the obtained F-statistic value is greater than the critical upper bound. Next, as annual data series will be used in this analysis, the ARDL level relation model will be used to estimate long-run relationships with a maximum lag value of two. The recommended maximum lag length by Pesaran and Shin (1999) was two for annual data (Hamuda et al., 2013). Meanwhile, the optimal lag value is determined using information criteria, and the ARDL level model's general equation is constructed as follows:

$$\begin{aligned} LCRM_t &= c + \sum_{i=1}^p \beta_1 LCRM_{t-i} + \sum_{i=1}^q \beta_2 LGDP_{t-i} + \sum_{i=1}^r \beta_3 LPOP_{t-i} \\ &+ \sum_{i=1}^s \beta_4 LEDU_{t-i} + \sum_{i=1}^u \beta_5 LINF_{t-i} + \varepsilon_t \end{aligned}$$

The final stage in the ARDL method is to estimate short-run dynamic equations by using the error correction model. The error correction term (ECT) should be between zero and one, representing the short-term speed of adjustment required to maintain the long-term stability. Zero ECT value implies no sense of a long-term relationship, while one ECT value implies that there is complete adjustment per time data unit. Moreover, if the ECT value is negative and significant, there is a stable long-term relationship. Finally, diagnostic checking such as tests of serially independent error and stability of model will be performed to meet the assumptions of the ARDL modeling approach. The serially independent error can be detected using the Breusch-Godfrey Lagrange Multiplier (LM) test. Meanwhile, the cumulative sum of residual tests (CUSUM) and cumulative sum of the recursive residual squares (CUSUMSQ) were performed to ensure the model's stability.

Next, after the relationship of the determinants has been modeled, the understanding of the causal effect between the determinants is of interest in this paper. Thus, the causal effect can be tested using the Granger causality test.

Granger Causality Test

The granger causality test was used to determine the causal relationship between variables and to discover whether forecasting is advantageous for one-time series (Kathena & Sheefeni, 2017). In other words, if there is evidence that X Granger causes Y, the

prediction of the current value of Y is more accurate by using the past value of Y and X rather than the past value of Y itself. The formula for the pairwise Granger causality test is shown as follows:

$$Y(t) = \sum_{i=1}^m \alpha_i X_{t-i} + \sum_{j=1}^n \beta_j Y_{t-j} + \varepsilon_{1t} \quad (1)$$

$$X(t) = \sum_{i=1}^m \lambda_i X_{t-i} + \sum_{j=1}^n \delta_j Y_{t-j} + \varepsilon_{2t} \quad (2)$$

Where $Y(t)$ is Y at time t linked to the previous values of Y and X , $X(t)$ is X at time t that is linked to the previous values of X and Y , α_i and λ_i is the coefficient of X , δ_i and β_i is the coefficient of Y , and ε is the error term.

Once the methodology has been successfully employed, the data is analyzed using the ARDL modeling approach to determine the factors that affect the crime rate and the Granger causality test to determine the causality relationship between the determinants.

RESULTS AND DISCUSSION

Table 3 displays the KPSS, ADF, and PP unit root tests. Based on the KPSS test, the LM statistic is lower than the critical values at the intercept for all variables except crime rate (LCRM) and inflation (LINF); hence the null hypothesis of stationary data cannot be rejected, suggesting that LCRM and LINF are stationary at 5% significance at level form. However, other variables such as gross domestic product (LGDP), population (LPOP), and education (LEDU) have no unit root after first differencing. Therefore,

the ADF and PP tests result shows that the LINF is stationary. Additionally, the first difference showed that the null hypothesis of non-stationary data was rejected since the *t*-statistic for all variables is greater than its critical values at a 5% significance

level. This result implies that all series have no unit root. To summarize, all series are integrated at the mixture of order one and zero, thus satisfying the assumption of the autoregressive distributed lag (ARDL) model.

Table 3

KPSS, ADF and PP unit root tests

| Variables | KPSS Test | | ADF Test | | PP Test | |
|-----------|----------------------|--------------------|------------------------|------------------------|------------------------|------------------------|
| | Level | First difference | Level | First difference | Level | First difference |
| LCRM | 0.3564 (0.4630) | 0.3252 (0.4630) | -1.2088 (-2.9511) | -3.8228** (-2.9511) | -1.2711 (-2.9484) | -3.8228** (-2.9511) |
| LGDP | 0.6920** (0.4630) | 0.0792 (0.4630) | -0.5026 (-2.9484) | -5.1106** (-2.9511) | -0.5026 (-2.9484) | -5.1001** (-2.9511) |
| LPOP | 0.6272** (0.4630) | 0.3774 (0.4630) | 1.0147 (-2.9484) | -4.2134** (-2.9511) | 0.6804 (-2.9484) | -4.2134** (-2.9511) |
| LEDU | 0.6276** (0.4630) | 0.0861 (0.4630) | -1.2482 (-2.9484) | -5.7155** (-2.9511) | -1.2410 (-2.9484) | -5.7345** (-2.9511) |
| LINF | 0.1089 (0.4630) | 0.0786 (0.4630) | -4.1624** (-2.9484) | -9.9859** (-2.9511) | -4.2986** (-2.9484) | -10.773** (-2.9511) |

Note. The asterisks ** denote the significance of the 5%

Pearson's correlation coefficient test was conducted to determine the association between the crime rate and the selected socio-economic variables in Malaysia. The multicollinearity problems among variables could also be observed by conducting the correlation analysis. The results tabulated in Table 4 show that pairwise correlation analysis for all variables is less than 0.9, suggesting there is no severe serious multicollinearity problem. However, the relationship between the crime rate in Malaysia and gross domestic product, population, and education does exist since it has a small *p*-value.

The correlation value of LPOP is -.3672, indicating a weak negative correlation with LCRM. Meanwhile, LGDP and LEDU also have a moderate positive association of .5595 and .6597 with LCRM. However, correlation analysis revealed that inflation has no relationship with the crime rate, gross domestic product, population, and education. Once the finding of the relationship exists among the determinants, the next step is to model the relationship using the ARDL modeling approach.

Table 4

Pearson's correlation coefficient

| Variables | LCRM | LGDP | LPOP | LEDU | LINF |
|-----------|----------|----------|----------|--------|--------|
| LCRM | 1.0000 | | | | |
| LGDP | .5595** | 1.0000 | | | |
| LPOP | -.3672** | -.8846** | 1.0000 | | |
| LEDU | .6597** | .8281** | -.8177** | 1.0000 | |
| LINF | .0568 | .0673* | .1521 | -.0834 | 1.0000 |

Note. The asterisks * and ** denote the significance at the 10% and 5%

Autoregressive Distributed Lag Modeling (ARDL)

Previously, the correlation analysis revealed that a relationship between inflation and the crime rate does not exist. However, a study by Hazra and Cui (2018) has confirmed the presence of a positive long-run relationship between inflation and crime rate, suggesting that an increase in the inflation rate will increase the crime

rate. Therefore, this research includes the gross domestic product, population, education, and inflation in ARDL estimation to identify the effect of these factors on the crime rate in Malaysia, both in the long and short run. Before checking the presence of cointegration among variables, the result of the optimal ARDL bounds model and diagnostic tests can be seen in Table 5.

Table 5

Optimal ARDL bounds model and diagnostic test

| Optimal Model | LM Test | | Structural Stability Test | |
|---------------------|---------|----------|---------------------------|--------|
| | Lag 2 | Lag 4 | CUSUM | CUSUMQ |
| ARDL (1,0,0,0,2) | 0.0877 | 0.0095** | Stable | Stable |

Note. The asterisks ** denote the significance at 5%

Starting from a maximum lag of 2, by eliminating the highest insignificant variable at the higher lag one at a time until all coefficients are statistically significant, Hendry's general to specific method generated an optimal model of ARDL

(1,0,0,0,2). Since the optimal model of ARDL (1,0,0,0,2) has no serial correlation and structural stability problem, the ARDL bounds cointegration test can be carried out. Table 6 provides the computed value of the F-statistic and two asymptotic Narayan

(2005) critical values. The result shows strong evidence that the crime rate has a long-term relationship with the gross domestic product, population, education, and inflation rate since the obtained

F-statistic values are 6.329 and greater than the upper bound. Hence, it is appropriate to proceed with an estimated ARDL long-run relationship model.

Table 6

F-statistics long-run cointegration test

| F-statistic | Significance level | Lower bound, I(0) | Upper bound, I(1) | Conclusion |
|-------------|--------------------|-------------------|-------------------|--------------------------|
| 6.3291 | 5% | 3.615 | 4.913 | Cointegration does exist |

Table 7

Optimal ARDL level relation model and diagnostic test

| Optimal Model | LM Test | | Structural Stability Test | |
|------------------|---------|--------|---------------------------|--------|
| | Lag 2 | Lag 4 | CUSUM | CUSUMQ |
| ARDL (1,1,0,0,2) | 0.5646 | 0.3805 | Stable | Stable |

Table 7 shows that ARDL (1,1,0,0,2) is the optimal lag of the ARDL level relation model. The diagnostic checking of the LM test and structural stability test was performed to ensure the model is free from the serial correlation problem and dynamically stable. At lag 2, the null hypothesis failed to be rejected at the 5% significance level and proved that the model has no serial correlation. Meanwhile, the CUSUM and CUSUMQ plots stay between two critical values, indicating that the model is dynamically stable. Hence, the variables' long-run coefficients were estimated using the ARDL (1,1,0,0,2) model.

Table 8 depicts the result of the long-run coefficient of Malaysia's crime rate and

proves that all variables, except the inflation rate, have a significant relationship with the crime rate at a 5% significance level. The result of the insignificant relationship between the inflation rate and the crime rate is supported by Kizilgol and Selim (2017). In the case of EU 28 and Turkey, they discovered that inflation is not affecting the crime rate. As predicted, the gross domestic product has a positive long-run relationship with the crime rates, suggesting that Malaysia's crime rate appears to increase by 2.08 percent when the gross domestic product increases by 1 percent. Mulok et al. (2016) also stated that more crimes would occur in good economic growth than in bad economic growth.

Higher revenues will raise the individual's accumulated wealth and boost economic growth, thereby generating opportunities for crime (Habibullah & Baharom, 2008).

Table 8
Estimated long-run coefficient results

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| LGDP | 2.0787 | 0.9333 | 2.2273 | 0.0352 |
| LPOP | 7.3338 | 3.0948 | 2.3697 | 0.0258 |
| LEDU | 5.5333 | 2.3918 | 2.3137 | 0.0292 |
| LINF | -0.4578 | 0.3683 | -1.2429 | 0.2254 |
| C | -30.7789 | 15.0320 | -2.0476 | 0.0512 |

Besides, the positive relationship between population growth and the crime rate is in line with Hussin et al. (2020). They found that rural and urban migration resulted in high population density, thus, increasing crime rates. According to Hussin et al. (2020), as the population increases, the urbanization process correlates with an increase in the cost of living. Therefore, to maintain their quality of living, individuals prefer to commit illegal activities. From the estimated long-run coefficient, it can be observed that education contributes to crime rates in Malaysia. According to Ishak and Bani (2017), by estimating the model with various types of crime, it is found that there is a significant positive relationship between education and type of crime such as burglary and larceny. It has been identified that criminal offenders misapply the skills, strengths, and abilities acquired through formal education.

There is a significant positive short-term association between crime and the population, as shown in Table 9, implying

that a one percent increase in population will increase the crime rate by 1.15 percent in the short run. Surprisingly, inflation positively affects Malaysia's crime rate in the short run, suggesting that if inflation rates rise by 1%, crime rates will increase by 0.7 percent. Adekoya and Razak (2016) supported the finding of a short-run relationship between inflation and crime, arguing that inflation increases living costs and reduces purchasing power, thus inducing people to engage in criminal activity to sustain their living. However, other variables such as gross domestic product and education insignificantly affected the crime rate at a 5% significance level in the short run.

The error correction term (ECT) is important to act as a mechanism for stabilizing the disequilibrium in the short run to achieve long-run equilibrium. The coefficient of ECT has negative signs and is highly significant, indicating a stable long-term relationship. In contrast, the absolute coefficient value of the error correction term implies that 12 percent of disequilibrium

Table 9

Estimated short-run coefficient result

| Variable | Coefficient | Std. error | t-Statistic | Prob. |
|-------------|-------------|------------|-------------|--------|
| C | -3.8529 | 0.5690 | -6.7714 | 0.0000 |
| ECT(-1) | -0.1257 | 0.0185 | -6.8043 | 0.0000 |
| D(LGDP) | -0.1365 | 0.1403 | -0.9727 | 0.3393 |
| D(LPOP) | 1.1518 | 0.2801 | 4.1123 | 0.0003 |
| D(LEDU) | 0.1619 | 0.4260 | 0.3801 | 0.7068 |
| D(LINF) | 0.0193 | 0.0187 | 1.0280 | 0.3131 |
| D(LINF(-1)) | 0.068486 | 0.0164 | 4.1776 | 0.0003 |

between crime rate and selected variables are adjusted within one year. Furthermore, it shows that the speed of adjustment in the short run to maintain long-term equilibrium is quite slow, and it takes approximately 8.33 years to achieve long-term stable equilibrium. Since the model relationship in the long term is stable, the causal effect between the variables can be tested, and the results are shown in the next section.

Granger Causality Test

A pairwise granger causality test was conducted, and the results were presented

in Table 10. The results show that the null hypothesis of LPOP does not Granger Cause LCRM, and LCRM does not Granger Cause LPOP are rejected at a 5% significance level, concluding that there is bidirectional causality between crime and population. The finding indicates that the past value of the population is useful to give a better prediction of the current value crime rate and vice versa. These results are consistent with Hussin et al. (2020) as they found that the population contributes to total and property crimes.

Table 10

Pairwise Granger causality results

| Null hypothesis | F-statistics | Prob. | Decision | Type of causality |
|----------------------------------|--------------|--------|--------------|-------------------------|
| LGDP does not Granger Cause LCRM | 1.17047 | 0.2874 | Accept H_0 | Independence |
| LCRM does not Granger Cause LGDP | 0.24271 | 0.6256 | Accept H_0 | Independence |
| LPOP does not Granger Cause LCRM | 7.39174 | 0.0105 | Reject H_0 | Bidirectional causality |

Table 10 (*Continue*)

| Null hypothesis | F-statistics | Prob. | Decision | Type of causality |
|----------------------------------|--------------|--------|--------------|--------------------------|
| LCRM does not Granger Cause LPOP | 13.5768 | 0.0008 | Reject H_0 | Bidirectional causality |
| LEDU does not Granger Cause LCRM | 1.82179 | 0.1866 | Accept H_0 | Independence |
| LCRM does not Granger Cause LEDU | 1.59288 | 0.2160 | Accept H_0 | Independence |
| LINF does not Granger Cause LCRM | 5.43883 | 0.0261 | Reject H_0 | Unidirectional causality |
| LCRM does not Granger Cause LINF | 0.00079 | 0.9778 | Accept H_0 | Unidirectional causality |

The result also shows a unidirectional causality between inflation rate and crime rate running from inflation rate to crime rate, and these findings are in line with Rosenfeld et al. (2019). On the other hand, it can be observed that there is no causality effect between the crime rate with gross domestic product and education level. This finding is consistent with the results found in the short-term relationship.

CONCLUSION

This paper aims to analyze the socio-economic determinants of the crime rate in Malaysia by using the ARDL modeling approach. Based on the three different types of unit root tests, all series are found to be integrated of a mixture of an order of one and zero. The bounds test cointegration analysis suggests that the long-term relationship among variables exists. Gross domestic product, population, and education level have a long-term positive significant effect on Malaysia's crime rate. In contrast, the

population and inflation rate will cause the crime rate in the short run. The research findings revealed that the population has a causal relationship with the crime rate. As a result, to minimize the number of crime cases, it is important to address the problems related to population growth as soon as possible.

Based on the research findings, there are a few recommendations for the government and authorities to strategize a crime prevention program to lower Malaysia's crime rate. First, as population growth has a causal relationship with the crime rate in Malaysia, the government should focus on improving the Malaysians' quality of life, such as salary increment, a safe working environment, increasing public safety, improving socio-culture, and providing better education, and others. A better and more viable quality of life will create a better living environment, and the improvement in quality of life must be in line with the social-economic development. The government

also needs to implement comprehensive efforts such as omnipresence in crime-prone areas by increasing the number of CCTV, increasing the number of Royal Malaysian Police, and encouraging the community to cooperate with the enforcement authorities by joining the Rakan Cop or Community Policing program, or voluntarily participate in Rukun Tetangga (RT) for neighborhood surveillance activities.

Future research should consider different types of crime rather than focus on the overall crime cases and consider other factors such as the unemployment rate and other deterrent variables such as the number of police officers, number of divorcees, and number of prisoners.

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Social Determinants of Alcohol Use Disorder, Depression, and Anxiety Among Sexual Minority Males During the COVID-19 Pandemic

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ABSTRACT

The COVID-19 pandemic magnified the mental health disparities between sexual minorities and the Filipino population. This study explored the mental health disparities experienced by sexual minorities, which remains unexplored. The study utilized self-administered survey forms to explore the extent and social determinants of an alcohol use disorder, depression, and anxiety among Filipino sexual minority males during the pandemic. A total of 220 participants were recruited in October 2020. They were composed of adult Filipino cisgender males with non-heterosexual orientation from Metro Manila. The results showed significant rates of risk for alcohol use disorder, depression, and anxiety at 36.4%, 9.5%, and 26.4%, respectively. Age ($OR=0.886$, $p=.025$), homosexual orientation ($OR=0.035$, $p=.033$), bisexual orientation ($OR=0.009$, $p=.011$), and living with relatives ($OR=0.162$, $p=.006$) were also significantly associated with depression. Age ($OR=0.866$, $p<.001$) was significantly associated with anxiety. Moreover, compared with the general population during the pandemic, Filipino sexual minorities' risk for alcohol use disorder was higher than depression and anxiety. These disparities were significantly associated with age, sexual orientation, and living arrangements. The findings suggest comorbidities of an alcohol use disorder, depression, and anxiety among Filipino sexual minorities that can be addressed through cost-effective online treatment modalities, information-education campaigns,

integration of mental health into educational curriculums, the institution of policies that bar discrimination against sexual minorities, and initiatives to strengthen family support groups.

Keywords: Alcohol use disorder, anxiety, COVID-19, depression, gays, LGBT, sexual minorities

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INTRODUCTION

The 2019 Coronavirus Disease (COVID-19) pandemic has affected millions of lives across the globe. Countries limit human mobility through travel restrictions, curfews, checkpoints, business closures, school suspensions, and lockdowns of entire cities and economic centers to contain its effects on populations (Tajudin et al., 2021; Tee et al., 2020). In the Philippines, similar measures were implemented (Alibudbud, 2021b; Tee et al., 2020). However, these measures heightened Filipinos' fears, uncertainties, and worries among Filipinos during the pandemic (Alibudbud, 2021b; Tee et al., 2020). Tee et al. (2020) noted that 16.9% of Filipino adults reported moderate-to-severe depressive symptoms while 28.8% had moderate-to-severe anxiety levels because of the pandemic lockdowns. Nonetheless, it should be noted that pandemics can magnify and highlight marginalization and inequalities experienced by particular social groups, including sexual minorities (Ahmed et al., 2020; Alibudbud, 2021b; Drabble & Eliason, 2021; Egcas et al., 2021; Goldbach et al., 2021; Salerno et al., 2020; Yanita & Suhardijanto, 2020). Therefore, researchers must elevate the discussion on mental health disparities among sexual minorities, as Salerno et al. (2020) suggested.

Mental health disparities among sexual minorities have been observed in terms of differences in the rates of depression, anxiety, and alcohol use disorder that are higher than the rest of the population (American Psychiatric Association [APA], 2013, 2018; Drabble & Eliason, 2021;

Goldbach et al., 2021; Pan American Health Organization & World Health Organization, 2013; Tan et al., 2021; Yanita & Suhardijanto, 2020). The effects of these disparities have been explained by the Minority Stress Model, where adverse social experiences by sexual minorities, such as discrimination and stigma based on their social position as a sexual minority, can predispose them to heightened distress and mental health morbidity (Alibudbud, 2021c; Goldbach et al., 2021; Meyer, 1995; Meyer & Frost, 2013; Tan et al., 2021). In the Philippines, international organizations have documented discrimination and stigma based on sexual orientation among sexual minority males across all age groups, different non-heterosexual orientations, income groups, employment status, and in various settings, including the home, school, and health sector (Human Rights Watch, 2017; United Nations Development Program [UNDP] & United States Agency for International Development [USAID], 2014). With the ensuing lockdown in the Philippines, these adverse experiences have persisted during the pandemic (See, 2021).

Given these continued adversities and their implication on mental health, it was recommended that mental health services should be cognizant of the unique needs of sexual minorities (Manalastas et al., 2016; UNDP & USAID, 2014). However, this can be difficult due to the country's scarce and unequal distribution of mental health services. For instance, only about 500 psychiatrists serve 100 million Filipinos, with most psychiatrists working in urban

centers (Lally et al., 2019). Therefore, there is a need to explore the mental health disparities among sexual minorities and their social determinants during the pandemic (Alibudbud, 2021c; Goldbach et al., 2021; Manalastas et al., 2016; See, 2021).

The list of social determinants of mental health among sexual minority males is similar to the general population. Previous studies in western countries have found that mental disorders vary according to age, sexual orientation, educational attainment, employment status, income, and living arrangement (APA, 2013; Goldbach et al., 2021; Sadock et al., 2015; Tan et al., 2021). Young sexual minority males face the problems and pressure of “coming out” (D’Augelli, 2006), while older individuals face both ageism and the stigma attached to their sexual orientation (APA, 2018). Homosexual orientation is associated with a higher propensity for marginalization resulting in higher rates of depression, anxiety, and alcohol use disorder (APA, 2018). Unemployment and low income have also predisposed sexual minority males to mental health problems (APA, 2018; Goldbach et al., 2021). Previous research also suggested that those living in isolation or unaccepted by their families and communities were at higher risk of developing mental disorders (APA, 2018; Russel & Fish, 2016). Few studies have explored the social determinants of mental health among sexual minorities in the Philippines. These studies found that the young and those in a relationship have a higher risk of suicidal ideations and anxiety

than their contemporaries (Alibudbud, 2021c; Manalastas, 2013; Manalastas et al., 2016).

While several studies have been conducted in western countries, there is a dearth of studies on the Philippines and the cultural and contextual variations of mental health (Alibudbud, 2021a; Cockerham, 2017; Estacio et al., 2021; Goldbach et al., 2021; Sadock et al., 2015; Tan et al., 2021). The Philippine cultural context and the COVID-19 pandemic are factors that can account for mental health variation among Filipino sexual minority males. Thus, research must understand and address their mental health disparities during the pandemic.

Significance

In general, the COVID-19 pandemic can magnify the existing marginalization of sexual minority males (Ahmed et al., 2020). This study determined the rates of an alcohol use disorder, depression, and anxiety among Filipino sexual minority males during the pandemic. Likewise, the social determinants of these mental health problems were also explored by assessing their relationship with sociodemographic variables. The findings may guide policies and programs to reduce mental health disparities among Filipino sexual minority males during the pandemic.

MATERIALS AND METHODS

Research Design

This quantitative cross-sectional study was conducted for two weeks in October

2020. It utilized a survey design through online self-administered questionnaires since it allows for the efficient analysis of the relationship between long-term social characteristics and mental health conditions (Bonita et al., 2006). It was conducted online due to Philippine physical distancing and quarantine policies (Tee et al., 2020).

Sampling and Population

This study utilized a purposive snowballing sampling design. First, potential participants were selected from the investigator's social network. Afterward, they were asked to recruit other people who fitted the inclusion criteria until the two-week data collection period elapsed. This purposive snowballing sampling design is instrumental in sampling populations that cannot be readily identified due to stigma or discrimination, which includes sexual minorities in the Philippines (Manalastas et al., 2016; Meyer & Wilson, 2009).

The minimum sample size for this study was computed based on nine predictors, 46.2% prevalence rate of depression among sexual minorities (Alibudbud, 2021c), and ten events per variable (EPV) for predictive models as suggested by Peduzzi et al. (1996) and Ogundimu et al. (2016). Based on these parameters, the minimum adequate sample size needed is 194 participants. Therefore, after the data-gathering period elapsed, 220 eligible participants were recruited.

The study participants were Filipino cisgender males with non-heterosexual orientation, had sexual intercourse with another male, and resided in Metro Manila

during the data gathering period. The non-heterosexual orientation considered in this study were those with sexual or romantic attraction other than women, such as bisexual, homosexual, asexual, and pansexual-oriented men (Alibudbud, 2021c). Male participants with heterosexual orientation, transgender identity, and residence outside Metro Manila were excluded from the study. Thus, this study excluded transmen, transwomen, and those living in other provinces. Additionally, those who did not complete the questionnaire were excluded from the study.

Instrumentation

The study utilized an online self-report questionnaire consisting of three sections. The sections were sequentially completed from the first to the third section. The first section asked for the participants' sociodemographic characteristics, such as age, sexual orientation, educational attainment, income, employment status, and living situation. These variables were adapted from the categorization of the Philippine Statistics Authority (2013). Age was indicated in years. The participant's sexual attraction indicated sexual orientation. The actual amount of the participant's monthly household income was asked for income level. Employment status was assessed in terms of its presence or absence. Living arrangement was indicated by noting whether they were currently living alone, with roommates, relatives, or partners. They can also specify other living situations. The highest educational attainment was reported

by indicating no grade completed to post-baccalaureate.

The second section assessed the risk for alcohol use disorder among the participants. The risk was determined using the Alcohol Use Disorder Identification Test (AUDIT), a 10-items self-report questionnaire developed by the World Health Organization. The AUDIT assesses three domains of alcohol use disorder: hazardous alcohol use, dependence, and harmful alcohol use (Babor et al., 2001). Its translation and validation among Filipinos showed that it conforms to a three-factor component among Filipinos. It indicates that it assesses the original three domains of alcohol use disorder assessed by the original AUDIT (Tuliao et al., 2016). The recommended cut-off point of 8 was used for this study to indicate a significant risk for Alcohol Use Disorder.

The third and last section contained the Hospital Anxiety and Depression Scale – Filipino (HADS-P). HADS-P was used to screen for significant risk for anxiety and depression. The HADS-P is a 14-item self-report questionnaire composed of seven items for anxiety and depression subscales (Zigmond & Snaith, 1983). Studies have confirmed that it is valid for community settings, including the Philippines (Bjelland et al., 2002; Gauiran et al., 2018; Snaith, 2003). Its optimal cut-off for the Philippines is 11 at a sensitivity of 75%, a specificity of 70%, and a positive predictive value of 75% (de Guzman, 2013). This study used this cut-off point to note for clinically significant risk for depression and anxiety.

Before data collection, the HADS-P and AUDIT were validated using the content validation method of Yusof (2019). Six subject matter experts, composed of board-certified psychiatrists, reviewed the relevance and appropriateness of the questionnaire towards Filipino sexual minority males as the target population. Each question was rated through a 4-point Likert scale. The experts unanimously agreed that the questions contained in the questionnaire were highly relevant in assessing depression, anxiety, and alcohol use among the target population. Thus, all questions showed an item-level content validity index score of more than 0.80, indicating universal agreement (Yusof, 2019). Given these, all questions were accepted and retained.

The questionnaire was also pilot-tested on five participants. After answering the questionnaire, the five participants in the pilot test were asked about the appropriateness and clarity of construction of the questions contained in the research instrument. Few revisions to increase the clarity of the questionnaire were done as suggested by the pilot test participants.

Data Gathering Procedure

Initially, potential participants from the investigator's social network were contacted through online messaging applications, such as Facebook and Instagram, since about three-quarters of the Philippine population actively use these platforms daily (Philippine Daily Inquirer, 2020). They were sent online messages regarding

the study objectives and the need for participants. After the potential participants accommodated the online invitation, the study's purpose, benefit, risk, and need for participants were explained. It was highlighted that they could refuse or stop the survey anytime. They were also asked to invite potential participants who may be eligible for this study. It was highlighted that potential participants must be cisgender males with non-heterosexual orientation, who had sexual intercourse with another male, and from Metro Manila. In addition, the investigator's contact details were given should the participants have questions regarding the study and inclusion criteria employed by the investigator. Afterward, a link to the research questionnaire was sequentially filled, from the participant's understanding of the informed consent to the last section of the research questionnaire. After the two-week data gathering period in October 2020 elapsed, the data gathered from the online research instrument was encoded in Microsoft® Excel for Mac version. Once all data were encoded, the online data was deleted.

Data Analysis

Initially, descriptive analysis was done where categorical data were summarized using frequencies and percentages, while continuous data were summarized using means and standard deviations. Afterward, three Logistic Regression models were done to determine the social determinants of significant risks for alcohol use disorder, depression, and anxiety. The predictors of

the regression models included age, sexual orientation, educational attainment, income, employment status, and living situation. The models' dependent variables were binary variables that indicate significant risks for alcohol use disorder, depression, and anxiety using the cut-off score of the AUDIT and each subscale of the HADS-P. Initially, the significance of the models was determined using Chi-Square. Afterward, the individual predictors of each model were analyzed by noting the odds ratio and confidence interval to determine the effect sizes of the predictors of an alcohol use disorder, depression, and anxiety. A p-value of $<.05$ was used as a cut-off for significant associations. All data were analyzed using the Statistical Package for the Social Sciences (SPSS).

Ethical Consideration

This study was based on the post hoc analysis of a duly approved study from the De La Salle University, Manila. It was conducted under the Philippines' Data Privacy Act and National Ethical Guidelines for Health and Health-Related Research. Informed consent was secured before the administration of questionnaires. Participants were also allowed to contact and ask the investigator before answering the questionnaire. Afterward, they indicate their consent in an online form. Numerical codes were also used in place of identifying data to protect the privacy and confidentiality of the participants. Likewise, during data gathering, the participants were given a list of mental health service providers to address their needs or interest in mental health.

RESULTS

Sociodemographic Characteristics of the Participants

As shown in Table 1, the average age of the participants was 30.85, with a standard deviation of 6.08, while the average monthly income of the participants was 93,585.57 (SD=138,533.86). This average monthly income falls on the upper-middle-income class in the Philippines. Majority of the

participants were college graduate (n=119, 54%), employed (n=193, 87.7%), had homosexual orientation (n=173, 78.6%), and lives with relatives (n=116, 52.7%). Notably, about a third of the participants had post-baccalaureate degrees (n=71, 32.3%), while a fifth of the participants had bisexual orientation (n=43, 19.5%) and lived alone (n=46, 20.9%).

Table 1

Sociodemographic characteristics of the participants (n=220)

| | Mean/Frequencies | SD/Percentage |
|-------------------------------|------------------|---------------|
| Age | 30.85 | 6.08 |
| Sexual Orientation | | |
| Homosexual | 173 | 78.6 |
| Bisexual | 43 | 19.5 |
| Asexual | 4 | 1.8 |
| Income | 93585.57 | 138533.86 |
| Educational Attainment | | |
| No grade completed | 1 | 0.5 |
| Postsecondary graduate | 6 | 2.7 |
| College undergraduate | 23 | 10.5 |
| College graduate | 119 | 54.1 |
| Post-baccalaureate | 71 | 32.3 |
| Employment Status | | |
| Employed | 193 | 87.7 |
| Living Arrangement | | |
| Lives alone | 46 | 20.9 |
| Lives with roommates | 28 | 12.7 |
| Lives with relatives | 116 | 52.7 |
| Lives with partner | 30 | 13.6 |

Prevalence of Alcohol Use Disorder, Anxiety, and Depression Among the Participants

The participants' risks for alcohol use disorder, anxiety, and depression were measured using the AUDIT and HADS-P subscales. Table 2 showed that one out of

three ($n=80$, 36.4%) participants were at risk for alcohol use disorder. In contrast, almost one out of ten ($n=21$, 9.5%) participants was at risk for depressive disorders, while one out of four ($n=58$, 26.4%) participants was at risk for anxiety disorders.

Table 2

Prevalence of participants at risk for alcohol use disorder, anxiety, and depression ($n=220$)

| | Frequencies | Percentage (%) |
|----------------------------------|-------------|----------------|
| At risk for Alcohol Use Disorder | 147 | 66.8 |
| At risk for Depression | 21 | 9.5 |
| At risk for Anxiety | 58 | 26.4 |

Model Summary of the Regression Model Used for Alcohol Use Disorder, Anxiety, and Depression

The logistic regression models used for exploring the social determinants of an alcohol use disorder, depression, and anxiety are shown in Table 3. The first model showed that the variables for predicting the risk for alcohol use disorder had no collective significance, X^2 ($n=9$, 220)=15.593, $p=.076$. The second model variable had collective significance for predicting depression, X^2 ($n=9$, 220)=18.744, $p=.027$.

Based on this model's estimated R Square of .082 to .175, the total variance accounted for by the independent variables of this model on depression is 8.2% to 17.5%. The third model's variables were statistically significant in predicting the risk for anxiety, X^2 ($n=9$, 220)=20.388, $p=.016$. The estimated R Square of this model ranged from .089 to .129. Thus, 8.9% to 12.9% of the anxiety variance among the participants could be attributed to the model's independent variables.

Table 3

Model summary of the regression model used for alcohol use disorder, anxiety, and depression

| Model | Logistic Regression Models | -2 Log likelihood | Cox & Snell R Square | Nagelkerke R Square | Chi-square | df | Sig. |
|-------|----------------------------|-------------------|----------------------|---------------------|------------|----|--------|
| 1 | Alcohol Use Disorder | 272.819 | 0.068 | 0.094 | 15.593 | 9 | 0.076 |
| 2 | Depression | 119.847 | 0.082 | 0.175 | 18.744 | 9 | 0.027* |
| 3 | Anxiety | 233.415 | 0.089 | 0.129 | 20.388 | 9 | 0.016* |

Note. * Significant at p-value of <.05

Social Determinants of Alcohol Use Disorder

The individual variables of the regression model for significant risk for alcohol use disorder were examined. Table 4 showed

that the sociodemographic variables had no statistically significant relationship with alcohol use disorder. Thus, this study did not identify any social determinant for alcohol use disorder among the participants.

Table 4

Logistic regression of alcohol use disorder and sociodemographic characteristics

| | Odds ratio | Lower 95% CI | Upper 95% CI | P-value |
|-------------------------------|------------|--------------|--------------|---------|
| Age | 0.97 | 0.919 | 1.024 | .268 |
| Sexual Orientation | | | | |
| Homosexual | 0.000 | 0.000 | | .999 |
| Bisexual | 0.000 | 0.000 | | .999 |
| Educational Attainment | 0.768 | 0.553 | 1.068 | .117 |
| Income | 1.000 | 1.000 | 1.000 | .415 |
| Employment Status | | | | |
| Employed | 0.836 | 0.35 | 2.000 | .688 |
| Living Arrangement | | | | |
| Lives alone | 0.809 | 0.294 | 2.227 | .682 |
| Lives with roommates | 1.295 | 0.425 | 3.949 | .649 |
| Lives with relatives | 1.298 | 0.544 | 3.096 | .556 |

Social Determinants of Depression

The individual sociodemographic variables in the model for anxiety were also examined (see Table 5). Among these variables, age ($OR= 0.886$, 95% CI [0.796, 0.985], $p=.025$), homosexual orientation ($OR= 0.035$, 95% CI [0.002, 0.764], $p=.033$), bisexual orientation ($OR= 0.009$, 95% CI [0.000, 0.339], $p=.011$), and living with relatives ($OR= 0.162$, 95% CI [0.044, 0.594], $p=.006$) lowered the odds of depression. Thus, age, sexual orientation, and living arrangement were social determinants that may reduce the odds of having depressive disorders among the participants.

Social Determinants of Anxiety

Lastly, the individual variables of the participant's risk for anxiety listed in Table 6 were also examined. It showed that there was a significant association between age and risk for anxiety disorders ($OR= 0.866$, 95% CI [0.804, 0.932], $p<.001$). Thus, age is a social determinant that may protect the participants against anxiety. The rest of the sociodemographic variables in this model was not statistically significant.

Table 5

Logistic regression of depression and sociodemographic characteristics

| | Odds ratio | Lower 95% CI | Upper 95% CI | P-value |
|-------------------------------|------------|--------------|--------------|---------|
| Age | 0.886 | 0.796 | 0.985 | .025* |
| Sexual Orientation | | | | |
| Homosexual | 0.035 | 0.002 | 0.764 | .033* |
| Bisexual | 0.009 | 0.000 | 0.339 | .011* |
| Educational Attainment | 0.967 | 0.639 | 1.464 | .875 |
| Income | 1.000 | 1.000 | 1.000 | .156 |
| Employment Status | | | | |
| Employed | 1.138 | 0.231 | 5.599 | .874 |
| Living Arrangement | | | | |
| Lives alone | 0.406 | 0.105 | 1.569 | .191 |
| Lives with roommates | 0.338 | 0.068 | 1.675 | .184 |
| Lives with relatives | 0.162 | 0.044 | 0.594 | .006* |

Note. *Significant at p-value of <.05

Table 6

Logistic regression of anxiety and sociodemographic characteristics

| | Odds ratio | Lower 95% CI | Upper 95% CI | P-value |
|-------------------------------|------------|--------------|--------------|---------|
| Age | 0.866 | 0.804 | 0.932 | <.001* |
| Sexual Orientation | | | | |
| Homosexual | 0.172 | 0.009 | 3.454 | .250 |
| Bisexual | 0.211 | 0.010 | 4.315 | .312 |
| Educational Attainment | 1.195 | 0.797 | 1.792 | .388 |
| Income | 1.000 | 1.000 | 1.000 | .537 |
| Employment Status | | | | |
| Employed | 1.465 | 0.515 | 4.169 | .474 |
| Living Arrangement | | | | |
| Lives alone | 0.826 | 0.267 | 2.558 | .740 |
| Lives with roommates | 1.053 | 0.308 | 3.605 | .934 |
| Lives with relatives | 0.877 | 0.334 | 2.306 | .790 |

Note. *Significant at p-value of <.05

DISCUSSION

Sexual minorities have higher rates of an alcohol use disorder, depression, and anxiety due to minority stress stemming from marginalization and discrimination based on their sexual minority background. Because of the COVID-19 pandemic, the rates of mental disorders can be heightened through their increased marginalization (Ahmed et al., 2020; Drabble & Eliason, 2021; Goldbach et al., 2021; Salerno et al., 2020; See, 2021). Thus, this study explored depression, anxiety, and alcohol use disorders among sexual minority males during the COVID-19 pandemic in “One of the World’s longest lockdowns” in the Philippines (Ahmed et al., 2020; Drabble & Eliason, 2021; Goldbach et al., 2021; Meyer & Frost 2013; Pan American Health Organization & World Health Organization, 2013; Salerno et al., 2020; See, 2021).

Alcohol Use Disorder, Depression, and Anxiety Among Filipino Sexual Minority Males

The findings revealed that one out of three (36.4%) Filipino sexual minority males in this study were at risk for alcohol use disorder. This rate is about two to three times higher than the 10% to 16% rate of risk for alcohol use disorder noted in other countries (Rehm & Patra, 2010). It was also six times higher than the 5.6% rate of harmful alcohol use in the general Filipino population (World Health Organization, 2016). Like other countries, this finding suggests that Filipino sexual minority males may have higher alcohol use problems than

the general population (APA, 2018; Pan American Health Organization & World Health Organization, 2013; UNDP & USAID, 2014).

The high alcohol use disorder among sexual minority males during the COVID-19 pandemic can be partially explained by the calming effects of alcohol that may reduce the high distress brought upon by the pandemic and lockdown measures. Notably, alcohol use can induce relaxation by affecting brain function and receptors (Sadock et al., 2015; Tee et al., 2020). Thus, it can be inadvertently used to self-medicate pandemic-related stress, depression, and anxiety. This distress reduction effect of alcohol is further reflected by the low rates of depression and anxiety among the sexual minority males in this study.

Alcohol can mask potentially higher rates of depression and anxiety related to these findings. The significant depression and anxiety rates among Filipino sexual minority males were 9.5% and 26.4%. These rates were lower than the Filipino general population’s 16.9% and 28.8% prevalence rates (Tee et al., 2020). These values suggest that the high rates of alcohol use may lower the rates of depression and anxiety among sexual minority males.

Social Determinants of Alcohol Use Disorder Among Filipino Sexual Minority Males

The social determinants of an alcohol use disorder, depression, and anxiety were explored by examining their relationship with sociodemographic variables. It was

found that age, educational level, sexual orientation, living arrangement, and employment status had no association with the risk for alcohol use disorder among the participants. It contradicted the previously reported relationship between alcohol use disorder and sociodemographic characteristics (APA, 2013; Sadock et al., 2015). This lack of relationship can be partly explained by the Philippines' unique cultural and contextual features, such as its kinship system and closely knitted communities (Alibudbud, 2021c; Alibudbud, 2021a; Estacio et al., 2021). Nonetheless, the results suggest a need to explore further the mechanism between these Filipino cultural factors and alcohol use disorder (Alibudbud, 2021a, 2021c; Estacio et al., 2021; Manalastas, 2013).

Social Determinants of Depression Among Filipino Sexual Minority Males

In contrast to alcohol use disorder, the findings suggest that higher age, bisexual orientation, homosexual orientation, and living with relatives could be protective factors against clinically significant depression among the sexual minority males in this study. Various mechanisms can explain these protective effects. Older individuals usually have better education and higher political power that may give them higher control over their life events (Cockerham, 2017). This higher locus of control over one's life is known to be protective against depression (Cockerham, 2017; Sadock et al., 2015).

For living arrangements, living with relatives can signify that individuals were accepted by their family regardless of their sexual orientation. Moreover, Filipino culture highly values strong family relationships and kinship support (Alibudbud, 2021a; Estacio et al., 2021). Given these, participants living with their relatives may have greater social support than those living alone. Thus, given that social support has been noted to mitigate clinically significant depression among populations, Filipino sexual minorities who live with their relatives may have less likelihood of developing significant depression (Alibudbud 2021a; APA, 2018; Estacio et al., 2021; Russel & Fish, 2016).

It was also found that homosexual and bisexual orientation have protective effects against depression among the participants. These protective factors against depression can be due to decreased interactions with adversities in their social environment. It should be noted that harassment and discrimination against sexual minorities are known factors contributory to the development of depression. Lockdown measures and work-from-home setups can decrease these social adversities during the pandemic (Human Rights Watch, 2017; Meyer & Frost, 2013; Sadock et al., 2015).

Social Determinants of Anxiety Among Filipino Sexual Minority Males

Like depression, it was also found that older age may protect against significant anxiety. This relationship can be attributed to the

nature of anxiety as a signal and the political clout of older adults. Anxiety is an alerting signal that warns of impending danger for individuals to control their situation better (Sadock et al., 2015). In addition, older individuals, as previously mentioned, have better control over the outcomes of events than younger ones due to their higher political clout and knowledge (Cockerham, 2017; Sadock et al., 2015). Thus, older individuals may better control anxiety-provoking and potentially dangerous situations.

It was also found that anxiety was not related to education, income, employment, or living arrangement. This finding contradicted previous studies that found associations between depression and these sociodemographic characteristics. Previous studies have also attributed this lack of relationship between mental health problems and social factors to the distinct cultural factors in Philippine society (Alibudbud, 2021a; APA, 2013; Estacio et al., 2021; Sadock et al., 2015). Nonetheless, further studies are needed to determine the processes behind this lack of relationships.

Limitations and Future Directions

While this study contributed to the further understanding mental health among Filipino sexual minorities, it has several limitations. First, the study utilized a non-probability sampling design, limiting its generalizability to the sexual minority population since members of the Filipino sexual minority male community may have less likelihood of being included than others (Manalastas

et al., 2016; Meyer & Wilson, 2009). Likewise, it was conducted in a single Philippine region, limiting its applicability to other regions. Future studies can address this limitation by utilizing probability sampling, recruiting more participants, and expanding to other Philippine regions. Second, asexual orientation and living with one's partner were removed from the regression model due to collinearity as referents. Third, other determinants of mental health, such as discrimination and face mask use during the pandemic, were not assessed (Wang et al., 2020). Moreover, the social and behavioral impact of mental health problems, including decreased sexual activities and COVID-19 vaccine hesitation, was not explored (Drabble & Eliason, 2021; Hao et al., 2021; Lehmler et al., 2021). Hence, future studies can include these determinants and consequences of mental health problems as possible variables related to sexual minority mental health. Fourth, this study was conducted online due to the physical distancing measures during the COVID-19 pandemic. Given the lack of internet access by a portion of Philippine society (Cleofas, 2021; Cleofas & Rocha, 2021), future studies can utilize face-to-face surveys to address this digital divide and internet access inequality for a better representation of the Filipino sexual minority population. Lastly, the analysis in this study also assumed that the social determinants preceded mental health conditions. This limitation can be improved by utilizing prospective methods to determine the causal relationship between these variables.

CONCLUSION

In general, Filipino sexual minority males in this study had six times higher rates of significant risk for alcohol use disorder compared to the general population. On the other hand, their rates of significant risk for depression and anxiety were lower than the general Filipino population during the pandemic. This high rate of alcohol use disorder can be attributed to alcohol's effect on decreasing anxiety and depression (Sadock et al., 2015; Tee et al., 2020). Hence, alcohol may mask a potentially higher rate of anxiety and depression among Filipino sexual minority males.

Recommendations

Given the study findings, there is a need to address the possible comorbidity of an alcohol use disorder, anxiety, and depression among sexual minority males during the pandemic. It can be done through screening for alcohol use disorder among those with depression and anxiety problems. Likewise, cost-effective online treatment modalities, such as internet-based Cognitive Behavioral Therapy, can be mustered and utilized to address mental health problems while maintaining physical distancing (Ho et al., 2020; Soh et al., 2020; Zhang & Ho, 2017).

This study also identified the social determinants of clinically significant anxiety and depression among Filipino sexual minority males. These included age, sexual orientation, and living arrangements. The significance of these social determinants can be explained through various mechanisms. First, higher age may protect against mental

health problems since older individuals have better control over their situations than younger ones. This higher locus of control can be enhanced among the younger population through information-education campaigns, online information cards, and integrating mental health and coping concepts into the Philippine educational curricula. Individuals with homosexual and bisexual orientations can have less exposure to discrimination and harassment during the COVID-19 pandemic and lockdown. Thus, policies that uphold their rights and bar sexual orientation-based discrimination can be instituted at the national level and replicated at the city level to mitigate discrimination against them further. Sexual minorities who live with their family have lower odds of depression since they can have strong social support. This strong family support should be strengthened and mustered in the existing mental health programs by involving family members in the recovery and treatment of sexual minority males with mental health concerns. These can be done through supporting family support groups and family and couples' therapy.

Overall, this study identified the risk for alcohol use disorder, depression, and anxiety as well as their social determinants among a group of Filipino sexual minority males during the COVID-19 pandemic. It also discussed and posited several mechanisms behind the effects of these social determinants. Nonetheless, further studies are needed to ascertain the validity of these mechanisms. Likewise, interventions

and programs can be established further to strengthen the protective effects of these social determinants and address alcohol use disorder, depression, and anxiety among Filipino sexual minority males.

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Gender, Resistance, and Identity: Women's Rewriting of the Self in Chitra Banerjee Divakaruni's *Before We Visit the Goddess*

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ABSTRACT

The image of Indian women has often been associated with the act of obedience and submission. Previous studies on gender and sexuality in India's literary tradition and culture point to the dominance of heteropatriarchal normativity and the scarcity of the image of a powerful woman capable of contesting and dismantling such impositions. In this study, we argue that Chitra Banerjee Divakaruni's *Before We Visit the Goddess* (2016) presents a more nuanced image of the Indian women who constantly problematize the mainstream prescriptions of gender roles and boundaries. In pursuit of the argument, this study aims to explore the novel to examine the multiple ways in which the leading female characters contest, negotiate, and reconstruct pre-existing definitions of gender identities. As an analytical framework, we draw upon the poststructuralist feminist Hélène Cixous's notions of "the feminine," "the other," and "*écriture féminine*" (feminine writing) to shed light on female characters' struggles against submission to patriarchal discourses. The findings reveal that the three female characters—i.e., Sabitri, Bela, and Tara—resist discourses of masculinity through empowerment in their unique ways: establishing a business, getting a divorce, and having an abortion. Through such practices, the female characters demonstrate the will of both a woman and a mother and a strong sense of love that works as a key factor in their resistance to patriarchy and rewriting identity relations.

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INTRODUCTION

India is historically dominated by a patriarchal culture that not only demands women's obedience and submission to their male counterparts but also encourages their silence when facing "discrimination, subordination, exploitation, and subjugation" (Sivakumar & Manimekalai, 2021, p. 427). Many scholars have indicated that the prevailing misogyny is deeply ingrained in Indian culture and is powerfully reinforced in its literary tradition, where the figure of an active Indian woman capable of contesting and dismantling patriarchy is relatively rare (Bhopal, 2019; Hapke, 2013; Singh et al., 2021). Against this backdrop, we argue that Chitra Banerjee Divakaruni's *Before We Visit the Goddess* (2016) provides profound insights into the subtle and intricate empowerment practices that Indian women adopt to resist and redefine mainstream prescriptions of gender roles and boundaries. The female characters reflect the collective consciousness of Indian women while showing individuality in their resistance against patriarchy. The novel narrates the story of three generations of mothers and daughters—Sabitri, Bela, and Tara—who are in pursuit of deciphering the meaning and purpose of their life. At the novel's crux is a strong sense of love that functions as the driving force behind the three characters' life decisions and ambitions. Although love is conventionally viewed as a feminine quality of subdued nature (Jaggar, 1989), the novel features it as a principal element deployed by female characters to topple the patriarchy and

redefine their identities. In pursuit of this argument, this study aims to explore the novel to examine the multiple ways in which the female characters contest, negotiate, and reconstruct pre-existing definitions of gender identities.

The present article draws upon the poststructuralist feminist Hélène Cixous's notions of "the feminine," "the other," and "*écriture féminine*" (feminine writing) to achieve this goal. These analytical concepts are employed to study female characters' individual and cooperative endeavors to change the status quo. Cixous theorized the three notions to emphasize the importance of unorthodox forms of feminine expression in resisting traditional binary impositions of gender and in rewriting new definitions of self. This framework is useful in understanding how one can liberate itself from the shackles of patriarchal obligations and embrace the limitless potentials of feminine desires instead, and thereby formulate a sense of self or a new feminine identity that is dissociated from a discourse of masculinity (Sellers, 2003). In this relation, the concept of "the other"—as a metaphor for exiled energies or the excess (Cixous, 2003a)—is theorized as subverting the traditional binary pairs of men/women and masculine/feminine. Therefore, exclusion of "the other" from the binary creates the "unknown," through which its creative driving force renders the negation of phallogocentric thoughts possible (Cixous, 2003b).

Furthermore, a Cixousian perspective brings to light the manifestation of

subjective feminine experience as a central feature of a woman's life in the novel. In this framework, the notions of "the other" and "the feminine" provide an alternative for phallogentric thoughts to be dissected and reconstructed. In like manner, *écriture féminine*, or feminine writing, offers insights into women's constant struggles to reshape their destiny. By continuously writing and rewriting the past and the present, the female characters move towards the desired future in the name of motherly and womanly love. It is crucial to explore the patriarchal ideology that prescribes and dominates hierarchical gender relations and the literary responses to this male-dominated context to grasp the mechanism of such deconstructions and reconstructions fully.

LITERATURE REVIEW

The Contextual and Literary Background

In recent decades, economic growth and structural advancements have positively transformed India's social, political, and cultural landscape (Nazneen et al., 2019). However, despite the progressive changes concerning the issues of gender and sex, Indian women are still confined to the long-existing patriarchal values and norms. Embedded into the country's traditional culture is the belief that women are the male's responsibility, whether as wives, daughters, or mothers (Jain, 2014; Sharma, 2017). Adherence to this patriarchal belief system has fostered a static and fixed definition of gender roles that have, in turn, deprived women of their independence and

autonomy (Mohanty, 2003; Siddiqi, 2021). Ethnographic studies have shown that a similar culture of gender stereotypes and expectations prevails among the Indians in the diaspora (B. Das, 2021; Jagannath, 2017; Sahoo & Shome, 2020). According to these studies, Indian diasporic communities have maintained—either passively or actively—their ethnonational identities insofar as the traditional perceptions of gender and sex shape the Indian culture in the diaspora.

The notions of gender and sexuality and the long-existing hierarchical gender relations lie at the crux of many of the literary works of Indian women, both nationals and in diaspora (Asl et al., 2018). Most of the literary works by contemporary women writers from India revolve around the current condition of women, marriage, family ties, motherhood, and the masculine discourses of the Indian culture and tradition. The prevalence and commonality of these topics highlight the significance of feminine struggles for identity-making within the male-dominated Indian society. Similarly, Indian diaspora writers explore these topics with further intricacy by reflecting on the processes of identity formation (Anuar & Asl, 2021; Asl & Abdullah, 2017; Kumari, 2018). In doing so, diasporic women writers take up the challenge to question the essentialist notions of identity as fixed and unchanging. Contrary to traditional Western feminism that "refers to third world women as a homogenous, singular group" (Shameem, 2016, p. 193), diasporic Indian women writers uplift the identity of diasporic women as individual, distinctive, and complex.

The South Asian women writers of diasporic experience generally explore the heterogeneity and constant metamorphosis of identities (Anuar & Asl, 2022; Laxmiprasad, 2020; Shukla & Shukla, 2006). Indeed, the significance of gender and sexuality of Indian women and Indian women of diaspora is reflected as a primary element in literary works by Indian women writers. According to Rajeswari and Rajarajan (2019), literary writing provides a platform where subjective feminine experiences can be rediscovered from the new perspective of women's voices. In this relation, diasporic Indian women writers such as Jhumpa Lahiri, Bharati Mukherjee, and Chitra Banerjee Divakaruni seek to represent marginalized Indian women's voices through their compelling portrayal of female characters living in diaspora in fictional works (Laxmiprasad, 2020). S. K. Das (2016) states that while the three writers explore the same aspects of gender and identity formation in search of 'home,' there is a generational difference in the representation of 'belongingness' in the Indian diaspora of the three writers. As such, Divakaruni's fiction is specifically selected for it explores various issues related to women's identity, such as:

mutual help among the women who strive for their life and identity [...] the various aspects of women such as women in love, women in family and society, women in the alien soil, their troubles and adaptation and their bravado of survival [...] the cross-cultural experiences of womanhood

and their assimilation, their struggle between the two worlds and culture. (Rajeswari & Rajarajan, 2019, p. 366)

Even though scholars like Laxmiprasad (2020) believe that the portrayed female characters in Divakaruni's works are imperfect beings who struggle for their identity, her literary writings seek to rejuvenate the novel and subjective feminine experience. This goal is achieved by centering her works around female characters' daily encounters with patriarchal impositions as well as their active participation in reconstructing their identities (Zupančič, 2020). Therefore, exploring the Cixousian feminist perspective adopted as the theoretical framework for the present study to examine such contestations and negotiations in *Before We Visit the Goddess* is crucial.

The Conceptual Background: Cixous's the Other, the Feminine, and *Écriture Féminine*

At the heart of the Cixousian framework is the emergence of a revolutionary practice of writing the feminine language and motherhood, which aims to reconstruct a self unaffected by the history of phallogentrism/phallogocentrism. In realizing this, Cixous has developed the concepts of "the feminine" and "the other" that are crucial in actualizing feminine writing or *écriture féminine*. Cixous' theory is built around the need to resist phallogentrism/phallogocentrism, where language is limited to the foundation of reason and rationality.

According to her, “the entire history of writing is confounded with the history of reason, [which] has been one with the phallogocentric tradition. It is indeed that same self-admiring, self-stimulating, self-congratulatory phallogocentrism” (Cixous, 1976, p. 879). Here, Cixous problematizes the male-centered perspective in writing and censures the blatant disregard for the more obscure “feminine” aspects of the body. In order to break down this structure of power, Cixous formulates a distinguished method of *écriture féminine* or feminine writing as an alternative practice. The two concepts of “the other” and “the feminine” that she theorized as part of other bisexuality become the basis for this revolutionary practice of writing the feminine body and experience. Thus, the approach to the study of the novel *Before We Visit the Goddess* is drawn from the Cixousian concept of feminine writing, through which the embodiment of “the feminine” and “the other” provide an opportunity for women to reclaim their stories and identities.

When discussing “the feminine” and “the other,” the first component that has to be studied is the primary binary division of gender roles and definitions. According to Farahbakhsh and Bozorgi (2013), Cixous sees male/female as the main binary that reproduces patriarchal order, which in turn triggers the birth of other binary oppositions founded in phallogocentrism. For this reason, this dyadic structural order limits creativity and rules out different possibilities beyond its framework. Cixous’ “the feminine” serves to valorize the ‘lesser’ half of the

binary pair masculine/feminine because “feminization, after all, is not an erasure of a male half of a binary, but a representation of all that conventional writing has left out of its discourse” (Hector, 2013, p. 18). Cixous (1996) then proposes “the other” as a third gender, a constructed self that is prompted but excluded from the binary pairs of male/female and masculine/feminine. The “feminine” that she speaks of becomes a necessary element in “keeping alive the other that is confided to her that visits her, that she can love as other. The loving to be other, another, without its necessarily going the route of abasing what is same, herself” (Cixous, 1996, p. 86). In other words, “the feminine” and “the other” are interrelated forces that validate the “irrational,” the whimsical, and the excess that is otherwise neglected and unattainable through phallogocentrism/phallogocentrism.

To understand “the other” not as a separate but a complementary aspect of “the feminine,” the term shall be viewed as an extension of the feminine desires where exclusion from the established male/female and masculine/feminine is possible to navigate the subjective experience as third sex (Cixous, 1976, 1996). Cixous discusses this idea in parallel with the term mother, a prominent and recurring element that shapes a large area of her theory. Torre states that “Cixous’s “mother” is not a name, meaning that it is not a role, a figure, a social category” (2010, p. 174). However, the existence of the self as a m(other) is liberated from phallogocentrism regardless of one’s biological sex. While

the term mother that she speaks of is metaphorical, it is nevertheless inextricably linked to birth and motherhood, both in the metaphorical and physical sense. According to Jordan, Cixous views women's strength in giving birth as a "self-actualizing and self-resourcing process" (2016, p. 96). Thus, the birth of "the other" is salvation for women (by becoming m(other)) to recover and reclaim their selves that were lost due to phallogocentrism/phallogocentrism, and where the feminine subjectivity becomes a necessary inclusion that makes up the whole complete self.

Cixous also weaves a strong connection between writing and birthing/motherhood to establish the basis of *écriture féminine* or feminine writing. In *Coming to Writing*, she draws a parallel between writing and motherhood:

She [A woman] gives birth.... She has her source. She draws deeply. She releases. Laughing. And in the wake of a child, a squall of Breath! A longing for text! ... A child! Paper! Milk. Ink. Nursing time, And me? I'm hungry too. The milky taste of ink! (Cixous, 1986/1991, pp. 30-31).

Cixous likens child and milk, inherently associated with motherhood, to paper and ink, respectively, which are inevitably crucial instruments to writing. With the 'ink' that comes from being a mother, she writes a new beginning for herself on her 'paper.' As stressed by Cixous, a woman is inclined towards a new beginning as she "couldn't care less about the fear of decapitation

(or castration), adventuring, without the masculine temerity, into anonymity, which she can merge with without annihilating herself: because she's a giver" (1976, p. 888). In other words, a woman does not fear castration because it does not deprive but amplifies her capacity to love herself and others. For this reason, feminine writing is a literal and symbolic act that appropriates the production of feminine desire through nurturing "the feminine" and "the other." Feminine writing is not only an act of using ink on paper but also a metaphorical act of rewriting destiny by embodying womanly experience and motherhood.

In relation to motherhood, Cixous forges a connection between giving and affection as the very same properties that shape the act of feminine writing. She implies that women's empowering forces of motherhood and nurturing are similar to the writing of the m(other) and the self. It aligns with Jordan (2016), who views Cixous' writing as distinctively of human creativity, where life and love overpower the forces of destruction and death associated with the feminine sex. Cixous subverts these conventions by introducing feminine solidarity: "woman for women.—There always remains in a woman that force which produces/is produced by the other-in particular, the other woman. In her matrix, cradler; herself giver as her mother and child; she is her own sister-daughter" (1976, p. 881). Therefore, birth and motherhood are viewed as intimate feminine experiences of "the feminine" and "the other" that liberate women and enable the act of feminine writing—a form

of writing from a woman for women. In addition, the basis of birth/motherhood and writing are inseparable from the notion of love. Bauerova (2018) asserts that Cixous rediscovers the relation between a woman and a mother, and through this, the unity of a mother with her child and her other is formed from the basis of acceptance and love. Similar to how motherhood rejuvenates love within a woman, writing becomes a site to restore and reconnect to “the feminine” and “the other,” to accept and love them as parts of the self. In other words, reclaiming the self becomes the first step that enables this revolutionary ‘new love’ for women.

Cixous’ feminine writing is introduced based on rejecting the phallogocentrism of language by asserting feminine subjectivity in their writing. Through the subversion of patriarchal influence in language, feminine writing seeks to manifest women’s underlying reality and true nature. However, according to Jones, *écriture féminine*, although a powerful concept, has been criticized as “idealist and essentialist, bound up in the very system they claim to undermine” (1981, pp. 252-253). While this statement is not unjust, feminine writing undermines as much as it does acknowledge phallogocentrism and patriarchy, for the deconstruction of such systems can only be realized through a profound understanding of their flaws. Therefore, despite the idea of feminine writing being “idealist and essentialist” (p. 252), it allows for an alternative view to the repressed, subdued side of the feminine, giving it an appropriate

space to materialize without completely detaching the values of reality as its foundation. Cixous’ concept of feminine writing is purposefully subjective to provide a site to reconstruct the feminine experience within the existing male-privileged system.

In *Before We Visit the Goddess* (2016), feminine writing is an essential aspect through which “the feminine” and “the other” is manifested. The concepts of “the feminine” and “the other” is prerequisite to catalyzing and reinforcing the realization of feminine writing. It is because feminine writing requires a female subject to dismiss the binary of masculine/feminine and embody the third sex before it can be carried out. This mode of writing that Cixous speaks of may be a physical and/or metaphorical act, where the story of a woman’s life is rewritten to break from the chain of predestined fate. In the case of this novel, Cixous’ feminine writing can be incorporated to study the significance of physical and metaphorical materialization in assisting the reading and understanding of the characters and their stories. Hence, “the feminine” and “the other” are crucial elements in writing and rewriting that are the basis of Cixous’ feminine writing, where the subjective feminine experience can be translated into the novel interpretation of the characters in the novel.

MATERIALS AND METHODS

Research Objective

This study aims to challenge the stereotypical representations of Indian women as submissive and obedient victims

of heteropatriarchal relations of power and emphasize the portrayed women's active participation in resisting the prevailing perceptions of gender and sex. Two minor objectives are to be pursued in the present study to achieve this primary goal: First, to examine the multiple ways the female characters question and resist heteropatriarchal normalizations of sex and gender through empowerment; second, to analyze the different means through which the female characters reinscribe and reconstruct their definition of the self.

Methodology

The article uses a Cixousian analytical framework—a poststructuralist feminist perspective—to analyze Chitra Banerjee Divakaruni's novel *Before We Visit the Goddess* (2016). First, a close reading of the text is performed to examine the fictional representations of female characters' everyday practices of contesting, negotiating, and re-writing existing definitions of gender and identity. Therefore, the main data collection method will be a textual analysis of the novel.

Material

Chitra Banerjee Divakaruni's *Before We Visit the Goddess* (2016) is selected for analysis in this study as it relates the life story of three generations of Indian women who are connected by blood and their family status as mothers and daughters. The novel is directly related to the central argument of this study as it explores the various ways in which women of different ages,

times, and places find their greatest source of power in each other. Each of the female characters must be analyzed individually. It is due to the multiplicity of insights into the collective consciousness of Indian women offered from the standpoint of diaspora and generational differences. The complex relationships among women are explored through the characters of Sabitri, her daughter Bela, and the granddaughter Tara who create their identity through different kinds of love. Sabitri is a widow who sets up a dessert shop called 'Durga Sweet' as a means of living. Her daughter, Bela, feels emotionally disconnected from her because Sabitri spends more of her time in the shop than with her. Later, Bela flies to the United States to live with her boyfriend and later husband, Sanjay. Bela's part of the story tells the failure of her love and marriage. Much like her mother and grandmother, Tara faces emotional difficulties as a result of having an abortion and a conflict with Bela that extends for years. The novel ends with both Bela and Tara reading a letter from Sabitri, recounting her life story. Through this letter, they learn the meaning of love and independence for a woman and a mother.

RESULTS AND DISCUSSION

Resistance Against Patriarchy Through Women's Empowerment

Women's empowerment is a product of resistance against patriarchy. As reflected in the selected novel, each female character has initiated change whereby self-empowerment becomes the outcome of patriarchal resistance. The first character introduced

is Sabitri, a victim of patriarchy who later manages to resist patriarchy through self-empowerment. Her mother, Durga, is their village's hardworking and known sweet-maker. However, the family is not blessed with wealth. When Sabitri is given the opportunity to further her studies in tertiary education, she has to seek the kindness of the Mittirs for a place to stay and food to eat. Then, Sabitri falls in love with the Mittirs' son, Rajiv. Their forbidden romance later leads to her fallout with the Mittirs family. Having to salvage the situation, she decides to marry her math professor, who has been interested in her and helped her following the event with the Mittirs. Over the years, Sabitri realizes that her old lover, Rajiv, "had been weak and pampered, too weak to stand up for [her]. He must have known that his mother had thrown [her] out of the house. But he hasn't even inquired after [her]" (Divakaruni, 2016, p. 28). In this situation, the action of Rajiv's mother is read as a result of the internalization of patriarchy. She upholds and participates in the subordination of other women—in this case, Sabitri—because she cannot share her "monopolistic power, affection, and love of [her] blood relation" (Habiba et al., 2016, p. 217). The force of patriarchy at play shows the powerlessness imposed upon Sabitri that is beyond her control due to poverty. It leads to her dependence on others—the Mittirs and, afterward, her husband before his death. These episodes of her life call for Sabitri to challenge and resist the patriarchal ideology of Indian women.

Cixous' "the feminine" and "the other" is characterized by the resistance to patriarchal binary thoughts. The female characters in *Before We Visit the Goddess* (2016) embody these notions as part of the condition in their journey of rewriting their life. Sabitri is an example of a Cixousian woman who adheres to the ideal that Cixous outlines. As stated, this framework allows for a "she" that is excluded from the masculine order (Sellers, 2003), thus making possible the materialization of the third sex/"the other" from "the feminine." In the novel, Sabitri embraces "the feminine" and makes it the source of her pride by subverting the very same 'lesser' binary pair into her own: "But how Sabitri had enjoyed cooking! This morning [...] when the milk had thickened perfectly, no ugly skin forming on top, she found herself smiling as she had not done since coming to Kolkata" (Divakaruni, 2016, p. 12). In this context, the manifestation of "the other" comes in the form of pleasure from making sweets. As Cixous emphasizes, "the other" is free from pre-existing binary oppositions of male/female and masculine/feminine and is characterized as being "whole and entire" (1976, p. 891), with disregard to castration. Therefore, making sweet—a traditionally reserved activity for women—is reclaimed and remade into an activity that is not gender-specific but measured at the level of 'wholeness' it brings. With this creation of the novel self, "the feminine" is not simply an element that exists as the binary opposition of the masculine. It is instead rejuvenated as a singular element

that brings out the excess outside of the 'known.' As Sabitri turns sweet-making into her very own personal pleasure, she embeds within her the subjective understanding that reshapes the feminine experience into a source of love and pride.

Hence, "the other" that she keeps alive inside her catalyzes the many decisions she later makes in her life. In order to care for Bela after the death of her husband, Sabitri opens a sweet shop named Durga Sweet in the memory of her mother. This important event marks a new beginning where Sabitri takes the unconventional role as the sole provider for her family. It is known that women in traditional Indian families are confined within the home space and/or tied to their husbands. Therefore, they are unlikely to pursue a 'masculine' career, such as starting a business. However, Sabitri makes this an exception for the connection she seeks to keep between herself, her mother, Durga, and her daughter, Bela. Sabitri names the sweet shop after her dead mother as a symbol of love. As Sabitri states about Durga, she was the most talented and hardworking sweet-maker Sabitri has ever known but had never been appreciated as she deserved. By doing this, Sabitri is not only keeping alive the tradition of sweet-making in her family but also honoring her mother. Similarly, to bring up Bela, Sabitri rebuilds her life surrounding this business. The establishment of Durga Sweet and the pursuit of a 'masculine' career out of love for Bela reflect Cixous' association of womanly love that emphasizes 'love' as an element that allows for transformation and

brings about differences: "wherever she loves, all the old concepts of management are left behind [...] she finds not her sum but her differences" (Cixous, 1976, p. 893). In this manner, Durga Sweet appears to be Sabitri's 'difference,' a physical proof of the love Sabitri has for her mother and daughter.

Besides, the losses that Sabitri faces harden her into an independent woman. For instance, Sabitri's husband's death forces her to become independent and self-relying—as highlighted by the manager of her sweet shop, Bipin, who is: "startled by her firm, urbane grip [...] where did a Bengali woman dressed in widow-white learn to shake hands like that?" (Divakaruni, 2016, p. 87). Although such a small gesture, a handshake can indicate someone's personality. In addition to this example, Bipin later brings up that Sabitri knows of darkness: "the death of her husband in a refinery fire which, some people whispered, had been started by the union workers. Afterward, she has to fight the company lawyers, a bitter, lengthy court battle, for compensation" (p. 84). Later, Bela's leaving for the United States adds to this, as her daughter is her Achilles' heel. Regardless, after taking a break for two weeks, Sabitri returns to being her energetic self, and all the employees except Bipin Bihari forget she had been away. These events in her life mark the losses of loved ones as the main factor of her independence.

Similarly, Bela is another victim of phallogocentric tradition—the production of values based on phallogocentrism—who manages to resist patriarchy. Bela has sacrificed her relationship with Sabitri,

her mother, by eloping and marrying Sanjay without her permission. Although Bela's marriage with Sanjay is built from mutual love, a conflict of power and trust accumulates over time, resulting in a divorce forced against her will. Bela states that Sanjay likes to keep secrets from her and decides what is best for her: "My husband, he was like that, too. Kept all kinds of things from me. Thought I wasn't strong enough to deal with them" (Divakaruni, 2016, p. 158). This one-sided divorce decision also causes a fallout with her daughter, Tara, who believes the divorce is Bela's fault. Her role as wife and a mother is confined to her relationship with Sanjay, as she loses her husband and Tara in the process. Nevertheless, these prior events initiate Bela's resistance to patriarchy by adopting "the feminine" and "the other," making a life for herself outside her sole reliance upon her relationship with Sanjay.

The reading of the character Bela can be analyzed through Cixous' "the feminine" and "the other." After the divorce from her husband, Bela starts living on her own with alimony until Sanjay declares bankruptcy, which leaves her penniless. Like Sabitri, she embraces cooking and uplifts it as a site to restart her life and channel her love and pride. Cooking has been a significant part of Bela's life, as stressed by her daughter Tara, "my mother was easygoing about many things, but not the preparation of food" (Divakaruni, 2016, p. 185). By establishing Bela's Kitchen, where she shares traditional Indian recipes, Bela not only reconnects with her culture but also with her identity

and self. Despite the divorce forced upon Bela by Sanjay, the difficult event later leads to her independence as she learns to break the gender expectation of an Indian woman. According to Sivakumar and Manimekalai (2021), Indian women are not expected to work outside the home, and those who do so are thought to be less valuable and less respectable. In the novel, Bela must learn to earn money by herself by demonstrating cooking. Because she needs to improve her communication skill and assert herself, she begins practicing answering the audience's questions, receiving compliments, smiling, and making "flashy moves" (Divakaruni, 2016, p. 149) while demonstrating cooking. As the prospects of ambition, confidence, and assertiveness are found to be lacking in working women (Lathabhavan & Balasubramaniam, 2017; Terjesen & Singh, 2008), Bela's initiatives are a big leap of faith in herself. Hence, Bela resists patriarchy by independently earning money for herself and becoming an active agent in her own life.

Besides, Bela also welcomes "the feminine" and "the other" by picking up dancing again after the separation from her husband, Sanjay. She used to love dancing when she was young. When she pursues her lover in the United States, although she puts aside this desire, she never completely abandons it. Bela re-centers her life around herself and what is important to her by acknowledging her love and desire for dancing. She states that she would love to wear her dress and dance again, through which she could provide herself with a

momentary but meaningful connection to her inner self and forgets life. When Bela wears the outfit, “there was something otherworldly in the way she moved, the way she lifted her arms and spun around, the red-and-white silk blurring like an undulation of fire” (Divakaruni, 2016, p. 159). Bela displays her capacity “of self-constituting a subjectivity that splits apart without regret” (Cixous, 1996, p. 90). The term “splits apart” is used to characterize the capacity of feminine subjectivity that spreads out and releases without being destroyed shall a woman embrace it—alive—as opposed to the belief of embracing “femininity to be associated with death” (Cixous, 1976, p. 885). This reconciliation with the feminine desire catalyzes the formation of her identity and self, where the feminine is rejuvenated as a component that gives birth to the subjective experience of “the other” personal to her. Following the analysis of the female characters, their oppression is followed by resistance to patriarchy that comes in the form of self-empowerment. It is achieved through a reassessment of past experiences and reconnection to the feminine that validates feminine desires from within. Resistance against the concept of patriarchy is first implemented through the realization of its influence, followed by the conscious establishment of a newly liberated self.

The Rewriting of Identity and Self

In the novel, the female characters’ resistance to patriarchy is completed through the practices of reinscribing and reconstructing

their definition of the self. After breaking away from the phallocentric tradition of patriarchy, the female characters build and learn their history through a new feminine language that resonates with Cixous’s theories. This feminine language entails reworking against dominant, rationalist, and largely masculinist language economies with creatively and resistively writing (Nautiyal, 2016). Thus, the materialization of feminine language through feminine writing allows each female character to employ a different practice of reinscribing and reconstructing her definition of self that suits her personal needs. With consideration of circumstantial and subjective feminine desires, the female characters seek to recreate a self-imposed sense of identity that belongs exclusively to themselves. To achieve this, they reconnect to the deepest part of their desires and bring to life the existence of their feminine desires without fear of castration.

The practices of reinscribing and reconstructing the definition of the self are dynamic and distinctively personal for every woman in the novel. Sabitri demonstrates a capacity for attaining a sense of self and identity through a successful recreation of a recipe of sweet. As shown in the novel, sweet making is an important link between Sabitri’s present to her past. According to Jagganath, “food is one of the most significant cultural markers of identity” that becomes a channel “to understand social relations, family and kinship, class and consumption, gender ideology and cultural symbolism” (2017, p. 107). Sabitri’s sense of self and identity is renewed when

she becomes successful in recreating a recipe of sweets that belongs to Durga, through which it becomes a representation of motherly love from Durga to her and from herself to Bela. At the same time, Sabitri also relives a significant connection between herself and her mother, who was a sweet-maker. In practicing this, Sabitri not only commemorates her mother's death but remakes the notion of happiness and independence interlaced with her womanly experience. Similarly, Bela's reconnection to the root of Indian food and culture is an important signifier of the practice of reinscribing and reconstructing the self. Cooking and dancing become the manifestation of feminine desires from within. While both are traditionally considered feminine activities tied to the patriarchal narrative of women, Sabitri and Bela manage to reclaim and reconstruct a new personal meaning into these activities. Through their love for cooking and dancing, Sabitri and Bela do not forsake parts of themselves that were first shaped by their gender and culture but instead take them as theirs to be owned and cherished. Whereas for Tara, she first incorporates the power of imagination where fiction functions as an outlet to generate a common space relative to her experience in the real world. The common space is where the notions of fictional women reside. Thus, Tara reimagines a woman's state of being by creating a bridge between fiction and herself in reality. Later, as this practice is insufficient, Tara begins to rewrite her definition of self by embracing reality and motherhood.

Cixous emphasizes the empowering aspect of stories, imagination, and creativity. The subjective feminine desires are infused into stories to be understood as separate but not completely detached subjects from an individual. Similarly, Tara uses the power of imagination and creativity to weave an intimate connection between stories and her life experience. When Tara becomes friends with an elderly Indian woman for whom she is working as a caregiver, she tells about her life by weaving stories into it. For example, Tara tells the old woman about her cheating boyfriend in relation to the story of the Hercules constellation. The story is about his cheating with another woman, which results in his death at his wife's hand. In a different story, Tara constructs a site through which her desire for a self that is free and cannot be impaired by men can be materialized: "[she] begins the story of the Pleiades, women transformed into birds so swift and bright that no man could snare them" (Divakaruni, 2016, p. 68). By interlacing her experience with fiction and using fiction as an outlet, Tara can incorporate space for herself where such desires are fathomed. She reflects upon the fictional woman as she reconnects with her own experience as a woman in reality.

Similarly, the advice that is being passed down uses vivid imagery to leave a deep impression in the receiver's mind: "Good daughters are fortunate lamps, brightening the family's name. Wicked daughters are firebrands, blackening the family's name" (Divakaruni, 2016, p. 20). It is the first verbal advice that Durga passes to Sabitri before Sabitri writes it in her letter to Bela

and Tara. In the novel, the term “wicked daughters” can generally be understood as daughters who bring shame to the family. In Sabitri’s situation, she views herself as a “wicked daughter” due to her secret relationship with Rajiv, even though it is built on the foundation of love. A similar line of thought can be derived from the figure of Medusa examined by Cixous. While Freud claims Medusa to be a symbol of a terrible mother, Cixous believes that her petrifying gaze is both sexually stimulating and terrifyingly deadly, which she considers a liberating force for women (Alban, 2017). However, as Cixous emphasizes, the same seductive and deadly Medusa can be a figure of empowerment, where the very aspect of her much-feared femininity becomes her source: “You only have to look at the Medusa straight on to see her. And she’s not deadly. She’s beautiful and she’s laughing” (Cixous, 1976, p. 885). An example of this much-feared femininity in the novel is reflected in Sabitri being forced to leave upon the revelation of her love relationship with Mittir’s son. In this instance, from the perspective of Rajiv, who assumes the role of an agent of patriarchy, Sabitri can be likened to Medusa, who expresses her love and an extensive capacity for feminine desire. This capability to want and desire more than what has been prescribed for her by phallocentric tradition is considered detestable as it goes against gender norms. However, like Medusa, Sabitri is ‘not deadly’ but a woman capable of desiring and loving in all her femininity. In these examples, the element of imagination is implemented to establish a distinguishable and powerful comparison with reality.

Feminine writing can be viewed as an act of love from a woman to another woman. Cixous emphasizes the necessity of this act through the physical and metaphorical aspects. In the novel, writing is central to the female characters in how it connects a mother to her daughter and a woman to a woman. *Before We Visit the Goddess* opens with the female character, Sabitri, writing a letter to her granddaughter, Tara. Sabitri has received news about Tara dropping out of college from her daughter, Bela. The raw force of womanly love and desire makes Sabitri write. Cixous emphasizes that writing is not simply for the sake of writing but is led by this desire “in the depths of the flesh, the attack. Pushed. Not penetrated. Invested. Set in motion” (1986/1991, p. 9). Through this act, the physical manifestation of feminine writing that takes place can be translated as a form of selfless confession of love through the sharing of womanly experience: “She looks down at the page. What made her write this foolishness? [...], but perhaps, if she shares her life, the girl might see something there” (Divakaruni, 2016, p. 14). With Cixous’ imagery that links a mother’s milk and her child to ink and paper, the content of the written letter can be viewed as a mother’s ‘milk’ to a child. The milk symbolizes the generosity and abundance of a mother’s love, through which she inscribes her wisdom into the child’s life. Sabitri writes about the joy of having perfected a new recipe for the sweet she would later name after her dead mother. In this letter, she tells them that joy is something she has created by herself

without having to depend on anyone so that no one can take it away. Then, Sabitri emphasizes that this same joy is what she wants for Tara and Bela. In other words, Sabitri means to impart the unprecedented contentment that comes with independence, with creating and owning herself, because it is a form of liberation that is exclusively theirs. Therefore, the act of writing, as demonstrated in the novel, is an extension of the form of motherly love.

Furthermore, the female characters in the novel forged the connection between food and culture to rewrite self and destiny. Food is an element that becomes the catalyst for reclaiming independence in women's lives: Bela has several successful cookbooks, a popular food blog, and *Bela's Kitchen*, whereas Sabitri's desserts are well-known in Kolkata. In relation to Cixous' feminine writing that emphasizes the significance of "bring[ing] women to writing" and placing "herself [a woman] into the text—as into the world and history—by her movement" (Cixous, 1976, p. 875), the cookbooks and the blog shall each be considered as an avenue where Bela rewrites her past self by regaining her independence. For Bela, who has been mostly dependent on her husband throughout her life in America, their divorce has caused great turbulence. *Bela's Kitchen* is a means to build and support a new life outside her marriage. It becomes a source of strength that reconnects her with her root and her family. Similarly, Sabitri established *Durga Sweets* after the death of her husband to rebuild a life for herself and her daughter and to honor her dead mother, Durga. The

decision can be viewed as another example of a form of motherly love: "All this time, I've been holding on to *Durga Sweets* for Bela's sake—in case something happened to her, and she needed to come back and start over" (Divakaruni, 2016, p. 78). Therefore, *Bela's Kitchen* and *Durga Sweets* are tangible manifestations of the rewriting of the women's lives in their attempt to reconnect with culture and family.

Besides, the novel bridges a connection between feminine writing and the process of reclaiming femininity and embracing the self unabashedly. For instance, after the divorce, Bela returns to accepting and reconnecting with the part of feminine desire and the culture she has forsaken in pursuing young love. By embodying the feminine, such raw desire is given an opportunity to be materialized into reality. Bela states she used to love dancing and performing in front of an audience. She felt a thrill she had never felt through dancing and performing since: "Moving to the beat of the tabla, I forgot my life" (Divakaruni, 2016, p. 151). It implies that dancing is meant as a site to rejuvenate her deepest desire. Only through dancing again can Bela incorporate "the existence of alternative forms of relation, perception and expression" as suggested by Cixous to be associated with feminine writing (Sellers, 2003, p. xxix). Bela appears young and happy, like a girl, as she dances again. In other words, this novel expression uniquely belonging to Bela is a channel through which her feminine desire writes and dreams and "invents new worlds" (Cixous, 1996, p. 72). Thus, Cixous' feminine writing allows

the healing of repressed feminine desire and owning it proudly as part of oneself.

Cixous' feminine writing is a continuous process of writing and rewriting. The novel focuses specifically on Tara, who has gone through the process multiple times in her life. As Cixous (1976/1981) explains in *Castration or Decapitation?* about woman and loss, to go on living, a woman has to take up the challenge of loss by living it and giving it life. It is reflected in Tara's story, where she faces a series of losses before reclaiming them. It begins with her dropping out of college to start working due to her frustration regarding her parents' divorce. Then, she decides on abortion after her boyfriend, who gets her pregnant, leaves her. These important prior events lead to the rewriting of her destiny in which Tara reclaims the dream she has lost by "taking loss, seizing it, living it" (p. 54). First, Tara builds back her foundation—she returns to college, graduates, and embarks on a career. Then, she marries a man she loves and goes through a successful pregnancy. Finally, the birth of the baby awakens motherly love within herself in the similar way it does to Sabitri and Bela: "Neel's birth changed things some [...] I don't know why I found myself weeping. Maybe it was postpartum hormones. I held him to me and cried like I'd never cried before" (Divakaruni, 2016, p. 188). Tara realizes nothing can amend the abortion she has willingly gone through in the past, but when she ceases crying as she holds Neel, she knows something in her is changing. Following the baby's birth, Tara goes through a rebirth of her

own—i.e., a cathartic realization that prompts the embodiment of womanhood and motherhood. In other words, by giving birth, Tara gives herself the means to rewrite her destiny without forsaking the experience she has written for herself in the past.

The act of rewriting in *Before We Visit the Goddess* intertwines the aspects of m(other) and religion. For example, in relation to pregnancy and m(other), Cixous explains that water is inextricable to the woman's body:

Unleashed and raging, she belongs to the race of waves. She arises, she approaches, she lifts up, she reaches, covers over, washes a shore, flows embracing the cliff's least undulation, already she is another, arising again, throwing the fringed vastness of her body up high, follows herself, and covers over, uncovers, polishes makes the stone body shine with the gentle underserving ebbs, which return to the shoreless non-origin as if she recalled herself in order to come again as never before.... (1996, p. 90-91)

According to Ramshaw, Cixous draws this parallel between water and motherliness where a woman is emphasized as "'living water,' *agua viva*, ever-growing and spreading; fearless: for how the sea can be afraid of the land it is blanketing, enveloping? how can the watery womb be fearful of the fetus it is protecting and nourishing?" (2003, p. 25). In this parallel, water is used as an element that symbolizes a woman's bodily fluid—i.e., blood and

amniotic fluid—to nurture and protect life. In relation to Cixous' conceptions of birthing and motherhood, a similar form of kindness and generosity can also be found in religion. Even though Cixous has not specifically outlined this connection, religion often considered the water element a general symbolism. According to Rasool (2019), in Eastern religious thought, the imagery of water and sea is celestial due to the motion of flowing inward and outward. Therefore, water can be associated with purification and redemption of life from the viewpoint of religion. The similarity of the element of water and sea between religion and Cixous's motherliness lies in its abundance and healing property. The process of remaking and rewriting life is then prompted by having been blessed by the unyielding water—i.e., the feminine source—of a goddess and a mother, respectively. In the novel, Tara has been assigned to be a chaperon for Dr. V, who has come to America to give a lecture. Later, Dr. V requests to visit a temple during their ride back to the Airport, where he tells her that they must cleanse themselves before visiting the goddess: "...he aimed the hose toward me. Water pooled over my feet and under my burning soles [...] That cool silver shimmer in the blazing afternoon. That small benediction. How can I forget it?" (Divakaruni, 2016, p. 136). As demonstrated, it is through the kindness and the love offered with the grace of the goddess that one can reconnect with other people and rekindle hope. Tara starts the process of rewriting her life for the better after this event, through which the relief

from the water is a blessing that likely catalyzes this process. It is comparable to the relationship between a mother and a child, where such selfless love and acceptance from a mother become benedictions to a child's life.

Multiple practices are employed in the rewriting of self and identity. The act of feminine writing, both physical and metaphorical, is implemented by the characters to deconstruct and reconstruct their predestined fate associated with gender. Physical writing that comes in the form of text—Sabitri's letter and Bela's cookbooks and blog—is a product of love and courage in desiring a change in themselves and other women. Whereas metaphorical writing comes from redefining life through the manifestation of changes initiated from within an individual. Consequently, physical writing is a means to reach out and share with other women, while metaphorical writing is an abstract, personal, and subjective process to reclaim a self for every woman. Each female character negates patriarchal influence in their life by recognizing feminine desire as a source of strength instead of weakness. In this respect, the outcome of rewriting herself and identity lies in the emergence of feminine writing, where "the feminine" and "the other" is materialized.

CONCLUSION

This study employed Hélène Cixous' concepts of "the feminine," "the other," and "*écriture féminine*" as an analytical approach to explore Divakaruni's *Before We Visit the*

Goddess (2016) and examine the female characters'—i.e., Sabitri, Bela, and Tara—encounter with male-centered impositions of gender roles and boundaries. The primary focus of the study has been on how the three characters' experiences of dramatic losses—i.e., separation from their husbands and/or daughters—have transformed their lives. This change can be attributed to the successful emancipation from the patriarchy that has made reconstructing their lives possible through the rewriting of self and identity. The female characters resist patriarchy amidst the Indian cultural influence in their idiosyncratic ways. For example, Sabitri becomes independent after her husband's passing, resisting the norm of the feminine role by establishing a business named Durga Sweet, which becomes a source of income to raise her daughter, Bela. Later, through the physical act of writing, Sabitri aims to leave her own feminine experience in the form of a letter to her daughter, Bela, and her granddaughter, Tara. The practice underlines the importance of women's reclaiming and narrating their own life stories. Similarly, Bela achieves autonomy after her divorce, a feat uncommon for an Indian woman living abroad. Through her independence, Bela learns to reconnect with her feminine desire and gives herself the room to realize "the other." The metaphorical manifestation of feminine writing can be seen in Bela's life transformation after the divorce, resulting from rewriting herself and identity through gaining independence and living for herself. Likewise, Tara's metaphorical rewriting

of self and identity is achieved through acceptance and motherhood. Although she never forgives herself for having aborted her baby, Tara mends the present by conceiving again and birthing another baby. Therefore, all the female characters demonstrate the will of a woman and a mother and the love that becomes the most significant factor in their resistance to patriarchy and their rewriting of the self and identity.

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Pakistani Teachers' Views About Their Undergraduates' Willingness to Communicate in English Inside the Classroom

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ABSTRACT

The main goal of modern second language (L2) pedagogy is to engender effective communication among its learners. Willingness to Communicate (WTC) has emerged as the most vibrant topic in L2 pedagogy, especially in the last two decades. A plethora of research on students' views about their WTC has been conducted in a variety of contexts. However, research on teachers' views about their students' WTC in English is still in its infancy. Thus, this study investigated ESL teachers' views about their undergraduates' WTC in English inside the classroom. The cluster sampling technique was used to collect data from 80 ESL teachers from eight universities in Khyber Pakhtunkhwa province of Pakistan. The results revealed that the teachers viewed the undergraduates' level of WTC as high in most classroom situations, such as during groups, during activities with the same and opposite gender, when given preparation time, seated in the middle of the class, and in front of the whole class. However, students showed a moderate level of WTC in situations such as sitting in front of the class and at the back of the class. A one-way ANOVA was performed to examine the differences between different classroom situations. The results showed significant differences in the teachers' views about their students' WTC in most classroom situations. Thus, the current study affirms that WTC is a dynamic variable that changes from situation to situation.

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INTRODUCTION

Contemporary second language (L2) pedagogy encourages learners to communicate in the target language. This purpose emphasises the need for

L2 pedagogy to empower learners to have the Willingness to Communicate (WTC). Researchers claim that effective communication in L2 is the main learning objective (de Saint Léger & Storch, 2009; MacIntyre et al., 2011). MacIntyre et al. (1998) asserted that one of the conclusive objectives of L2 education is to create WTC among learners to communicate proficiently. WTC is “readiness to enter into a discourse at a particular time with a specific person or persons, using an L2” (MacIntyre et al., 1998, p. 547). The ability to use L2 could not be determined by linguistic competence because some L2 learners with high linguistic competence may speak less, while some students with minimal linguistic competence may use L2 more frequently (MacIntyre et al., 1998). MacIntyre and Doucette (2010) believe that in the modern era, language teaching strategies focus on engaging learners in effective oral communication inside a classroom. Thus, a plethora of research on WTC from students’ perspectives has been conducted in a variety of contexts, such as in Iran (Riasati, 2012; Riasati & Rahimi, 2018), China (Chang, 2018; M. Liu & Jackson, 2009), Turkey (Asmali, 2016; Cetinkaya, 2005), Korea (Kang, 2005; Kim, 2004), and Pakistan (Ali, 2017; Kalyar et al., 2019; H. A. S. Syed, 2016).

Pakistan is multilingual, with more than 70 languages (Ali, 2017; Shamim, 2011). English is paramount in these languages importance (Ali, 2017). English is official in all private and government organisations (Ali, 2017; Shamim, 2011). English is

compulsory in all government and private institutions from Grade one to undergraduate (Ali, 2017; T. J. Khan et al., 2017; Shamim, 2011; Shoukat & Ghani, 2015). English is also the language of media, education, military, dominance, and corporate sector (Pathan et al., 2010; Shamim, 2008, 2011; H. A. S. Syed, 2016). However, English is often taught through the traditional grammar-translation method (GTM) (Ali, 2017; Bukhari et al., 2015). GTM focuses on teaching vocabulary and grammatical rules rather than enhancing learners’ communicative skills (Omar, 2019). On the other hand, in the modern era, the objective or goal of teaching English is to engender effective communication skills among its learners (Bukhari et al., 2015; MacIntyre et al., 1998). However, Javed (2020) found that Pakistani undergraduates could not speak proper English. Moreover, they lack confidence when communicating in English (Javed, 2020). Despite learning English for almost 14 years, Pakistani students are still weak in English communication skills; they feel hesitant and shy while speaking in English (Ali et al., 2020; Nosheen et al., 2020). Furthermore, the undergraduates of Pakistan lack English speaking skills (Abbasi et al., 2020). Abbasi et al. (2020) asserted that Pakistani university students need to work on their English-speaking skills. Much research has been done on the students’ perspective of WTC inside the class (Ali, 2017; Ali et al., 2020; Bukhari et al., 2015; Cao, 2011; Kang, 2005; MacIntyre et al., 2011; Zarrinabadi, 2014). However, teachers’ views about their students’ WTC should also be considered.

Researchers found that teachers' views are very important for every study of human behaviour and learning (Ajzen, 1988; Gilakjani & Sabouri, 2017). The views brought by teachers to the classroom are very crucial to the learning process of the students (Breen, 2001). Similarly, Li (2012) asserted that teachers' views play a very important role in L2 learning. Many researchers such as Cao (2011), MacIntyre et al. (2011), and Peng (2007) found that teachers' attitudes, views, teaching style, and involvement exert a significant influence on university students' participation. Moreover, the instructor's social support helps reduce university students' anxiety and enhances L2 WTC (Kang, 2005). Previous studies were useful in bringing the teacher variable into L2 learners' WTC. However, less attention has been given to the teachers' views on university students' WTC (Chang, 2018). Moreover, the teachers' views about their students' WTC in English have yet to be explored in the Pakistani ESL context (Ubaid et al., 2021).

Hence, the present study attempts to investigate the students' WTC from the teachers' perspective in nine situations, i.e., in groups, during activities, with the same and the opposite gender, when given preparation time, when seated in front, in the middle, at the back of the class, and in front of the whole class inside the classroom. Therefore, the main aim of the current study is to investigate the teachers' views about their students' WTC in English inside the classroom.

Research Questions

1. What are the teachers' views about their undergraduates' level of WTC in English in various classroom situations?
2. Are there any differences in the teachers' views about their students' WTC between various classroom situations?

The main focus of modern L2 pedagogy is to enhance the students' communicative competence. Thus, it can be argued that WTC can engender the learners' L2 communication skills. Subsequently, much research has been conducted on the L2 WTC from students' perspectives. As a result, the current study investigates L2 WTC from teachers' perspectives. The following section deals with the related literature on the researched phenomenon.

LITERATURE REVIEW

WTC in L2

MacIntyre et al. (1998) theorised WTC in L2 by conceptualising a pyramid-shaped model (Figure 1). The model contains a wide range of psychological and social variables which may influence the decision to communicate (MacIntyre & Wang, 2021).

Layer 6 of the model reflects the individual and social variables, indicating the extensive influences on L2 communication, including learners' personality and intergroup climate. Both the relationship between language groups and personality traits changes very slowly but are omnipresent across communication

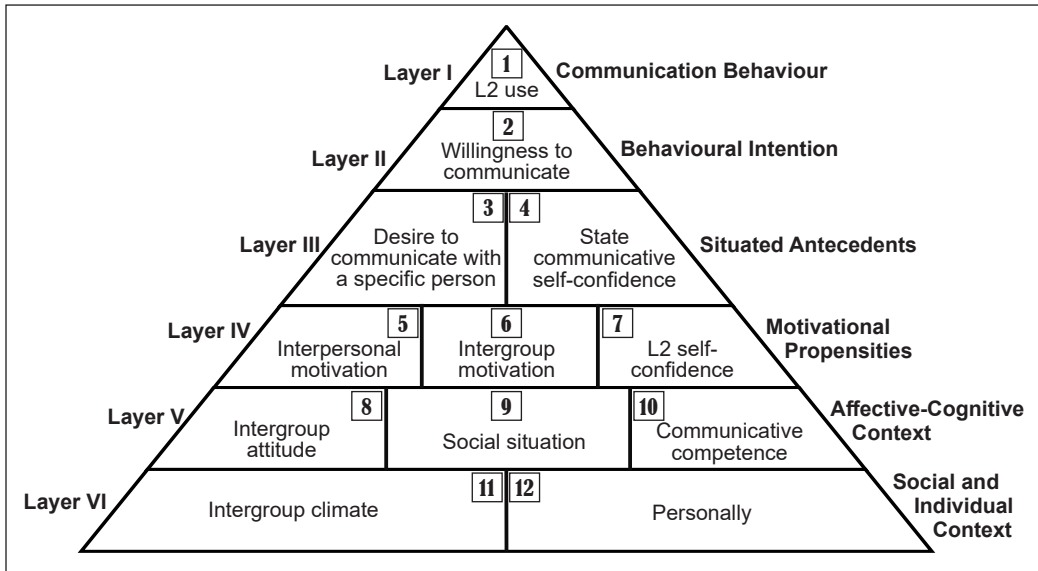


Figure 1. The Pyramid Model of L2 WTC (MacIntyre et al., 1998).

settings, often working in the background (MacIntyre, 2020). For example, studies show that attitudes towards learning English and international posture as the way to speak with foreign people are consistently correlated with higher WTC (Peng & Woodrow, 2010; Yashima, 2009; Yashima et al., 2004). Personality, in particular openness and extroversion, has also been correlated with L2 WTC across several studies (Fatima et al., 2020; Oz, 2014; Piechurska-Kuciel, 2018).

Moving up the model, Layers 4 and 5 contain the bulk of L2 WTC research. Research shows that a wide range of contextual, social, interpersonal, and intra-personal variables are associated with L2 WTC (MacIntyre & Wang, 2021). Shirvan et al. (2019), in a meta-analysis study, found that motivation, anxiety, and perceived language competence were significantly correlated with WTC. Studies

indicate that WTC inside the classroom can differ from WTC outside the classroom; sometimes, supportive situations lead to higher L2 WTC, but on the other hand, harsh pedagogical practices may reduce students' WTC in L2 inside the classroom (Başöz & Erten, 2018; Kang, 2005). In the classroom context, positive interaction with peers and teachers can enhance learners' WTC (Cao, 2011; Sheybani, 2019).

The top three layers of the pyramid indicate that WTC is situational, which changes from moment to moment (MacIntyre, 2020). Recent research studies also found that L2 WTC is a dynamic variable which changes from situation to situation (Cao, 2014; MacIntyre, 2020; Mystkowska-Wiertelak, 2018; Riasati & Rahimi, 2018; H. Syed & Kuzborska, 2019). Layer 3 specifies the state of communicative self-confidence and desire to communicate with a specific person. Layer 2 has one

element, i.e., willingness to communicate, defined as “readiness to enter into a discourse at a particular time with a specific person or persons, using an L2” (MacIntyre et al., 1998, p. 547). In situational WTC, recent research has shifted the focus to the L2 classroom context (Mystkowska-Wiertelak, 2018; MacIntyre & Wang, 2021; Riasati & Rahimi, 2018). Teachers' role immediacy and views inside the classroom influence learners' L2 WTC (Sheybani, 2019). Teacher involvement is key in easing the students' pressure and enhancing their WTC (Ballester, 2015). Moreover, studies found that teachers' direct involvement with students increased teacher-student relationships inside the classroom (Harran, 2006; Hsu, 2005; Saechou, 2005).

Teachers' Role in Learners' WTC

Along with other affecting variables, the teacher's role has been a significant variable influencing learners' WTC (Cao, 2011; Kang, 2005; MacIntyre et al., 2011; Zarrinabadi, 2014). MacIntyre et al. (2011) stated that teachers' involvement could lower and raise learners' WTC at any moment. Kang (2005) also asserted that social support from teachers enables learners to lower their anxiety and enhances their WTC. Teachers play a vital role in learners' tendency to talk with peers and teachers (MacIntyre et al., 2011). In concurrence, Cao (2011) pointed out that the immediacy and involvement of teachers influence students' engagement and WTC. The more the learners like their teacher, the more they ask questions and take part in activities inside the classroom

(Cao, 2011). Zarrinabadi (2014) found four factors in relation to teachers that may influence students' WTC: the decision on the topic, teacher's support, wait time, and error correction. As mentioned, the teachers' support, immediacy, error correction, teachers' role, teachers' decision on the choice of the topic, and wait time in facilitating or debilitating learners' WTC have been widely investigated. However, teachers' views about their students' WTC inside the classroom have yet to be explored in the Pakistani ESL context (Ubaid et al., 2021).

WTC Inside Classroom

In an educational context, WTC plays a very important role in encouraging learners to engage in active, communicative behaviour. Therefore, it should be the basic goal of language instruction (MacIntyre et al., 1998). Previous research showed no discrepancy between out-of-class and in-class WTC (Borkowska, 2021). For example, MacIntyre et al. (2001) examined four language skills from outside and inside classroom perspectives in the immersion context. However, the interactions in this study referred to “friends,” “acquaintances,” or “strangers” with no specific professions (Borkowska, 2021). For the first time, Weaver (2005) developed a questionnaire focusing on the activities occurring in a classroom context, such as doing a role-play and writing a paragraph. In the Chinese context, a study by Peng and Woodrow (2010) investigated in-class WTC among three interlocutors types: a group of peers,

a teacher, and a peer. In this study, Chinese students were more willing to communicate in controlled situations rather than in form-focused and meaning-focused exercises. Peng (2014) stated that Asian classrooms are teacher-centred, and silence in class is considered an indicator of respect for the teacher, who is the sole authority in the class (J. Liu, 2002).

Furthermore, being talkative in class may contribute to “showing off” (Peng & Woodrow, 2010). Mystkowska-Wiertelak and Pawlak (2017) also developed a tool and conducted a study among university learners in the Polish context. They measured WTC in relation to various factors. The results showed that individual differences variables had a great amount of impact on WTC inside the classroom. They concluded that anxiety, learning strategies, personality, and English learning agendas might contribute to the differences in the results. However, the current study developed and validated a comprehensive questionnaire on teachers’ views about their students’ WTC in English inside the classroom.

Factors Influencing In-Class WTC

It is worth mentioning that most previous research indicated a plethora of different variables affecting WTC inside the classroom (Cao, 2011; Peng & Woodrow, 2010; Riasati, 2012; Riasati & Rahimi, 2018; Zarrinabadi, 2014). For example, Cao (2011) emphasized the importance of task type and topic. Earlier researchers found that learners take more interest in familiar topics because they possess more knowledge and

vocabulary to share with their peers (Cao & Philp, 2006; Kang, 2005; MacIntyre & Legatto, 2011; Mystkowska-Wiertelak, 2016). Moreover, interlocutors play a vital role in maintaining WTC. It is also found that students are more WTC with familiar group members, those who are active, and more cooperative (Kang, 2005, Pawlak & Mystkowska-Wiertelak, 2015). De saint Léger and Storch (2009) pointed out that more talkative students should not dominate classroom interaction as it may affect WTC in L2 and, resultantly, refrain less secure learners from communication.

Research also showed that a positive classroom climate leads to cooperation, lower anxiety, and increases the chances of high WTC (Cao, 2011; Dewaele & Dewaele, 2018). A positive classroom environment created by a teacher promotes communicative behaviour in learners through interaction in different tasks (Riasati & Rahimi, 2018; Sheybani, 2019). Mystkowska-Wiertelak and Pawlak (2017) also found that students appreciate those teachers who encourage students to engage actively in pairs because it motivates them to use their interaction positively. It is evident from previous studies that teachers’ immediacy and support in the form of positive verbal and non-verbal behaviour such as praising, smiling, and encouragement resulted in a positive environment and good rapport inside the classroom (Cao, 2011). Zarrinabadi (2014) found that learners’ L2 WTC was affected by the teacher’s time given to error correction, topic selection, and task preparation. MacIntyre et al. (2011) further explained that errors should

be corrected non-threatening because error correction feedback is considered a factor that influences and exerts learners' WTC. Students were more eager to participate when gentle error correction was given, whereas they were more anxious and discouraged when immediate error correction was given during tasks (Zarrinabadi, 2014). Interestingly, the learners' fear of making mistakes was lower when talking to a different or strange interlocutor inside the classroom (Baran-Lucarz, 2015).

Likewise, classroom interactional methods are believed to affect learners' WTC. Previous research found that students liked dyads or small groups compared to whole-class interaction as it is anxiety-provoking (Cao, 2011; de Saint Leger & Storch, 2009). Turn-taking in pairs was less competitive and discouraging to learners with lesser language competence (Cao, 2013; Cao & Philp, 2006; Mystkowska-Wiertelak, 2016). When it comes to the learners' performance in pairs and individually, Mystkowska-Wiertelak and Pawlak (2014) found that learners preferred monologue to pair work, despite the fact that WTC tends to drop during individual work, whereas it may increase in dialogue during tasks. Riasati and Rahimi (2018) found that preparedness, gender, and seating position influenced the respondents' L2 WTC. Research revealed that topic familiarity escalates learners' WTC inside the classroom (Cao & Philp, 2006; de Saint Leger & Storch, 2009). Moreover, the seating position can also assist or hinder the learners' WTC. H. A. S. Syed (2016) found that the students' WTC

was high when seated in front of the class while they were less WTC when seated at the back of the class. Mystkowska-Wiertelak (2016) found that the learners' WTC was less in the whole class interaction. Likewise, in de Saint Leger and Storch's (2009) study, the whole class interaction was the most challenging activity for the learners. Cao (2009) found that the informants' WTC was low in the whole class interaction due to awkwardness and peer pressure.

As mentioned, WTC was first conceptualised by MacIntyre et al. (1998) in L2. At first, the focus of the researchers was on the L2 learners in ordinary life situations. Later, the researchers started to investigate WTC in classroom situations. It was found that inside the classroom, WTC was influenced by a host of factors, including interlocutor, topic familiarity, grouping, task type, error correction, and teachers' immediacy. The subsequent section will elaborate on the quantitative design, participants, and instruments to give a clear picture of the methods applied in the current study.

METHOD

The current study used a quantitative research design. First, a questionnaire was used to collect data from the ESL teachers. Quantitative data enable the researcher to get information based on the facts (Kalsoom et al., 2020). Kalsoom et al. (2020) further explained that results obtained from numerical data such as questionnaires provide deeper and complete insight into the researched phenomenon.

Participants

Data were collected from 80 ESL teachers (male N=50, 62.5%, female N=30, 37.5%) teaching undergraduates at universities in the Khyber Pakhtunkhwa province in Pakistan. The participants were selected through the cluster sampling method. Johnson and Christensen defined cluster sampling as “a form of sampling in which clusters (a collective type of unit that includes multiple elements, such as schools, churches, classrooms, universities, households, and city blocks) rather than single-unit elements (such as individual students, teachers, counsellors, administrators, and parents) are randomly selected” (2008, p. 235).

First, eight universities (clusters) were randomly selected out of thirty-one universities in the province. Then, ten ESL teachers were selected from each university. Prior to data collection, each participant signed a consent form.

Instrument

Due to the unavailability of an instrument to investigate teachers' views about their students' WTC, the research first took items from previous questionnaires developed for students' WTC. Then, the items were modified from students to teachers' views. The items of this questionnaire were adapted from Peng and Woodrow (2010), Riasati and Rahimi (2018), and Yashima et al. (2018). The questionnaire consisted of eighty items containing nine different situations inside the classroom, such as WTC during groups, activities, same gender, opposite gender, when prepared,

in front of the class, in the middle of the class, at the back of the class, and in front of the whole class. After modifying the items, the validity of the questionnaire was established. The opinion of experts plays a vital role in the validity of the questionnaire (Brown, 1983, cited in Pamuk et al., 2015). Therefore, experts' judgment is the most appropriate way to determine the validity of an instrument (Gay et al., 2011). Gable and Wolf (2012) stated that a minimum of two experts' views are required to determine the validity of a questionnaire. Thus, two experts' views were taken to determine the validity of the questionnaire. The experts removed some irrelevant items, and the number of items was reduced to 80, containing nine subscales—subscale “grouping mode” comprised of three items. However, researchers recommended that a scale have a minimum 3 of three items (Robinson, 2018). Later, the reliability of the items was determined using Cronbach's alpha. The questionnaire's reliability was ($\alpha = .96$) on Cronbach's alpha. The reliability details of the WTC subscales are given in Table 1.

The questionnaire comprises students' WTC from teachers' perspectives in nine situations inside the classroom. There are several reasons for developing a comprehensive questionnaire. First, McCroskey and Baer (1985) developed a WTC scale. However, this scale was limited to only three types of interlocutors, i.e., WTC small groups, peers and large groups with three types of people: friends, strangers, and acquaintances. Moreover, the authors did not specify the questionnaires

Table 1
The reliability of the WTC questionnaire

| | WTC Subscales | Items | Reliability |
|----|---------------------------------------|-------|-------------|
| 1 | In different grouping mode | 3 | 0.85 |
| 2 | In different activities | 6 | 0.87 |
| 3 | With the same gender | 8 | 0.72 |
| 4 | With opposite gender | 8 | 0.77 |
| 5 | When given preparation time | 11 | 0.90 |
| 6 | When seated in front of the class | 11 | 0.92 |
| 7 | When seated in the middle of class | 11 | 0.94 |
| 8 | When seated at the back of the class | 11 | 0.88 |
| 9 | When seated in front of a whole class | 11 | 0.84 |
| 10 | Overall WTC | 80 | 0.96 |

with inside classroom situations but items that included ordinary life situations (Peng, 2013). Second, Weaver developed a questionnaire on WTC in EFL contexts. Nevertheless, the questionnaire items were ambiguous such as “[i]nterview someone in English asking questions from the textbook” (Weaver, 2005, p. 415). The interlocutors were not specified. The word “someone” is ambiguous, the respondents may infer it as teachers or classmates. Third, researchers have highlighted a dire need for a comprehensive questionnaire on WTC inside the classroom (Cao & Philp, 2006; Riasati & Rahimi, 2018; Ubaid et al., 2021). Fourth, previous questionnaires included WTC from students’ perspectives. Thus, the current questionnaire comprised 80 items covering all important situations inside the classroom on students’ WTC from teachers’ perspectives.

Data Analysis

The data were analysed using descriptive statistics (mean and standard deviation) and one-way ANOVA to see the differences in

WTC in different classroom situations. To determine the level of WTC, the researchers divided the mean score into three levels. High mean score is 3.68 to 5.00, moderate 2.34 to 3.67, and low 1.00 to 2.33 (Başöz & Erten, 2018; Kalra, 2017; Lian & Budin, 2014). Thus, this study used the same interpretation of the mean score for low, moderate, and high WTC.

This study employed a quantitative research design. The participants were ESL teachers. Previously, several questionnaires were developed to measure the learners’ WTC in L1 and L2 contexts. This study has attempted for the first time to develop and validate a comprehensive questionnaire that measures the learners’ L2 WTC from teachers’ perspectives in nine different situations inside the classroom. The results of these nine situations are presented in detail in Table 2.

RESULTS

Table 2 demonstrates the teachers’ views about their undergraduates’ WTC in English in different classroom situations. The results

show that according to the teachers, the undergraduates' WTC was high in situations such as in grouping mode (individually, in pairs, and in small groups), during different activities (role-play, presentation, discussion), with the same gender, with the opposite gender, when prepared, in the middle of the class, and front of the whole class. On the other hand, their WTC was moderate in certain situations, like in front and at the back of the class.

Table 3 shows the results of the one-way ANOVA. Again, there was a statistically significant difference ($F = 567.973$ and the $P < .05$) between groups and within the group of teachers' views about their students' WTC inside the classroom.

Table 4 demonstrates the comparison between various situations based on the

teachers' views about their undergraduates' WTC inside the classroom. For multiple comparisons, Tukey's HSD test was performed. The results revealed that there was a statistically significant difference between the teachers' views about their students' WTC inside the classroom in most situations ($P < .05$). However, in a few situations (with the same gender with the opposite gender, when prepared in front of the whole class and the middle of class, at the back of the class in front of the class), there was no significant difference between the teachers' views about their students' WTC ($P > .05$).

The results obtained through mean and standard deviation revealed that from the teachers' perspectives, the level of the students' WTC was high in most situations

Table 2

The teachers' views about their undergraduates' WTC in English in different situations inside the classroom

| | WTC in different situations | Mean | Std. deviation |
|---|---|-------|----------------|
| 1 | WTC in grouping mode. | 3.875 | .661 |
| 2 | WTC during activities inside a class. | 3.766 | .565 |
| 3 | WTC with the same gender in a class. | 3.829 | .417 |
| 4 | WTC with opposite gender inside a class. | 3.853 | .365 |
| 5 | WTC when prepared. | 4.018 | .347 |
| 6 | WTC when sitting in front of the class. | 3.470 | .563 |
| 7 | WTC while sitting in the middle of the class. | 3.885 | .385 |
| 8 | WTC while sitting at the back of the class. | 3.447 | .541 |
| 9 | WTC in front of the whole class. | 3.908 | .402 |
| | Overall | 3.741 | .315 |

Table 3

One way ANOVA

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|-----|-------------|---------|------|
| Between groups | 82551.461 | 8 | 10318.933 | 567.973 | .000 |
| Within groups | 12917.450 | 711 | 18.168 | | |
| Total | 95468.911 | 719 | | | |

Table 4
Comparison between various situations based on the teachers' views about their undergraduates' WTC inside the classroom

| (I) WTC subscale | (J) WTC subscale | Mean difference (I-J) | Std. error | Sig. | 95% Confidence interval | |
|----------------------|-----------------------------|-----------------------|------------|-------|-------------------------|-------------|
| | | | | | Lower bound | Upper bound |
| During grouping mode | During activities | -11.53750* | .67394 | 0.000 | -13.6344 | -9.4406 |
| | With the same gender | -19.58750* | .67394 | 0.000 | -21.6844 | -17.4906 |
| | With opposite gender | -21.55000* | .67394 | 0.000 | -23.6469 | -19.4531 |
| | When prepared | -34.03750* | .67394 | 0.000 | -36.1344 | -31.9406 |
| | In front of the class | -28.01250* | .67394 | 0.000 | -30.1094 | -25.9156 |
| | In the middle of class | -32.57500* | .67394 | 0.000 | -34.6719 | -30.4781 |
| | At the back of the class | -27.76250* | .67394 | 0.000 | -29.8594 | -25.6656 |
| | In front of the whole class | -32.82500* | .67394 | 0.000 | -34.9219 | -30.7281 |
| During activities | During grouping mode | 11.53750* | .67394 | 0.000 | 9.4406 | 13.6344 |
| | With the same gender | -8.05000* | .67394 | 0.000 | -10.1469 | -5.9531 |
| | With opposite gender | -10.01250* | .67394 | 0.000 | -12.1094 | -7.9156 |
| | When prepared | -22.50000* | .67394 | 0.000 | -24.5969 | -20.4031 |
| | In front of the class | -16.47500* | .67394 | 0.000 | -18.5719 | -14.3781 |
| | In the middle of class | -21.03750* | .67394 | 0.000 | -23.1344 | -18.9406 |
| | At the back of the class | -16.22500* | .67394 | 0.000 | -18.3219 | -14.1281 |
| | In front of the whole class | -21.28750* | .67394 | 0.000 | -23.3844 | -19.1906 |
| With same gender | During grouping mode | 19.58750* | .67394 | 0.000 | 17.4906 | 21.6844 |
| | During activities | 8.05000* | .67394 | 0.000 | 5.9531 | 10.1469 |
| | With opposite gender | -1.96250 | .67394 | 0.088 | -4.0594 | 0.1344 |
| | When prepared | -14.45000* | .67394 | 0.000 | -16.5469 | -12.3531 |
| | In front of the class | -8.42500* | .67394 | 0.000 | -10.5219 | -6.3281 |
| | In the middle of class | -12.98750* | .67394 | 0.000 | -15.0844 | -10.8906 |
| | At the back of the class | -8.17500* | .67394 | 0.000 | -10.2719 | -6.0781 |
| | In front of the whole class | -13.23750* | .67394 | 0.000 | -15.3344 | -11.1406 |

Table 4 (continue)

| (I) WTC subscale | (J) WTC subscale | Mean difference (I-J) | Std. error | Sig. | 95% Confidence interval | |
|-----------------------|-----------------------------|-----------------------|------------|-------|-------------------------|-------------|
| | | | | | Lower bound | Upper bound |
| With opposite gender | During grouping mode | 21.55000* | .67394 | 0.000 | 19.4531 | 23.6469 |
| | During activities | 10.01250* | .67394 | 0.000 | 7.9156 | 12.1094 |
| | With the same gender | 1.96250 | .67394 | 0.088 | -0.1344 | 4.0594 |
| | When prepared | -12.48750* | .67394 | 0.000 | -14.5844 | -10.3906 |
| | In front of the class | -6.46250* | .67394 | 0.000 | -8.5594 | -4.3656 |
| | In the middle of class | -11.02500* | .67394 | 0.000 | -13.1219 | -8.9281 |
| | At the back of the class | -6.21250* | .67394 | 0.000 | -8.3094 | -4.1156 |
| | In front of the whole class | -11.27500* | .67394 | 0.000 | -13.3719 | -9.1781 |
| When prepared | During grouping mode | 34.03750* | .67394 | 0.000 | 31.9406 | 36.1344 |
| | During activities | 22.50000* | .67394 | 0.000 | 20.4031 | 24.5969 |
| | With the same gender | 14.45000* | .67394 | 0.000 | 12.3531 | 16.5469 |
| | With opposite gender | 12.48750* | .67394 | 0.000 | 10.3906 | 14.5844 |
| | In front of the class | 6.02500* | .67394 | 0.000 | 3.9281 | 8.1219 |
| | In the middle of class | 1.46250 | .67394 | 0.427 | -0.6344 | 3.5594 |
| | At the back of the class | 6.27500* | .67394 | 0.000 | 4.1781 | 8.3719 |
| | In front of the whole class | 1.21250 | .67394 | 0.683 | -0.8844 | 3.3094 |
| In front of the class | During grouping mode | 28.01250* | .67394 | 0.000 | 25.9156 | 30.1094 |
| | During activities | 16.47500* | .67394 | 0.000 | 14.3781 | 18.5719 |
| | With the same gender | 8.42500* | .67394 | 0.000 | 6.3281 | 10.5219 |
| | With opposite gender | 6.46250* | .67394 | 0.000 | 4.3656 | 8.5594 |
| | When prepared | -6.02500* | .67394 | 0.000 | -8.1219 | -3.9281 |
| | In the middle of class | -4.56250* | .67394 | 0.000 | -6.6594 | -2.4656 |
| | At the back of the class | 0.25000 | .67394 | 1.000 | -1.8469 | 2.3469 |
| | In front of the whole class | -4.81250* | .67394 | 0.000 | -6.9094 | -2.7156 |

Table 4 (continue)

| (I) WTC subscale | (J) WTC subscale | Mean difference (I-J) | Std. error | Sig. | 95% Confidence interval | |
|--------------------------|-----------------------------|-----------------------|------------|-------|-------------------------|-------------|
| | | | | | Lower bound | Upper bound |
| In the middle of class | During grouping mode | 32.57500* | .67394 | 0.000 | 30.4781 | 34.6719 |
| | During activities | 21.03750* | .67394 | 0.000 | 18.9406 | 23.1344 |
| | With the same gender | 12.98750* | .67394 | 0.000 | 10.8906 | 15.0844 |
| | With opposite gender | 11.02500* | .67394 | 0.000 | 8.9281 | 13.1219 |
| | When prepared | -1.46250 | .67394 | 0.427 | -3.5594 | 0.6344 |
| | In front of the class | 4.56250* | .67394 | 0.000 | 2.4656 | 6.6594 |
| At the back of the class | At the back of the class | 4.81250* | .67394 | 0.000 | 2.7156 | 6.9094 |
| | In front of the whole class | -0.25000 | .67394 | 1.000 | -2.3469 | 1.8469 |
| At the back of the class | During grouping mode | 27.76250* | .67394 | 0.000 | 25.6656 | 29.8594 |
| | During activities | 16.22500* | .67394 | 0.000 | 14.1281 | 18.3219 |
| | With the same gender | 8.17500* | .67394 | 0.000 | 6.0781 | 10.2719 |
| | With opposite gender | 6.21250* | .67394 | 0.000 | 4.1156 | 8.3094 |
| | When prepared | -6.27500* | .67394 | 0.000 | -8.3719 | -4.1781 |
| | In front of the class | -0.25000 | .67394 | 1.000 | -2.3469 | 1.8469 |
| In the middle of class | In the middle of class | -4.81250* | .67394 | 0.000 | -6.9094 | -2.7156 |
| | In front of the whole class | -5.06250* | .67394 | 0.000 | -7.1594 | -2.9656 |
| In front of Whole class | During grouping mode | 32.82500* | .67394 | 0.000 | 30.7281 | 34.9219 |
| | During activities | 21.28750* | .67394 | 0.000 | 19.1906 | 23.3844 |
| | With the same gender | 13.23750* | .67394 | 0.000 | 11.1406 | 15.3344 |
| | With opposite gender | 11.27500* | .67394 | 0.000 | 9.1781 | 13.3719 |
| | When prepared | -1.21250 | .67394 | 0.683 | -3.3094 | 0.8844 |
| | In front of the class | 4.81250* | .67394 | 0.000 | 2.7156 | 6.9094 |
| In the middle of class | In the middle of class | 0.25000 | .67394 | 1.000 | -1.8469 | 2.3469 |
| | At the back of the class | 5.06250* | .67394 | 0.000 | 2.9656 | 7.1594 |

* The mean difference is significant at the 0.05 level

and moderated in some situations. The findings from the ANOVA test showed that there were significant differences in the students' WTC in most situations. It shows that WTC is a dynamic variable that changes from situation to situation. The discussion on the results is presented in the subsequent section.

DISCUSSION

The main aim of the current study was to investigate the teachers' views about their undergraduates' WTC in English inside the classroom. It was found that the undergraduates' WTC was high in most situations. Research showed that activities such as discussion and role-play could enhance the learners' tendency to communicate in English (Cao & Philp, 2006; Eddy-U, 2015; MacIntyre & Legatto, 2011; Riasati & Rahimi, 2018). Furthermore, studies revealed that group dynamics exert students' L2 WTC inside the classroom (Bernales, 2016; Cao, 2009, 2011, 2014; Cao & Philp, 2006; de Saint Leger & Storch, 2009; Kang, 2005). The participants' WTC was high in situations such as activities (presentation, role-play, discussion) and during groups (individually, in pairs, and small groups). The findings are in line with Riasati and Rahimi (2018), who found that informants' WTC was high in pairs and small groups. Moreover, the present study found that the informants reported being highly willing to communicate with the same and opposite gender. On the other hand, Riasati and Rahimi (2018) found that the Iranian participants were more

willing to communicate with the same gender compared to the opposite gender. This difference could be because of the contextual and cultural changes. Riasati and Rahimi (2018) conducted their study in the Iranian EFL context, while the current study was conducted in the Pakistani ESL context. In Pakistan, English is used as a lingua-franca (Panhwar et al., 2017) and also enjoys the status as an official language (Ali, 2017; H. I. Khan, 2013; Shamim, 2008, 2011).

From the teachers' perspective, the students' WTC was high in English when they were given time to prepare for tasks. Preparedness and topic familiarity enhance learners' WTC (Cao & Philp, 2006; de Saint Leger & Storch, 2009; Riasati & Rahimi, 2018). Riasati and Rahimi (2018) also found that their informants were highly willing to communicate when they were prepared for tasks. In addition, learners take more interest in the topic of discussion when they are already familiar with the topic (Cao & Philp, 2006; de Saint Leger & Storch, 2009).

Regarding the physiological factor, the learners were highly willing to communicate in the middle of the class while less willing to communicate in front and at the back of the class. However, Riasati and Rahimi (2018) found that the participants were highly willing to communicate in front of the class. It may be because Pakistani students feel more secure when positioned in the middle of the class as compared to being in front of the class. Learners' feeling of security inside the classroom can enhance their WTC (Kang, 2005). Moreover, in the current study, the participants were highly willing to communicate in front

of the whole class. The results contradict previous findings of de Saint Leger and Storch (2009), who found that the whole class interaction was the most challenging task for the students. Similarly, Cao (2011) found that the whole class interaction exerted embarrassment and anxiety because of the pressure of the classmates. The inconsistency in the results may be because of the difference in the teaching methods and classroom environment. It could also be because of the students' motivation toward learning English. In Pakistan, English is the gateway to high-paid jobs (Shamim, 2008, 2011). Therefore, the students are highly motivated to learn English (Islam et al., 2013).

The second objective of this study was to investigate the differences between the teachers' views about their students' WTC in different classroom situations. It was found that there were significant differences among most of the situations when the nine classroom situations were compared with each other. The results revealed that WTC was fluctuating in all situations. It was recently found that WTC is a state and dynamic variable that changes according to situations (Cao, 2014; MacIntyre, 2020; Mystkowska-Wiertelak, 2018; Riasati & Rahimi, 2018; H. Syed & Kuzborska, 2019). Thus, the current study confirmed the notion of dynamism of WTC, i.e., it changes from situation to situation.

It is clear from the discussion that from teachers' perspectives, situations including activities, groupings, same and opposite gender, when given preparation time, physiological situations, i.e., sitting in the

middle of the class, enhanced the learners' WTC. On the other hand, physiological situations sitting in front of the class and at the back of the class and whole-class interactions are the situations that debilitated the learners' WTC. Moreover, it was found that WTC is a dynamic variable that changes from situation to situation. The following section concludes this study.

CONCLUSION

The current study aimed to investigate the teachers' views about their undergraduates' WTC in English inside the classroom. It was found that the participants' WTC was high in most of the classroom situations while moderate in a few situations. To examine the differences in classroom situations, a one-way ANOVA was performed. The results show that according to the teachers' the students' WTC fluctuated in the nine classroom situations. Thus, this study revealed that WTC is a dynamic construct that changes from situation to situation. The findings of this study are important as it informs ESL teachers' practice to consider that social interaction in the shape of group work and activities is an essential part of L2 learning inside the classroom. It will also inform ESL teachers of the importance of mixed-gender activities and grouping, which could promote learners' L2 WTC. Moreover, learners would be more willing to communicate if given time to prepare for tasks.

Like other research studies, the present study also has some limitations. First, this study was limited to the teachers'

views about their undergraduates' oral WTC. Future researchers may replicate the current study into the students' WTC in other communication skills such as reading, writing, and listening. Second, the focus of the current study was on teachers' views about their students' WTC in English inside the classroom. Future studies may consider investigating students' views about their WTC in English as well as in other languages. Third, the data were collected through the cluster sampling technique. Future researchers could use other sampling techniques such as purposive sampling to get more interesting results. Finally, this study focus on the undergraduate students' WTC from the teachers' perspectives. Future studies could focus on the teachers' views about other levels such as school, college, and post-graduate WTC.

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The Effects of Input Enhancement on Incidental Academic Word Learning

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ABSTRACT

Reading contributes to vocabulary development and is regarded as an efficient pedagogical approach to vocabulary learning. Through reading, learners are exposed to new words in their rightful context of use. This study investigates the effects of input enhancements on incidental academic word learning through reading English academic texts among English as a Second Language (ESL) undergraduates. The study compares different input conditions, gloss, contextual clue and no clue. Twelve academic words from Coxhead's Academic Word List (AWL) were selected as the target words for this study. Three vocabulary tests were employed to assess academic words learnt incidentally from the texts in terms of their form, meaning recognition and ability to recall. Seventy-nine proficient and less proficient Malaysian ESL undergraduates participated in this study. Findings revealed that proficient participants recognised more target words compared to less proficient participants. In addition, gloss increases the noticeability of the target words, at least at the form recognition level. The study's findings suggest that input enhancement would better impact vocabulary learning if integrated into a reading task or facilitated by vocabulary learning instruction.

Keywords: Academic word, academic word learning, gloss, incidental vocabulary learning, input enhancement

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INTRODUCTION

Reading academic texts with understanding involves searching for main ideas, general and specific concepts, being critical, underrating the writer's purpose and attitudes, and identifying discourse patterns and markers (Zulu, 2005). On top of that, academic materials often consist of

complex features of academic discourse, text structure, and vocabulary that may affect learners' understanding of complex contents, usually presented in a lengthy and complex language structure. Moreover, the words used in academic texts are usually low-frequency words, as they are not frequently encountered in non-academic texts, such as academic, technical, and subject-related words. Hence, a wide vocabulary knowledge of general and academic words is important to ensure learners comprehend academic reading materials at the university level (Sulaiman et al., 2018).

Nonetheless, English as the second language (ESL) learners may experience a great hurdle in acquiring and storing new words morphologically or phonologically different from their first language (Nation, 2001). In addition, new words containing unfamiliar sounds or letters influence the success of storing words in isolation or clusters (Hulstijn, 2001). All these justify why ESL learners perceive learning new words as one of the most difficult knowledge to master (Kalajahi & Pourshahian, 2012). Consequently, many Malaysian university students have insufficient vocabulary size, far below what is expected of a university student after years of studying English (Asgari & Mustapha, 2012; Yunus et al., 2016).

Learning words solely to acquire new words is time-consuming (Webb & Nation, 2017) and hence inefficient for university students. On the other hand, reading is a significant source for lexical gains as it provides opportunities for readers to

encounter new words in a meaningful context. In other words, reading enables learners to acquire more vocabulary than what explicit vocabulary instruction alone can accomplish. Hence, this study proposes incidental academic vocabulary learning through reading academic texts as one of the approaches to expanding learners' academic vocabulary independently. However, despite its potential outcomes, the question remains the same: what are the optimal conditions that could enhance incidental vocabulary learning through reading?

The present study upholds the notion of comprehensible input by Krashen (1985), which asserts that the input needs to be comprehensible for learners to acquire the meaning and later the structure of the language, which will lead to its acquisition. Input enhancement approaches such as glossing and contextual cues can increase the saliency and comprehensibility of the target words so that they will be noticed and are more likely to be acquired by learners (Smith, 1993). In line with the noticing hypothesis by Schmidt (1990), noticing the input facilitates the conversion of input into the intake; that is when the learner notices the input (namely the target word), only then will the process of word acquisition take place successfully. In the context of incidental learning, the acquisition of new words happens and is considered effective when a task requires learners to pay attention to the relevant features of the input.

Numerous studies have investigated a number of pedagogical approaches to explore L2 incidental word acquisition through L2 reading (Jung, 2016). However,

what is lacking to date is the investigation of multiple factors which combine input and individual differences factors to uncover the most effective way for learners to learn new L2 words. Given this background, this study was conducted to investigate incidental academic word learning through reading English academic texts among proficient and less proficient ESL undergraduates at one of the research universities in Malaysia. Specifically, the study aimed to investigate the effects of glosses and contextual cues as two forms of input enhancements on the learning of selected academic words through reading English academic texts.

Incidental Vocabulary Learning

Past studies of L1 and L2 vocabulary acquisition have found that most vocabulary items are acquired incidentally as the product of learners' engagement in listening, reading, speaking or writing activities (Nagy et al., 1985; Nation, 2001; Schmitt, 2000). According to Richards and Schmidt (2002), learners may acquire words unintentionally while engaging in reading or listening activities specifically aimed at comprehension. This 'unintentional learning' is referred to incidental learning, i.e., the process of learning one thing while intending to learn another. It happens when new words gradually become familiar and known to learners as the words repeatedly appear in the reading or listening activities.

When encountering new lexical items while reading, readers must decide whether to attend to the new lexical forms and their meanings, integrate the new linguistic

information into their developing L2 system or ignore the new words. According to Pulido (2007), the new words that readers encounter may be processed at a superficial level (that is, at the recognition level), reducing the likelihood of the words being retrieved from memory later. Alternatively, these new words will be noticed by readers, and sufficient attention will be allocated to the new words. The meaningful attention allocated in the lexical processing during reading is important for incidental vocabulary learning in this modality.

Huckin and Coady (1999) have listed the benefits of incidental vocabulary learning in the context of incidental learning. Firstly, the vocabulary encounter is in its context of use which gives learners not just the meaning of the word but also information on its knowledge of use. Secondly, incidental vocabulary learning can be pedagogically efficient as reading and vocabulary learning occur concurrently. Finally, according to Huckin and Coady, incidental vocabulary learning is more individualised than intentional vocabulary learning as in learning in a language classroom because vocabulary learned depends on the learners' needs and conscious effort. Through incidental learning, a broader amount of vocabulary can be exposed to learners in its context (Nation & Waring, 2013), and learners will at least learn the partial meaning of the words they encounter (Ponniah, 2011) or may remember the first few letters of the word, or its broad structural outline (Schmitt, 2010) which may lead to the acquisition of the word. Furthermore, the words learned

via incidental learning are claimed to result in better retention and recall as it involves deeper cognitive processing (Ahmad, 2012; Kweon & Kim, 2008).

Input Enhancement

Smith (1993) introduced the term ‘input enhancement,’ an approach that intentionally drives an input to be noticeable by learners, for example, by highlighting (e.g., bolding, underlining) or glossing certain parts of the structure of words in the texts that need to be attended to. The key point is to make the input more salient to learners and enhance the chances of the input being noticed. However, input enhancement does not assure the learners’ attention to the input nor guarantees the retention of the input. Among the methods of input enhancement that input modification is visual input enhancement, semantic input enhancement, and input flooding. Visual input enhancement is also known as typographical or textual (written input) enhancement. Visual input enhancement accentuates targeted components of the input to implicitly make it prominent to the learners (Namaziandost et al., 2020). For example, the saliency of the target word can be increased using different colours, italics, underlining, boldface, and others. Semantic input enhancement involves providing semantic characteristics of the target word and augmenting attention to the target word to enhance retention and improve recognition (Zarei et al., 2016). Examples of semantic enhancement are glosses containing the meaning of target words in L1 or L2 and the contextual

information included in the text to assist learners in acquiring the target word. Input flooding focuses on the form of intervention in which the input is repeatedly exposed to learners (Hernández, 2018). It allows learners to get ample exposure to the target form of the input and increase the possibility for learners to acquire the form.

The concept of input enhancement is integrated into the present study to investigate the effect of input enhancement on incidental word learning. The use of gloss helps to enhance the chances of the input being noticed (Jung, 2016). When reading academic material in L2 is concerned, modification of input surrounding target words will increase the chance of L2 learners to acquire the words incidentally.

A considerable number of past studies have shown that overall gloss has a positive effect on vocabulary learning compared to the no gloss condition (Danesh & Farvardin, 2016; Duan, 2018; Jung, 2016; Ko, 2012; Watanabe, 1997). However, the contradicting notion is that gloss might deprive a learner’s mental effort for searching and inferring the meaning of the word, causing a less affirmative result in vocabulary learning (Huang & Lin, 2014). The use of gloss is beneficial as it may compensate for the lack of contextual input; however, this may diminish the reader’s chance to infer and hence reduce the effort in the processing of the new word, which might affect the retention of the new word in their long-term memory (Watanabe, 1997). On the other continuum, new words could effectively and efficiently be learnt by making learners infer the meaning of unknown words

using the information obtained from context (Hulstijn, 1992). However, Zahar et al. (2001), in their study on the effects of frequency and contextual richness on L2 vocabulary learning through reading, found no relationship between vocabulary gained and the types of contexts in which they were presented. Nevertheless, adequate and familiar contextual information surrounding the target words opens a learning opportunity for learners to understand the target word and the context better. Nonetheless, the number of studies that examined the learning of specific target words based on corpus or wordlist in a specific context is quite limited. Thus, examining how ESL university students learn academic words through incidental learning while reading English academic texts would contribute to better insights into this area.

Academic Words

Academic word is a specialised vocabulary of academic texts. There has been a growing body of research investigating what words are needed for academic study and how vocabulary should be taught and practised in the academic context at a tertiary level of education. Academic vocabulary is postulated as words that are relevant to a university setting and are most likely to be encountered by learners in their reading (Coxhead & Byrd, 2007). It is a set of lexical items frequently utilised in academic texts such as journal articles, theses/dissertations, research papers, conference papers, and academic books. Hence, academic vocabulary is vital for comprehension and

communication among university students. The limitation of academic vocabulary in learners' mental lexicon may restrict their 'comprehension to grasp the academic concepts they are learning.

Sulaiman et al. (2018), who conducted a study on Malaysian ESL undergraduates' knowledge of academic words based on the Academic Word List (Coxhead, 2000), found that learners' knowledge of academic words was still low and that the distribution of the knowledge of these words differs according to their academic disciplines and English language proficiency. Their findings, however, reveal the need for further investigations on learning academic words among university students and seek alternative ways to provide adequate based on their vocabulary needs. Given this background, input enhancements are one of the alternatives for learners to acquire vocabulary, which is imperative for their academic endeavour.

METHODOLOGY

Participants

The current study participants were 79 ESL first-year undergraduates pursuing two different academic specialisations in the social science field at one of the research universities in Malaysia. The participants were those who had not taken any preparatory courses related to English for Academic Purpose (EAP). Consequently, they were not formally taught the structure, types, and language skills associated with academic discourses. Hence, it was assumed that the likelihood of knowing the selected

academic words from AWL was low. The participants were grouped according to their English language proficiencies. The categorisation of proficient and less proficient groups was based on the participants' Malaysian University English Test (MUET), a standardised Malaysian English language proficiency test at the post-secondary level administered by the Malaysian Examination Council. A total of 41 participants fell under the proficient group, while 38 were in the less proficient group.

Target Words

Twelve academic words derived from Coxhead's (2000) Academic Word List (AWL) were selected as the target words for this study. The academic word list (AWL) compiled by Coxhead (2000) is widely used in language teaching and testing, as well as in the development of pedagogical material. Coxhead's AWL is derived from a large corpus of academic texts such as journal articles, university-level textbooks, book chapters and laboratory manuals from 28 subject areas in four disciplines: arts, commerce, law, and science. The list consists of 570-word families and includes all related forms such as affixes, inflected forms, and transparent derivational forms. Coxhead's AWL is categorised into ten sub-lists based on word frequency and range. The most frequent words are included in the first sub-list, whereas the least frequent words are included in the tenth sub-list.

Target words are among the low-frequency words on the AWL list and listed

among the highest percentages of reported "unknown" words by the respondents in the study conducted by Sulaiman et al. (2018). The target words were inserted into the three texts and enclosed with three different conditions: gloss, contextual clue, or no clue. The target words were not equally distributed across the three texts since they were inserted according to the suitability of the sentence and content. In this study, glosses in the form of definitions of the target words appeared on the right-side margin of the text. Each gloss was placed in a blue-outlined box, in line with the target word in the text. The number of words in the gloss box was between four and six. Table 1 shows the list of target words and their input conditions.

Table 1
List of target words and their input conditions

| Academic word | Sub list | Input condition |
|---------------|----------|-----------------|
| Albeit | 10 | Gloss |
| Amend | 5 | Gloss |
| Notion | 5 | Gloss |
| Confer | 4 | Gloss |
| Integral | 9 | Contextual Clue |
| Derive | 1 | Contextual Clue |
| Constrain | 3 | Contextual Clue |
| Diverse | 6 | Contextual Clue |
| Inevitable | 8 | No Clue |
| Orient | 5 | No Clue |
| Adequate | 4 | No Clue |
| Nonetheless | 10 | No Clue |

Reading Texts

The three reading texts (labelled as Text A, Text B and Text C) were adapted from the introduction section of three journal articles. The introduction part of an article is deemed

suitable to use as the reading material for this study as it provides relevant information about the topic and usually does not contain any methodological terms that may be unfamiliar to the participants. In addition, the length of the texts was 1217 words, and its readability was suitable for college-level entry students (aged between 21-22 years old), as measured by the Flesch-Kincaid readability scale.

Vocabulary Tests

Three tests were administered to the participants to assess the form-meaning link of target words learned by participants, namely form recognition, meaning recall, and form and meaning recognition tests. The first test (Test 1) was a form recognition test, in which the participants were asked to circle the words they remembered seeing in the text they read. The test was meant to assess the participants' ability to recognise the form of the target words encountered during reading. It was followed by the meaning recall test (Test 2), in which the participants were required to provide the meaning of the twelve target words without contextual support. The purpose of the second test is to measure the participants' comprehension of the meaning of the target words in a decontextualized manner. The last test (Test 3) required the participants to choose the right target words that fit the sentence in cloze test format. This test could indicate the participants' understanding of the meaning of the study's target words in their context of use. The use of multiple measures of vocabulary enables the researcher to

measure the different types of knowledge learned and the strength of that knowledge (i.e., the depth of vocabulary and how well the participants know the word; Nation & Webb, 2011). The tests were given after the participant had completed the reading session. The participants were aware of the tests but were not informed in detail about the content of the tests. It was done to create an ideal experimental condition for incidental vocabulary acquisition, that is, by directing students' attention and purpose towards understanding the text rather than individual words (Hulstijn et al., 1996). There was no time limit allocated for each test.

FINDINGS

The target academic words were analysed individually based on their input conditions (gloss/contextual clue/no clue) to examine their effect on academic word learning. In addition, the comparisons between the mean vocabulary scores of target words with different input conditions were made between the two groups of participants respectively to scrutinise the effect of input conditions on vocabulary gains. The differences in mean scores for the three vocabulary tests based on input conditions which are gloss, contextual clue, and no clue, are presented according to participants' English language proficiency in the following sections.

Vocabulary Tests Scores

In this study, learning the target words was operationalised as the participants' ability to

recognise and give accurate meaning to the target words in three vocabulary tests. The scoring for each vocabulary test was based on the number of correct answers given for each test. In other words, participants being able to answer correctly in a vocabulary test means they can either recognise form or recall form and meaning in the test. Table 2 shows the descriptive analysis of proficient participants' scores in each test according to the target academic words. Of 41 proficient participants, 38 recognised the word 'albeit' presented in Test 1. The words 'diverse' and 'notion' were also highly recognised by the most proficient participants. On the other end, 'orient' was the least recognised by proficient participants. Only nine out of forty-one proficient participants remembered seeing the word 'orient' and could recognise it after they had read the texts.

In addition, more than half (50% to 88%) of the proficient participants recognised eleven out of twelve target words. However, successful recognition of the form of the

word did not guarantee that the participant would be able to recall the meaning of the word. The percentages of participants who correctly gave meaning to the target words on Test 2 decreased compared to those who managed to recognise the target words. It reflects that some of the participants who successfully recognised the form of the target words failed to recall the meaning of the target words. For example, only three participants could provide the meaning of the word 'integral' (i.e., scored in Test 2) even though 22 participants were initially able to recognise the word (scored in Test 1).

There are many factors affecting word recognition and meaning recall. Presumably, some of the participants had already known the target word prior to the reading of the texts. However, they did not remember seeing the word in the texts. In this case, they were probably not focused on the words while reading, as the words were already familiar to them. Therefore, they could score in Tests 2 and 3, but not on

Table 2
Frequency and percentage of proficient participants scored in each test

| Target Word | Test 1 | Test 2 | Test 3 |
|-------------|------------|------------|------------|
| Albeit | 36 (87.8%) | 20 (48.8%) | 22 (53.6%) |
| Confer | 27 (65.8%) | 7 (17.1%) | 21 (51.2%) |
| Integral | 22 (53.6%) | 3 (7.3%) | 6 (14.6%) |
| Inevitable | 28 (68.3%) | 13 (31.7%) | 25 (60.9%) |
| Derive | 23 (56.1%) | 14 (34.1%) | 23 (56.1%) |
| Diverse | 33 (80.5%) | 26 (63.4%) | 24 (58.5%) |
| Notion | 32 (78.0%) | 11 (26.8%) | 22 (53.6%) |
| Orient | 9 (21.9%) | 11 (26.8%) | 17 (41.5%) |
| Nonetheless | 29 (70.7%) | 29 (70.7%) | 27 (65.8%) |
| Adequate | 33 (80.5%) | 13 (31.7%) | 18 (43.9%) |
| Amend | 30 (73.1%) | 14 (34.1%) | 24 (58.5%) |
| Constrain | 24 (58.5%) | 19 (46.3%) | 28 (68.3%) |

Test 1. For example, the word ‘orient’ was reported to be recognised by nine proficient participants. However, eleven proficient participants accurately recalled the meaning of the word ‘orient’ (as reflected in Test 2), and seventeen proficient participants managed to use the word correctly (as reflected in Test 3).

For ten target words: ‘albeit,’ ‘confer,’ ‘integral,’ ‘inevitable,’ ‘derive,’ ‘notion,’ ‘orient,’ ‘adequate,’ ‘amend,’ and ‘constrain,’ the results showed that proficient participants scored higher in Test 3 compared to Test 2. It indicates that these participants could recognise the form and meaning of the target words when they were presented in context but failed to recall the meaning of the words in a decontextualized manner.

Table 3 shows the descriptive analysis of vocabulary scores in each test among the less proficient participants according to target academic words. Eight target words: ‘amend,’ ‘adequate,’ ‘nonetheless,’ ‘notion,’ ‘diverse,’ ‘derive,’ ‘inevitable,’ and ‘albeit’

were recognised by more than half of the less proficient participants. Similar to the proficient group, the word ‘albeit’ was the most recognised target word among the less proficient participants, while the word ‘orient’ was the least recognised by the less proficient participants. It indicates that the word ‘albeit’ was perceived as a low frequency or unfamiliar word as only a few participants from both groups were able to recognise it.

Compared to Test 1, a smaller number of less proficient participants had successfully scored in Test 2. In other words, even though the less proficient participants remembered seeing the target words while reading the texts, most may not understand the meaning, which was reflected by the low scores in Test 2. Five target words, namely ‘albeit,’ ‘confer,’ ‘inevitable,’ ‘notion,’ and ‘constrain,’ showed that a higher number of less proficient participants scored in Test 3 compared to Test 2. It indicates that the participants could recognise the form

Table 3
Frequency and percentage of less proficient participants scored in each test

| Target Word | Test 1 | Test 2 | Test 3 |
|-------------|------------|------------|------------|
| Albeit | 32 (84.2%) | 12 (31.5%) | 18 (47.4%) |
| Confer | 15 (39.5%) | 6 (15.8%) | 18 (47.4%) |
| Integral | 14 (36.8%) | 3 (7.9%) | 3 (7.9%) |
| Inevitable | 20 (52.6%) | 4 (10.5%) | 12 (31.5%) |
| Derive | 22 (57.9%) | 9 (23.7%) | 9 (23.5%) |
| Diverse | 23 (60.5%) | 13 (31.6%) | 13 (31.6%) |
| Notion | 24 (63.1%) | 4 (10.5%) | 8 (21.0%) |
| Orient | 11 (28.9%) | 9 (23.7%) | 6 (15.8%) |
| Nonetheless | 21 (55.3%) | 21 (55.3%) | 20 (52.6%) |
| Adequate | 27 (71.0%) | 7 (18.4%) | 6 (15.8%) |
| Amend | 21 (55.3%) | 10 (26.3%) | 9 (23.7%) |
| Constrain | 15 (39.5%) | 8 (21.0%) | 14 (36.8%) |

and meaning of those target words when presented in context but failed to recall the meaning when the words were presented in isolation.

Overall, participants from the proficient group recognised more target words, as seen in Test 1, compared to the less proficient participants. However, in both groups, the number of participants who scored in Test 2 was smaller compared to those who successfully scored on Test 1 for almost all target words. In other words, more participants in both groups failed to provide the meaning of the target words even though they remembered seeing the words while reading the texts. In Test 3, the more proficient participants could recognise the form and meaning of more target words compared to the less proficient participants. These participants displayed their understanding of the target words by successfully choosing the right target word that suited the context of the sentence.

Table 4 displays the summary of the total mean scores of each test for both groups of participants. Again, the proficient group of participants exhibited a higher mean score compared to the less proficient group for all the vocabulary tests.

A t-test was performed to determine the significant difference between the two groups' vocabulary scores on the three tests. The dependent variable was the mean scores for each vocabulary test, and the independent variable was participants' English language proficiency (categorised as proficient and less proficient). Based on the analysis presented in Table 5, there was a significant difference between proficient and less proficient participants in each vocabulary tests; Test 1 ($t(77) = 3.163, p 0.002 < 0.01$), Test 2 ($t(77) = 2.622, p 0.011 < 0.05$) and Test 3 ($t(77) = 4.573, p 0.000 < 0.001$). These results suggest that language proficiency influenced vocabulary test performances. Specifically, the results indicated that more proficient participants could recognise and recall more target words compared to the less proficient participants.

Table 5
Differences in each vocabulary test score between proficient and less proficient

| Test | T | Df. | Sig. (2-tailed) |
|--------|-------|-----|-----------------|
| Test 1 | 3.163 | 77 | 0.002** |
| Test 2 | 2.622 | 77 | 0.011* |
| Test 3 | 4.573 | 77 | 0.000*** |

*Significant difference at $p < .05$

** Significant difference at $p < .01$

*** Significant difference at $p < .001$

Table 4
Summary of total mean scores of each test

| Test | Group | N | Mean | Standard Deviation |
|--------|-----------------|----|------|--------------------|
| Test 1 | Proficient | 41 | 8.02 | 2.38 |
| | Less Proficient | 38 | 6.31 | 2.41 |
| Test 2 | Proficient | 41 | 4.43 | 2.91 |
| | Less Proficient | 38 | 2.92 | 2.13 |
| Test 3 | Proficient | 41 | 6.26 | 2.61 |
| | Less Proficient | 38 | 3.63 | 2.49 |

Mean Scores of Three Vocabulary Tests Based on Input Conditions for Proficient ESL Undergraduates.

To investigate the significant difference in the mean total scores of each test between input conditions, a one-way analysis of variance (ANOVA) test was performed. The dependent variable was the mean scores of the target words according to their input enhancements, and the independent variable was participants' vocabulary scores in three tests, namely Test 1, Test 2, and Test 3. As can be seen in Table 6, the results of ANOVA indicated that there was a significant difference among the three conditions namely gloss ($F = 25.261$, $p 0.000 < 0.001$), contextual clue ($F = 8.161$, $p 0.000 < 0.001$), and no clue ($F = 4.706$, $p 0.011 < 0.05$) between the mean scores of three vocabulary tests.

Post-hoc Tukey HSD test was performed to determine the significant difference among the three tests for each input condition (Table 7). For the gloss condition target word score among the proficient participants, post hoc comparisons using the Tukey HSD test indicated that the mean score for vocabulary Test 1 ($M = 3.17$, $SD = 0.99$) was significantly different from the mean scores for Test 2 ($M = 1.60$, $SD = 0.91$) and Test 3 ($M = 2.26$, $SD = 1.07$). For the contextual clue condition, results showed that the mean score for Test 1 ($M = 2.51$, $SD = 1.02$) was significantly different from the mean score for Test 2 ($M = 1.65$, $SD = 0.88$). However, the mean scores for Tests 1 and 3 and Tests 2 and 3 were not significantly different. The outcome was similar to the contextual condition for the no clue condition. The

Table 6

ANOVA test for input conditions and vocabulary tests scores (proficient group)

| Input Condition | Sum of Squares | df | Mean Square | F | Sig. |
|-----------------|----------------|----|-------------|--------|----------|
| Gloss | 50.358 | 2 | 25.179 | 25.261 | 0.000*** |
| Contextual Clue | 15.041 | 2 | 7.520 | 8.161 | 0.000*** |
| No Clue | 8.537 | 2 | 4.268 | 4.706 | 0.011* |

*Significant difference at $p < .05$

** Significant difference at $p < .01$

*** Significant difference at $p < .001$

Table 7

Tukey HSD test for input condition (proficient group)

| Dependent Variable | (I)Test | Mean | SD | (J) Test | Mean Difference (I-J) | Standard Error | Sig. |
|--------------------|---------|------|------|----------|-----------------------|----------------|----------|
| Gloss | Test 1 | 3.17 | 0.99 | Test 2 | 1.560 | 0.220 | 0.000*** |
| | | | | Test 3 | 0.902 | 0.220 | 0.000*** |
| | Test 2 | 1.60 | 0.91 | Test 1 | -1.560 | 0.220 | 0.000*** |
| | | | | Test 3 | -0.658 | 0.220 | 0.010* |
| | Test 3 | 2.26 | 1.07 | Test 1 | -0.902 | 0.220 | 0.000*** |
| | | | | Test 2 | 0.658 | 0.220 | 0.010* |

Table 7 (continue)

| Dependent Variable | (I)Test | Mean | SD | (J) Test | Mean Difference (I-J) | Standard Error | Sig. |
|--------------------|---------|------|------|----------|-----------------------|----------------|----------|
| Contextual Clue | Test 1 | 2.51 | 1.02 | Test 2 | 0.853 | 0.212 | 0.000*** |
| | | | | Test 3 | 0.365 | 0.212 | 0.261 |
| | Test 2 | 1.65 | 0.88 | Test 1 | -0.853 | 0.212 | 0.000*** |
| | | | | Test 3 | -0.487 | 0.212 | 0.069 |
| | Test 3 | 2.14 | 0.96 | Test 1 | -0.365 | 0.212 | 0.261 |
| | | | | Test 2 | 0.487 | 0.212 | 0.069 |
| No Clue | Test 1 | 2.39 | 0.86 | Test 2 | 0.609 | 0.210 | 0.013* |
| | | | | Test 3 | 0.121 | 0.210 | 1.000 |
| | Test 2 | 1.78 | 1.01 | Test 1 | -0.609 | 0.210 | 0.013* |
| | | | | Test 3 | -0.487 | 0.210 | 0.066 |
| | Test 3 | 2.26 | 0.93 | Test 1 | -0.121 | 0.210 | 1.000 |
| | | | | Test 2 | 0.487 | 0.210 | 0.066 |

*The mean difference is significant at the 0.05 level

**The mean difference is significant at the 0.01 level

***The mean difference is significant at the 0.001 level

mean score for Test 1 ($M=2.39$, $SD=0.86$) and Test 2 ($M=1.78$, $SD=1.01$) for the no clue condition was significantly different, while the mean score for Test 1 and Test 3, and Test 2 and Test 3 was not significantly different.

Mean Scores of Three Vocabulary Tests Based on Input Conditions for Less Proficient ESL Undergraduates. Table 8 revealed a significant difference for all three input conditions namely, Gloss ($F=17.237$, $p=0.000 < 0.001$), Contextual Clue ($F=9.673$, $p=0.000 < 0.001$), No Clue ($F=9.375$, $p=0.000 < 0.001$) based on the three vocabulary tests.

As seen in Table 9, the mean scores between Test 1 ($M=2.42$, $SD=1.10$) and Test 2 ($M=1.31$, $SD=0.52$), Test 1 and Test 3 ($M=1.55$, $SD=0.86$) for glossed target word showed a significant difference. However, the mean scores between Test 2 and Test

3 revealed otherwise. For contextual clue condition, the mean scores between Test 1 ($M=2.10$, $SD=0.98$) and Test 2 ($M=1.36$, $SD=1.36$, $SD=0.67$), and Test 1 and Test 3 ($M=1.42$, $SD=0.68$) showed a significant difference, whereas the mean scores between Test 2 and Test 3 did not significantly differ. Lastly for no clue condition, there was a significant difference between the mean scores of Test 1 ($M=2.10$, $SD=0.86$) and Test 2 ($M=1.39$, $SD=0.63$), and the mean score of Test 1 and Test 3 ($M=1.50$, $SD=0.79$). However, there was no significant difference between the mean scores of Test 2 and Test 3 for target words in no clue condition.

DISCUSSION

The current study's findings reveal that the proficient participants recognised and successfully recalled the meaning of more

Table 8

ANOVA for input conditions and vocabulary tests scores (less proficient)

| Input Conditions | Sum of Squares | df | Mean Square | F | Sig. |
|------------------|----------------|----|-------------|--------|----------|
| Gloss | 25.737 | 2 | 12.868 | 17.237 | 0.000*** |
| Contextual Clue | 12.842 | 2 | 6.421 | 9.673 | 0.000*** |
| No Clue | 11.175 | 2 | 5.588 | 9.375 | 0.000*** |

*Significant difference at $p < .05$ ** Significant difference at $p < .01$ *** Significant difference at $p < .001$

Table 9

Tukey HSD test for input condition (less proficient group)

| Dependent Variable | (I) Test | Mean | SD | (J) Test | Mean Difference (I-J) | Standard Error | Sig. |
|--------------------|----------|------|------|----------|-----------------------|----------------|----------|
| Gloss | Test 1 | 2.42 | 1.10 | Test 2 | 1.105 | 0.198 | 0.000*** |
| | | | | Test 3 | 0.868 | 0.198 | 0.000*** |
| | | | | Test 2 | -1.105 | 0.198 | 0.000*** |
| | Test 2 | 1.31 | 0.52 | Test 3 | -0.236 | 0.198 | 0.704 |
| | | | | Test 1 | -0.868 | 0.198 | 0.000*** |
| | | | | Test 2 | 0.236 | 0.198 | 0.704 |
| Contextual Clue | Test 1 | 2.10 | 1.03 | Test 2 | 0.736 | 0.186 | 0.000*** |
| | | | | Test 3 | 0.684 | 0.186 | 0.001** |
| | | | | Test 1 | -0.736 | 0.186 | 0.000*** |
| | Test 2 | 1.36 | 0.67 | Test 3 | -0.052 | 0.186 | 1.000 |
| | | | | Test 1 | -0.684 | 0.186 | 0.001** |
| | | | | Test 2 | 0.052 | 0.186 | 1.000 |
| No Clue | Test 1 | 2.10 | 0.86 | Test 2 | 0.710 | 0.177 | 0.000*** |
| | | | | Test 3 | 0.605 | 0.177 | 0.003** |
| | | | | Test 1 | -0.710 | 0.177 | 0.000* |
| | Test 2 | 1.39 | 0.63 | Test 3 | -0.105 | 0.177 | 1.000 |
| | | | | Test 1 | -0.605 | 0.177 | 0.003** |
| | | | | Test 2 | 0.105 | 0.177 | 1.000 |

*The mean difference is significant at the 0.05 level

**The mean difference is significant at the 0.01 level

***The mean difference is significant at the 0.001 level

target words compared to the less proficient participants. It suggests that language proficiency does influence vocabulary test performance. The findings are consistent with past studies by Warren et al. (2018) and Duan (2018), who found that highly

proficient participants demonstrated better at both form and meaning recall of target words. It is the least puzzling as the past study by Sulaiman et al. (2018) revealed that ESL Malaysian undergraduates with low proficiency in the English language had

lower AWL knowledge compared to high proficiency undergraduates. It indicates that more proficient undergraduates are more likely to be more familiar with the target words used in this study and are aware of them as they read the texts.

Proficient and less proficient participants highly recognised target words in the gloss condition, yet they were still unable to recall the meaning of the words. Glosses reduce the processing time to search for the target word's meaning, which diminishes the possibility of incorrect meaning inferencing target words by participants. The salient feature of gloss that provides the meaning of target words directly enhances the chances of the target words in the gloss condition being noticed and retained at the form recognition level. However, many participants from both groups were unable to recall the meaning of the glossed target words. It reflects that the participants did not fully use the benefit of gloss in their reading. They dismissed the chances for deeper processing of target words while reading and understanding the text. Hence, it reduces the retention of meaning recall of glossed target words as resonated in the participants' low-performance scores in the meaning recall test.

Overall, gloss appears to promote better vocabulary gain, especially on form recognition, regardless of the participants' language proficiency. It is consistent with findings from past studies (e.g., Danesh & Farvardin, 2016; Duan, 2018; Jung, 2016; Ko, 2012; Watanabe, 1997), which showed that glossing has a positive impact

on L2 vocabulary learning. Surprisingly, target words in the contextual clue and no clue conditions were retained better in the meaning recall, even though they were less recognised compared to target words in the gloss condition. Contextual clue provides information on the target word's meaning in its rightful context of use. A richer informative context may yield better gains in knowledge of the meaning of target words (Webb, 2008). In line with the findings of this study, the contextual clue condition may provide better context information for the target words, which makes participants put more cognitive effort into acquiring the meaning of the target words as compared to the gloss condition. In addition, the no clue condition induces the participants' effort to infer the meaning of the target words based on their lexical knowledge, which may require higher cognitive effort and result in better recall of the target words (Hulstijn, 1992). Proficient participants with better word knowledge than less proficient participants showed higher mean scores for the no clue conditions for both meaning recall (Test 2) and form and meaning recognition (Test 3) tests.

Proficient participants recognise more words in contextual conditions than less proficient participants. As a result, the proficient participants have better L2 vocabulary knowledge; they are more likely to know a wider range of L2 word knowledge, which leads to a better comprehension of L2 texts. Therefore, it can be assumed that proficient participants are better at utilising contextual clues provided and inferring the

meaning of unknown words compared to less proficient participants (Zahar et al., 2001).

Overall, the results of the present study conclude that explicitness meaning inferences of target words during reading does not guarantee vocabulary gains, especially in recalling word meaning ability. In this case, glosses, which provide the explicit meaning of the target words presumed to attract learners' attention while reading, only manage to assist the learner in recognising the form of the target word. Nonetheless, putting more cognitive effort into inferring word meaning from informative or less informative contexts appears to help develop recall word knowledge among participants.

CONCLUSION

The findings of this study add to the growing body of second language vocabulary research, specifically on the development of academic vocabulary. In line with Schmidt's Noticing Hypothesis and Krashen's Comprehensible Input, the study supports the notion that enhanced target words with comprehensible input attract learners' attention which may lead to the successful acquisition of the target words. It, however, depends on the degree of attention placed on the target words as well as the types of input enhancement provided.

The study puts forth the significant role of comprehensible input in providing ample and informative contexts to increase the likelihood of incidental vocabulary learning through reading. However, as projected in

the overall results, comprehensible input alone may not be sufficient; hence, input enhancements contribute to maximising the best conditions for targeted words to be noticed and acquired successfully. Furthermore, a combination of multiple-input enhancements could provide an expansion of opportunities for incidental vocabulary learning. For example, multiple exposures to target words coupled with highlighted glossed words could increase the chances of vocabulary acquisition. Therefore, it contributes to the extension of the input enhancement concept to provide comprehensible input for incidental vocabulary learning. The current study also underscores the importance of suitable academic reading materials that entail rich and ample input as a substantial source for academic vocabulary learning. Academic vocabulary mastery is important for all university students regardless of their academic specialisation. Therefore, the study provides a guideline for selecting and designing reading materials to ease reading comprehension and help learners enhance their vocabulary. Specifically, this information is valuable for creating or modifying authentic academic reading materials (i.e., journal articles) for vocabulary learning purposes. These include taking into consideration all input and textual features (i.e., lexical properties, range, and frequency of target words), learner factors (i.e., language proficiency, academic specialisation) in selecting suitable contents and contexts to cater for the needs of ESL university students.

In addition, the findings revealed the provision of different input enhancements to the in-reading material that can be adapted for second language vocabulary learning and teaching. The gloss has been shown to enhance the noticeability of target words, which leads to successful form recognition of the words among participants in the current study regardless of their language proficiency. Using typographic enhancement such as highlighting or bolding the target words in the passage could also increase the chances of deeper processing of the target words among participants. Vocabulary learning in the present study varies depending on the input enhancement of academic target words and the participants' language proficiency. Students should be taught how to read glosses effectively or any input enhancement provided in the texts. Glosses should be read when encountered because they are usually presented on the same line as the target words. Reading the glosses this way would assist learners in understanding the words in context better and eventually ease the reading comprehension of the text. It is important as it enables students to pay deliberate attention to new words in their rightful context, which will further augment the successful acquisition of the words. It also trains students to become autonomous learners and function independently when encountering new lexical items in other contexts. In addition, language educators could expose the use of vocabulary learning strategies to students. It is particularly useful to ensure that learners efficiently utilise all

input provided using the right strategies to facilitate their academic vocabulary mastery through incidental learning.

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Al-Qur'an (Re)Presentation in the Short Video App Tiktok: Reading, Teaching, and Interpretive

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ABSTRACT

Several previous studies have proven the significant role of social media in the reading, teaching, and interpretation of al-Qur'an. Therefore, this study aims to determine the models, factors, and implications of teaching al-Qur'an using the TikTok application, a popular social media platform utilizing a logical structure to emphasize the importance of its contents. A qualitative approach was applied in this study to mediate this function by collecting 47 al-Qur'an-related contents from six influential accounts. The results showed that TikTok is a mediator in disseminating al-Qur'an-related content, especially in teaching al-Qur'an. It is indicated by illustrations of how to recite al-Qur'an properly by following the *tajweed*, displaying a variety of beautiful and contextually meaningful readings. Furthermore, the uploaded contents are driven by the need to teach and recite al-Qur'an, expand *da'wah*, and respond to encountered questions and events. Therefore, the teaching, recitation, and interpretation of al-Qur'an on TikTok have an impact on the shift of the authority of the traditional al-Qur'an teaching to the more dynamic social media.

In other words, this learning model forms a variation in how people learn al-Qur'an, from the conventional system to online through social media. These changes in the way and form of teaching on TikTok indicate that this application can be effectively used for *da'wah* and is an excellent way to spread the recitation of al-Qur'an without distorting the meaning and intention of its users.

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INTRODUCTION

Approximately 689 million TikTok users were recorded by the Global Web Index (2021) in 2020, which has increased significantly to date. According to Domingues et al. (2020), TikTok is a social media platform that creates and shares short, attractive, and funny videos ranging from 15 to 60 seconds. It is also a social media platform for disseminating the Quran's contents and teachings, making it more enjoyable (Azzam, 2021; Ibrahim, 2021; Salsabila, 2021; Setiadi, 2021). This application is a medium that functions as a window, mirror, and guide for young people in need of information on learning the Quran. In this context, it serves as mediation in the knowledge building of the community through social media (McQuail, 1987). The significant increase in users has a positive impact on its function as a medium in expanding the teaching and study of the Quran.

Presently, studies on the use of TikTok in constructing religious narratives are limited to the validity of the content and narrowing of meaning. Therefore, this application is considered a channel that needs to be watched out for due to possible negative impacts. The role of TikTok as a mediator in message delivery has been neglected in the following previous studies. The literature review on the studies of al-Qur'an in TikTok revealed three patterns. The first are studies on the Islamic views of this application and its use, which was considered a medium containing harmful elements, not by the values of the Qur'an (Malihah, 2019; Wandl,

2020). According to Soedardi (2020), the Islamic attributes used by TikTok actors do not reflect Islamic values; therefore, it needs to be properly analyzed using the da'wa method. The second is studies that visualize this application as a medium of da'wa and an alternative in educational ways (Amelia, 2021; Hikmawati & Farida, 2021; Salsabila, 2020). The third is studies that explain the positive and negative impacts of TikTok, such as a medium of friendship (Dini, 2021) and displaying content that is not following Islamic values (Sa'ad et al., 2020). This study aims to assess TikTok as an application that negatively impacts the spread of religious narratives. The mediative function of TikTok towards disseminating the Quranic verse in various aspects is abandoned. According to Hjarvard (2014), studying al-Qur'an in social media leads to mediatization; therefore, social media logic forces religious narratives according to the readers' tendencies. This study places TikTok as a mediator that provides new media opportunities to convey the teaching recital of reading the al-Qur'an, display the beauty of recitation, and responding the current problem with the al-Qur'an.

This research is intended to complement the shortcomings of preliminary studies by analyzing Quran narration on TikTok as an intermediary medium capable of teaching, displaying the aesthetics of reading, and explaining the meaning of al-Quran. Therefore, this study led to three research questions; (1) How is al-Qur'an represented on TikTok? (2) what are the factors that promote its realization? (3)

what are the implications of (re) presenting it on TikTok? These questions are supported by evidence of a mediation function in disseminating the content and teaching of al-Qur'an through the TikTok application. Therefore, it is carried out as a form of explanation by account owners to spread al-Qur'an in various forms by building a narrative to deliver verses and disseminate the content and teachings of al-Qur'an on TikTok.

This study is based on the argument that the use of TikTok in disseminating content and teaching of al-Quran lies in placing its function as a medium capable of delivering user messages to the public. During this time, the role of TikTok and other social media platforms are placed as a tool capable of changing the social structure by maintaining the media logic in delivering messages till the meaning and intent of the message are vulnerable to distortion (Couldry, 2008). By putting this application in the mediation function, teaching the al-Quran as content plays a significant role in developing the study of the al-Quran in the new media sphere, independent of the social media logic.

LITERATURE REVIEW

Underline Theory and Model between Mediation and Mediatization

Increased use of social media has a significant impact on studies on its function in delivering messages. Hjarvard (2014) stated that the role of media is classified into two types, mediation and mediatization. The difference in this role is based on input and

output processes, where the input is related to media definition as an object of economic value useful for society. Meanwhile, the output process is associated with the impact produced in constructing the social order of media users. Following Couldry's (2008) research, the construction created by social media is very significant because social reality depends on media. Therefore, it is considered a means of bridging the delivery of messages and carrying out social construction.

Media are considered a means of conveying messages to society. Karunianingsih (2020) defines media as a transmission tool with a mediation function. The mediation function means the overall impact produced by the media (Ahmad, 2018). Silverstone (2002) states that mediation is a fundamental dialectical process involving communication media to circulate symbols in messages conveyed to the public. This dialectical process allows the media to capture various dynamics in production and understanding. However, the meaning in the mediation process is limited in the media sphere and closed to the possibility of conveying other symbols outside the message content (Couldry, 2008). Therefore, the role of media in the mediation context is limited to the message being transmitted without other tendencies that affect its understanding.

The media play a significant role in social, cultural, and political representation. It is because all kinds of interactions that occur in the life of modern society take place within this space. It is a tool

capable of influencing social, cultural, and political structures by following media logic (mediatization) (Couldry, 2008). Mediatization describes many transformations of different social and cultural processes into appropriate forms or formats for media representation. The argument is not only on message transmission but on incorporating media-based logic and norms into social, cultural, and political actions. Mediatization denotes quantitative and qualitative changes in cultural life's social structure and texture. According to Hjarvard (2013), mediatization is interpreted as a process in which culture and society increasingly depend on media logic. The idea is not that the media "colonize" every other domain of society and strip them of their deepest reasons. Rather, there is a growing interdependence in which it acts as a construct and other important factors (Hjarvard, 2017; Miski, 2021). The media acts as a key structure in the mediatization of construction inline people's lives without paying attention to the delivery of the message contained.

Background of the Study: Dialectics Between Religion and Social Media

The existence of religious narratives and the media is like a double-edged knife. While the media makes it easy to spread religious narratives and form virtual communities, it can also distort religion's narrow meaning and understanding within a wide range (Henry, 2021). The spread of religious narratives takes place outside religious institutions as a sign of the formation of

communities in the virtual world. Exploration of religious developments is approached with media construction through mediation, mediatization, new social construction, and the process of adapting religion (Evolvi, 2021). Meanwhile, the existence of a virtual religious community in Rota (2019) forms an understanding of uniform religion. Its presence in social media has positive and negative implications.

The existence of religion in social media impacts the ease of accessing religious information quickly. Hidayat (2018) stated three ways to strengthen the legitimacy of religious narratives in social media: self-presentation, switching code, and textual reference. These strategies also create maturity and commitment among young people in understanding and carrying out religious orders (Retpitasaki & Oktavia, 2020). Basri and Murtadlo (2020) stated that the media is important in increasing spiritual knowledge and learning about religion. The speed of delivery and acceptance of religious narratives in social media is the main force associated with having a positive impact on the spiritual improvement of the community.

The existence of religion in social media also impacts a series of consequences that lead to negative representation. According to Fakhruji et al. (2020) and Wibowo (2018), the narrative building formed is symbolic. It appears as a subjective representation ambiguous in understanding sacred and profane areas. The media also significantly accelerate the spread of hate speech with religious nuances, especially on issues related to religion and politics

(Aminuddin, 2017). The media is also considered a bad element in creating political and social chaos, originating from beliefs, especially those related to controversial and conservative issues.

The relationship between the media and religion can shape new spiritual realities and collectivities. The existence of religion in social media also provides space for religious adherents to create and exercise authority collectively (Cheong, 2017; Makinuddin, 2021). The need to use the media in spreading religious narratives affects all actions and behaviors of modern society (Wahyuni, 2017). Social media provide a change in people's behavior that leads to the value of the message contained (Abidin & Fahmi, 2019; Sari, 2017). Furthermore, it significantly influences people's behavior and acts as an alternative to delivering Islamic da'wa (Pitchan et al., 2018). A similar analysis was explained by Jafar (2017) by revealing the important role of the media as a means to make friends, exchange ideas and thoughts, develop business, and preach. In addition, religion and media in modern life are two inseparable elements.

METHOD

Objectives

This study aims to determine the models, factors, and implications of teaching al-Qur'an using the TikTok application. The form of mediation is analyzed based on content that provides education on how to read al-Qur'an correctly according to *tajwid* (reading rules), displays readings by highlighting the beauty of the voice, and giving meaning to the verse according to the context faced (Figure 1). Data is analyzed critically and transformatively to strengthen the existence of TikTok as a mediator in the delivery of teaching, aesthetics, and the meaning of al-Qur'an.

Sources of Data

This study's data source is based on TikTok, a significant contribution among young people. The significant account is based on the number of followers exceeding one million and accounts that consistently narrated al-Qur'an teachings in their posts with the number of likes. These criteria are the primary data source. After determining the accounts, this study limits the data by

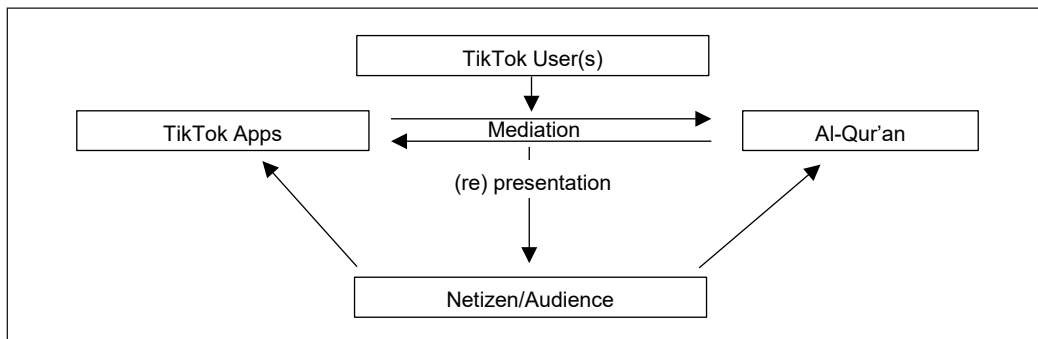


Figure 1. Conceptual framework

Table 1
Primary data sources

| Account | Follower | Like | Total Data |
|---------|----------------|--------------|------------|
| SD1 | 1 billion | 24.9 billion | 15 videos |
| SD2 | 123.5 thousand | 1.2 billion | 4 videos |
| SD3 | 971.9 thousand | 25 billion | 8 videos |
| SD4 | 2 billion | 57.3 billion | 4 videos |
| SD5 | 425.1 thousand | 10.4 billion | 15 videos |
| SD6 | 3.5 billion | 100 billion | 4 videos |

taking posts from April 14 to May 13, 2021, which coincides with the month of Ramadan 1442 H. A total of 47 contents were found in the sample data, as shown in Table 1. This study is also based on secondary data based on preliminary studies conducted from 2017 to 2021 related to mediation and mediatization problems.

Methodology

This study's methodology is used a qualitative method to generate new concepts with data collected from TikTok accounts that promote the teachings and meaning of al-Qur'an. Hancock et al. (2002) stated that qualitative methods focus on describing and interpreting data that develop new concepts or theories. It is also the evaluation of processes in an organization used to understand and generate new concepts to convey the teachings of al-Qur'an using TikTok. Data is collected from TikTok accounts that consistently display the narratives of al-Qur'an posts through documentation. The data was collected based on the process mentioned by Miles and Huberman (1984).

Data Analysis

The data collected were analyzed using three flows simultaneously: reduction, visualization, and conclusion drawing/verifications (Miles & Huberman, 1984). Data reduction is selecting, focusing, simplifying, and abstracting the narratives that appear on TikTok related to the dissemination of the meaning and contents of the al-Quran. After the data selection process, the next stage is the visualization before it is compiled, sorted, and assembled to make possible conclusions. Furthermore, the data is arranged based on the forms, factors, and implications of the Quranic narrative in TikTok. This study also used content analysis to explore and discover new concepts that Miles and Huberman (1984) argued. According to Grimmer and Stewart (2013), content analysis is a tool used to qualitatively determine the presence of certain words, themes, or concepts. Therefore, using the content analysis method, valid and replicable conclusions can be made from the data obtained (White & Marsh, 2006). In addition, the methodical appearance of data makes it easier to draw conclusions and verify the results.

RESULTS

This section presents the narrative form of al-Qur'an in the TikTok application. The explanation of various forms of the Qur'anic narrative in TikTok is explained in three models. The first is descriptive explanations, which include the form explanations carried out by the account owners to spread al-Quran in various models. The second is critical explanations comprising the need to build a narrative by choosing the verses' delivery. The third is the transformative explanations comprising the impact obtained by the account owner in explaining al-Qur'an.

The Model of Qur'anic (Re) Presentation on TikTok

The development of al-Quran study in social media is carried out in various forms and ways. The data shows three models used by young people to understand al-Qur'an on TikTok: reading, learning, and interpretative.

Theme 1: Reading the Quran

The first theme is derived from TikTokers' recitation of al-Qur'an, which consists of three sub-themes: (a) The beauty of reciting

al-Qur'an; (b) Visual as a mediator; and (c) The role of music in making a dramatic impression.

Sub-Theme 1: The Beauty of Reciting al-Qur'an.

The data show that recitations in a beautiful tone and voice were emphasized and used by TikToker(s) to present the beauty of reciting the verses of al-Qur'an. There are two ways of displaying the graceful recitation of al-Qur'an, i.e., (1) using your voice and (2) featuring the voices of famous figures. SD3, SD5, and SD6 display the recitation of al-Qur'an by highlighting the correct reading, great memorization, and melodious voice. In contrast, SD1 uploads euphonious and eloquent recitations by others. The chosen *surahs* are the ones that are popular and widely read by Indonesians, such as QS. al-Ikhlas (112), QS. al-Falaq (113), QS. al-Nas (114) (SD6), QS. al-Kahf (18), QS. al-Waqi'ah (56) (SD1), and al-'Ashr (SD6; SD5) or verses that are relevant to the motive of *da'wah* (SD3). Several uploaded recitations of al-Qur'an on TikTok reveal the acceptance and interest of the younger generation to explore and learn about the beauty of al-Qur'an.

Table 2
Thematic analysis

| Themes | Sub-themes |
|--|--|
| Reading al-Qur'an | <ol style="list-style-type: none"> 1. The beauty of reciting al-Qur'an 2. Visual as a mediator 3. The role of music in making a dramatic impression |
| Teaching al-Qur'an effectively and enjoyably | <ol style="list-style-type: none"> 1. Provision of information on the recitation of al-Qur'an 2. Techniques of memorizing al-Qur'an 3. Music as a mediator to teach al-Qur'an enjoyably |
| Interpretive of al-Qur'an on TikTok | <ol style="list-style-type: none"> 1. Explanation of the function of <i>surah</i> or verse 2. Congruence of meaning with reality. |

Sub-Theme 2: Visual as a Mediator.

High-resolution images and videos are used to support the recitation of al-Qur'an. The data shows three methods for leveraging visuals on the TikTok app.: First, displaying images with added background sounds, readings in Latin, ornate pictures, and Indonesian translation to get a dramatic impression of the meaning of the verses (SD1). Second, presenting the abstraction of meaning through certain images and tones, the images are used as a supporting medium (SD2) with an emphasis on tones that complement the visualization to add to the impression of visually meaningful recitations of al-Quran (SD3). For example, for the recitation of *surah* QS. al-Ankabut (29: 57), *kullu nafs da'iqat al-mawt* (every soul will taste death), the chosen opening and tone are fearful and sorrowful (SD3). It reinforces the conveyance of the meaning of death in the verse. In addition, SD3 also uses a specific tone to present the dramatic situation related to the meaning of the recited verse (Figure 2). Third, putting the content creators on view when they do the recitations; SD2, SD5, and SD6 perform this

method to give confidence in the ability to memorize and recite al-Qur'an correctly and beautifully to provide examples to follow. Images are used to leave a mesmerizing and sacred impression in the recitation of al-Qur'an to engage young TikTok users.

Theme 2: Teaching al-Qur'an Effectively and Enjoyably

The second theme is obtained from the teaching of al-Qur'an by TikTok users with three sub-themes: (a) Provision of information on the recitation of al-Qur'an; (b) Techniques of memorizing al-Qur'an; and (c) Music as a mediator to teach al-Qur'an enjoyably.

Sub-theme 1: Providing Information on Ways to Read the Qur'an. The ways to read the Qur'an emphasize the rules of *tajwid* (the science of reading the Koran), such as *makharij al-huruf* (pronouncing letters) (SD5; SD6), reading law (SD5), *waqaf* (stop) signs (SD4), and analyzing the beginning of a letter (*al-ahruf al-muqatta'ah*) (SD3).



Figure 2. Visualization of al-Qur'an on TikTok: (a) SD1 model; (b) SD3 model; and (c) SD4 model

How to read *Surah al-Kauthar*? First, when a nun conducts *tasydid*, they must be detained for reading it because of *ghunnah*. When there is *mad jaiz*, it means that the reading was prolonged. Attention needs to be paid to bold letters, such as *tha'* and *shad*. Finally, when there is a *ra'* that is *sukun* (dead) because of the *waqf* preceded by the *harakat fathah*, then the *ra'* becomes thick. (SD5)

(You must know) The sign of *waqf* in al-Qur'an م must stop, لا should not stop, صلى should continue, ∴ ∴ stop at one of the signs, ج may stop, may continue, قلى preferably stop, س pause without taking a breath. (SD4)

According to SD5, the teaching of al-Qur'an is also done by correcting inaccurate readings often performed by the public. In addition, correct reading techniques are displayed to teach how to recite al-Qur'an through the TikTok app to make it more widely accessible.

Sub-Theme 2: Techniques of Memorizing al-Qur'an. SD2's TikTok account consistently displays the processes and methods used to teach children to memorize al-Qur'an in a fun way. For example, she shows her son's ability to memorize short *surahs* in *juz* (part) 30 correctly and adequately. S2 tests his rote ability in two ways; (1) the child recites the memorized verses independently, and (2) he continues

the verse (S2). The ability to memorize a specific verse can also be accompanied by a description of the *faidah* (benefits) contained in it (S2).

Sub-Theme 3: Music as a Mediator to Teach al-Qur'an Enjoyably.

The advantage of TikTok as a medium that accommodates music as a background sound for videos or images is to strengthen the impression of fun al-Qur'an learning. For example, S4 uses "Bika Moulhimi" by Maher Zain in teaching the rules of *waqf* (stopping). Similarly, S5 provides background sounds for the contents. For example, S5 chooses the instrumental "River Flows in You" by Yiruma to learn about the pronunciation of the letter *ta'* and uses different music when teaching how to connect the first and second verses of QS. al-Ikhlâs (112: 1-2). The suitability of song lyrics with the explanatory narrations becomes another model of using music as a background sound. For instance, S4 uses "What Do You Like in Me" by Nasty Cherry, whose lyrics contain the phrase "you want me," to describe Dajjal's speech for people who are lazy in memorizing *surah* al-Kahf (18). Adding various sounds as the background for explanation videos exemplifies that learning al-Qur'an can be fun and exciting.

Theme 3: Interpretation of Al-Qur'an on TikTok

The third theme is TikTokers' interpretation with three sub-themes, i.e., (a) explanation of the function of *surah* or verse and (b) congruence of meaning with reality.

Sub-Theme 1: Explanation of the Function of *surah* or Verse. The explanation of the meaning of the certain verse is displayed along with its function, which is to address and overcome the problems experienced by young people. SD4 features the *faidah* (benefit) of QS. al-Ra'd (13: 28), *alladhina amanu wa tathmainnu qulubuhum bi zikr Allah* (those who have believed and whose hearts are assured by the remembrance of Allah) as a remedy for people who need self-healing. Besides, economic issues also motivate TikTok users to search for al-Qur'an-related content that explains the *faidah* (benefit) of certain *surah* or verse which relates to the problems they face. A video entitled "7 sustenance magnets for merchants" (SD4), for example, explains the *faidah* (benefit) of reading al-Waqi'ah (QS. 56) to attract fortune. The other benefits of al-Quran readings are explained in SD4's videos related to the virtues of reciting QS. al-Anbiya' (21: 87) to achieve *hajat* (intention) and QS. al-Sharh (94: 1–8) to facilitate sustenance collection (SD4). The concern of TikTok content creators so that young people practice al-Qur'an in their everyday life encourages posts related to daily behavior. SD3 describes the function of reciting QS. al-Ikhlās (112), QS. al-Falaq (113), and QS. al-Nas (114) before going to bed to protect against evil at night. The needs of young people as TikTok users are satisfied by using attractive images and videos as parts of explanations of the functions of certain *surahs* or verses that are relevant to daily life.

Sub-Theme 2: Congruence of Meaning with Reality. Contents that explain the meaning of a particular *surah* or verse are given to respond to the phenomena encountered by many, with the suitability of the meaning for the narrative. For example, SD6 interprets the 18th verse of *surah* al-Dharyat (51:18), *wa bi al-asharihum yastaghfirun* (and in the hours before dawn, they would ask forgiveness) as the basis to argue that women get rewarded during menstruation in the month of Ramadan. Meanwhile, SD3 presents an interpretation of the 152nd verse of *surah* al-Baqarah (2:156), *idha ashhabathum musibah, qalu Inna lillah wa Inna ilayh raji'un* (Who, when disaster strikes them, say, "Indeed we belong to Allah, and indeed to Him we will return") in response to the sinking of the Nanggala submarine which became a national issue at that time. Explanations of the *faidah* (benefit) and the meaning of a particular *surah* or verse relevant to the existing context are part of the dissemination of al-Qur'an teaching through the TikTok application.

Contributing Factors for the (Re) Presentation of al-Qur'an on TikTok

The creation of TikTok accounts with various motives is closely related to the use of this social media platform as a medium for spreading the teachings of al-Qur'an by the younger generation. Representations of al-Qur'an on TikTok involve not only how the identity of al-Qur'an is produced and reconstructed through the uploaded videos but also how the content creators display

this identity as well as audience reception to it. On this basis, three contributing factors affect the reshaping of the identity of al-Qur'an on TikTok. The first is public reception to the media. The production of al-Qur'an-related content on TikTok is encouraged by the high acceptance of its users; they agree on the advantages of using this application as a means of sharing experiences and exhibiting the ability to recite al-Qur'an to motivate others to learn. SD1 emphasizes the visualization of al-Qur'an by featuring the melodious voices of several prominent figures in the contents, whereas SD2 educates children and motivates them to memorize al-Qur'an. Meanwhile, SD3 and SD5 show their ability to recite al-Qur'an beautifully. As a religious figure, SD6 puts more emphasis on the aspect of *da'wah* by responding more to the religious questions of the people. The diversity of the presentation of al-Qur'an on TikTok is produced and reconstructed according to the capabilities possessed by the creators as parts of their self-actualization on this popular social media platform.

The second factor is the reproduction of realities. The urge to spread the virtues of al-Qur'an properly and correctly according to the rules of recitation is the main motive for TikTokers to identify themselves as preachers and teachers of al-Qur'an (SD5; SD3; SD6). Self-identification as a *da'i* impacts the purpose of providing teachings to improve the condition of the people. The basis of educating how to recite verses unfamiliar to many people (SD4) and

practicing them to be followed (SD5) becomes an effort to reproduce reality in the recitation of al-Qur'an with the correct rules. This reproduction of realities in reciting al-Qur'an is done by answering audience questions about previously unknown ways and rules of recitation correctly. For example, the SD5 account consistently responds to various questions on reading problems from a verse with the correct *makharij al-huruf* (pronouncing letters). Meanwhile, the SD3 account is more directed at correcting various wrong readings made by the public.

((@khodijah830: I still cannot tell the difference between *mad jaiz* and *mad wajib*...) It is really easy to tell the difference between *both*. For instance, the *mad wajib* rule has a length of 4/5 *harakat*, assuming there is a *mad tabi'i* meeting with *hamzah* in one word. Meanwhile, *mad jaiz* has 2, 4, or 5 *harakat* lengths, supposing *mad tabi'i* meets *hamzah* in two words. (SD5)

The desire to respond and provide teaching on al-Qur'an is an incentive for young people to use TikTok.

The practice of al-Qur'an in social life is conducted by responding to phenomena relevant to particular verses. For example, it can be seen in SD3's posts related to three phenomena, namely: (1) the recitation of QS. al-Baqarah (2: 156) in response to the sinking of the Nanggala submarine; (2) the recitation of QS. al-Kahf (18) on Fridays during Ramadan; and (3) the recitation of QS. al-Isra' (17: 27) (Indeed, the wasteful

are brothers of the devils) in response to a video depicting someone throwing money. SD6 and SD5 account conducted similar activities by responding to phenomena during the fasting month. The depiction of these verses in the actual phenomena makes al-Qur'an applicable in everyday life.

The third factor is self-branding. Content production on TikTok cannot be separated from lifestyle branding as the embodiment of young people's lives in the digital era. The ability to recite correctly, the beautiful voice, and an ample number of followers are the main reasons for producing al-Qur'an-related TikTok videos. SD3 features previously recorded recitations of al-Qur'an with magnificent sound effects. In addition, he uploads a video of himself reciting al-Qur'an lip-synchronically. Representation of al-Qur'an also refers to how TikTok users portray realities to present themselves in front of an audience. SD6 exhibits al-Qur'an through the beauty of the recitations he does when he becomes the imam of *salat*. Similarly, SD4 presents himself as an "expert" in the recitation of al-Qur'an by responding to various comments of his audience and claiming that they are wrong. Thus, al-Qur'an is a tool to create self-branding by utilizing many followers.

Implications of Spreading the Teachings of al-Qur'an on TikTok

The representation of al-Qur'an on TikTok aims to display messages and teachings facilitated by limited media in 15–60 second videos. The appearance of the 'new face' of al-Qur'an in this media has given rise

to various expressions of pride that has attracted young people. The widespread access of TikTok as a medium for learning al-Qur'an has impacted the shifting of the traditionally institutionalized authority into a more modern and widely accessible medium. With their TikTok accounts, SD3, SD5, and SD6 can replace the role of traditional formal institutions in teaching al-Qur'an. The great interest of the TikTok audience in learning al-Qur'an through modern media is evidenced by SD5, which routinely organizes al-Qur'an teachings. SD3 also receives the same response for his posts that provide *tajwid* teaching, which gains 1.1 million views. The transfer of teaching media by TikTok user(s) can shift institutional authority in the traditional teachings of al-Qur'an to social media through the representation of al-Qur'an.

The emerging shift of religious institutions is carried out cooperatively in a similar pattern to produce shared purposes in teaching al-Qur'an. The emphasis on the correct recitation of al-Qur'an in accordance with the *makharij al-huruf* (pronouncing letters), which is beautiful and melodious, is a form of a central signifying practice by SD1, SD3, SD5, and SD6. Similarly, SD2 and SD4 provide the same concept about the benefits of memorizing al-Qur'an. At the same time, this model responds to the challenges of al-Qur'an teaching in the era of technological development by shifting to a more modern and digital approach. SD4 answers the question of "why teaching al-Qur'an on TikTok?" by mentioning the historical hadith of al-Bukhari, which states,

"The best of you are those who study al-Qur'an and teach it to others," in his video with the caption stating that "teaching al-Qur'an can be done anywhere." The teaching activities of al-Qur'an carried out by various TikTok content creators show efforts to form the usual meaning of the urgency of learning and teaching al-Qur'an through any media.

The belief in the ability to teach al-Qur'an through any media impacts the transformation of al-Qur'an learning. TikTok is a new tool used by content creators to provide the knowledge needed by the people by responding to their audience through the comment section in the form of Q&A sessions. Various questions related to difficulties in reciting al-Qur'an become the basis for creating new content that other viewers appreciate (SD5). Similarly, the responses to questions about the message and meaning of certain verses encourage the production of other contents to explain the posed problems (SD6). The process of constructing the meaning of the verse in the form of relevant images and appropriate contexts gives sacredness to the message contained in the verse (SD1; SD4). The success and experiences in learning and memorizing al-Qur'an can be seen in SD2's TikTok account, which contributes to creating a community that memorizes al-Qur'an at an early age. The gap in learning the meaning of al-Qur'an and the strategies of reciting al-Qur'an among young people is resolved by the existence of al-Qur'an-related content on TikTok.

A more tangible impact for TikTok users is related to the advantages gained by the content creators. This study finds two advantages associated with the teachings of al-Qur'an on TikTok. The first is the existence and expansion of *da'wah*. SD6, a *da'i* famous on television, benefits from the widespread dissemination of *da'wah* narratives among young people. This expansion of *da'wah* can be seen in the numbers of their followers and videos that receive more than 100 million likes. The numbers of followers of SD1, SD4, and SD3 measure the public appreciation for the purposes and benefits of the presented contents. Meanwhile, SD5 expressed on a national television program that he acknowledges the significant impact of teaching al-Qur'an on TikTok by sharing his experiences and teachings of al-Qur'an. Furthermore, popularity provides non-financial benefits to TikTokers through their continued existence on this social media platform.

Second, financial benefits from the account owner manifested from incoming advertisements in products related to attributes commonly used in posts on TikTok. For example, SD5 accounts provide special posts related to *mushaf* products.

What kind of Qur'an is suitable for people learning to read al-Qur'an using the following (1) Ottoman Rasm, (2) textual text, (3) 15-line Qur'an, (3) yellow paper with tajwid markings, and (4) a translation? I (Sandi) have a recommendation for you from the

tokohadija. It is really cool and well packaged. The cover can also be custom, according to our choice. (SD5)

SD4 accounts from digital prayer beads and beauty products (SD4) also obtain profits from advertising. Several studies have shown financial benefits' to strengthening account owners' existence in teaching al-Qur'an using TikTok. The benefits obtained are financial and non-financial without eliminating their contribution to the social sphere. Meanwhile, the popularity gained is used to spread social messages. The SD5 account consistently invites its followers to participate in various social activities by facilitating donations channeled to needy people. SD4 did the same thing by actively raising humanitarian issues for Palestine citizens. Meanwhile, SD6 consistently spreads messages related to several government policies dealing with the COVID-19 pandemic in its position as a preacher.

DISCUSSION

This study shows that TikTok is a medium for delivering the narratives of al-Qur'an to provide education without changing perceptions. The data collected indicate that these applications are not used to spread the interests of certain religious sects. Submission of al-Qur'an narration is displaying the beauty of reading, learning, and conveying relevant meaning to the context faced by young people. It makes them easy to appreciate and explore

problems related to al-Qur'an easily and significantly by mediating gaps in reading and understanding. TikTok is used as a mediator to convey the narrative of al-Qur'an with motifs and implications without the forceful use of media logical structure. Schulz (2004) stated that the media majorly function as a means of delivery without any tendency. The dialectical process between al-Qur'an and the media requires TikTok to be involved in the circulation of symbols in social life. This view aligns with Silverstone's (2002) research that the mediation process depicts a fundamental dialectical process in which institutionalized media is involved in circulating symbols in social life. TikTok has become a new medium for young people to spread the contents and teachings of the Quran.

Furthermore, this platform is increasingly used by young people as a medium of da'wa in teaching, solving reading problems, and overcoming problems related to al-Qur'an. The dominance of teaching content to read al-Qur'an and display a variety of musical readings indicates a good mediation aspect using the TikTok application. The effectiveness of delivering al-Qur'an learning makes this application a positive in Muslim society. Hamad (2001) stated that most of the messages presented can be conveyed properly without distortion. This function in the mediation aspect proves McQuail's (1987) view that social media can act as a window, mirror, filter, guide, space for mutual agreement, and a connector for separate communities in reality. Strömbäck (2008) stated that the wise use of media

could connect individuals without being limited by distance. Therefore, putting the media only as a liaison avoids the associated logic trap, which aims to change audience perceptions. TikTok is only used as an educational tool without changing perceptions.

The use of TikTok as a teaching medium reflects the community's need for content that provides an understanding of al-Qur'an via reading, learning, and explaining the actual problem. The ease of providing these aspects promotes the advancement of the introduction of al-Qur'an in society using social media. The conventional teaching of al-Qur'an, limited by space and time, can be overcome by diverting the learning and understanding system into a virtual space using social media platforms, such as TikTok. According to Putra (2018), social media has a significant impact on society's understanding of religion, such as Islam. The existence of teaching and understanding of al-Qur'an on social media provides an opportunity for the wider community to explore their curiosity about how to read, listen to the melodious strains, and share problems related to misunderstanding the meaning. TikTok contributes to the understanding of al-Qur'an related to the correct way of reading, listening to the strains of beautiful readings, and contextualizing meaning.

Several studies have shown the impact of social media on the Qur'an and how religion is constructed under social media logic. Couldry (2008) stated that the important messages contained in al-Qur'an

are reduced to political and ideological interests. This study shows that wise media use maximizes important aspects of reading al-Qur'an. The main base of the TikTok application, which uses music, is turned into a melodious chanting of the recitation of al-Qur'an. The video's duration, only 15 to 60 seconds, is used to create short and effective learning content regarding how to read al-Qur'an. The background sound strengthens the meaning of the verse that is read for the reader to understand easily (SD1). This model enables other debated explanations to be reduced by delivering a short narrative related to the verse, which indicates the role of the media as intermediaries manifested in this study. This view is in line with Hjarvard's (2008) research that the media is not only an independent language and environment but also depends on its users. Therefore, the narratives of al-Qur'an in the media do not always lead to a form of mediatization; rather, it refers to mediation.

The freedom to share religious narratives on social media leads to the uncontrolled spreading of the content. It makes it challenging to validate the truth associated with understanding al-Quran. This application's limitations in constructing religious messages are vulnerable to simplifying religious content. It has to shallow religious knowledge caused by the delivery of narrative in creating the widest possible attraction with the content created. Fealy (2012) analyzed the correlation between Islam and consumption in the technological era. Fealy stated that Islamic views tend to decline along with

market demands to simplify religious messages and create attractive videos (Fealy, 2012). Therefore, TikTok users need to pay attention to the potential that can make al-Qur'an narrative on social media without distorting its original meaning.

CONCLUSION

The old assumption about the logic of the media to reduce religious narratives has proven to be unreasonable. This study shows that media can be used as a mediator to disseminate the teaching, recitation, and interpretation of al-Qur'an through the TikTok application. The contents uploaded to this social media platform teach how to recite in correct *tajwid*, display a beautiful recitation and respond to the problems of the people regarding the recitation of al-Qur'an and the meaning of the verses. The presented representations are not merely popularity-oriented but provide teachings and interpretations. It can transform the way of learning al-Qur'an, replace the authority of the traditional institution, and produce shared purposes in the teachings of al-Qur'an. Although this orientation affects financial and non-financial benefits gained by the content creators, they do not distort the original purposes of providing teachings and interpretations of al-Qur'an in responding to current problems.

This platform can mediate the need for the education and understanding of the Quran effectively and openly. Its effectiveness and breadth of coverage

make it a new alternative for spreading Islamic da'wa through teaching, melodious recitation of verses, and direct interaction with virtual communities. The findings and contributions in this study were achieved by applying the content analysis method. The Quranic narrative objectives using TikTok allow the easiness of drawing correct conclusions from the data. It also provides tools for study to answer the questions; therefore, the function of social media as a mediating tool is found in narrating the understanding and teaching of al-Qur'an on TikTok.

However, this study only used TikTok as a material object with accounts that consistently display the teaching and the meaning of al-Qur'an. This research is limited to the use of TikTok as a medium and al-Qur'an as its content. Therefore, further research is needed to be conducted with the same models to determine the efforts to display al-Qur'an in other social media or content, such as hadith in the TikTok application. A study with this model is needed to provide other evidence or criticism. Similarly, further study needs to be conducted by displaying hadith content or other applications capable of improving Islamic learning in advancing information technology for a more effective broad scope.

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The Effect of a Smart Money Kit on the Financial Interest, Financial Management Behavior, and Prosocial Level of Preschoolers

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ABSTRACT

Financial literacy is among the most significant components of daily life. Due to the current economic problems, the need and use for financial literacy and planning become more prevalent as one grows older. Children grow up in an infinitely uncertain world, where they are forced to take responsibility for their financial future. Since the financial intellect can be cultivated, increasing the proclivity of financial management and fostering money-related knowledge at a young age has a significant impact on promoting future financial behavior. This study was conducted in response to the need to broaden the current understanding of financial socialization among the young generation. This research aimed to ascertain whether a Smart Money Kit (SMK) can be utilized as an alternative financial education tool to increase preschoolers' financial interest, management behavior, and prosocial levels. The sample of the research included 50 preschoolers from Selangor, Malaysia. They were randomized into an experimental or control group with 25 preschoolers. A one-way MANOVA was used. The findings of within-subject multivariate tests demonstrated statistically significant differences between the control and experimental groups. In addition, the results showed a significant effect on the experimental group's level of interest score, a significant effect on the experimental group's level of financial management behavior,

and a statistically significant difference in the experimental group's level of prosocial score. The study showed that SMK effectively improves children's interests in financial education, management, and prosocial behavior.

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INTRODUCTION

The literacy and knowledge of financial management have fundamentally become vital in navigating financial resources in the 21st century. Individuals, their families, and society may all be affected by poor financial decisions. It results from the increasing demands of the persistently dynamic and complex global financial market, which expects an individual to possess such aptitudes. The notion of financial literacy, jointly characterized by the International Networking and Financial Education (INFE) and the Organization of Economic Co-operation and Development (OECD), recognizes that a financially savvy society plays a pertinent role in ensuring economic progress and stability, which inevitably contributes to the building of a prosperous nation. Financial literacy refers to the knowledge and understanding of concepts, risks, skills, and motivations, as well as the confidence to employ individual knowledge and skills to make effective decisions in the financial context (OECD, 2014). It also refers to the financial understanding and capacity used to arrive at strong personal financial decisions (Te'eni-Harari, 2016), which all impact society and the nation. Furthermore, numerous studies have proven that the mastery of financial knowledge and skills during schooldays will influence adulthood (Kaiser & Menkhoff, 2020).

In this regard, Sabri et al. (2019) created the Smart Money Kit (SMK) in Malaysia. The SMK includes sixteen interactive teaching materials organized as games based on age compatibility for children aged

six to twelve that raise awareness among parents and educators on the best financial management practices for children. Getting to ascertain the knowledge children have about money, financial goals, needs against wants, savings, expenses, budgets, and basic concepts of Islamic banking are all included in this kit. The kit is used in preschools in Malaysia to help actively stimulate the minds of preschoolers (Sabri et al., 2019).

The kit is still in its early stages of development, but it is gradually being utilized to improve the financial behavior of preschoolers and students. Such financial management tools could indirectly improve the potential of individuals and produce creative and innovative human capital capable of higher-order thinking that simultaneously helps meet the goals of national educational psychology (e.g., Anthony et al., 2021). Many researchers in the field of early childhood education have duly recognized 'play' as a key factor in childhood learning (Kim, 2020; Rao et al., 2019). Despite it being an instinct, there is a necessity to include play activities in the learning sessions of children because, as stated by Brock et al. (2009), play creates opportunities for rearrangement, enrichment, and discovery in building experiences and knowledge in children through the discoveries of novel concepts. As such, apart from exploring the use of the SMK, this study also looks at conventional teaching methods to allow for an objective comparison between the two on their respective effects on the financial management behavior of preschoolers

and their interest in the study of financial management.

The problems related to teaching and learning found in past studies confirmed that the educational system is still very much teacher-centered, which is a practice that restricts the possibilities of two-way interactions between teachers and students (Kaskens et al., 2020; Levine & Pantoja, 2021). This pattern contradicts the natural, active, and exploratory inclinations of children. Hence, there is a need to include creative and appealing play elements in implementing children's activities to complement the learning and teaching processes. Unfortunately, most teachers in preschools are prone to applying direct teaching pedagogy without prioritizing play (Lee et al., 2021) due to their lack of knowledge and skills in the play approach, which inadvertently affects their familiarity with materials and play elements generally used for teaching (Blackwell et al., 2016; Padmavathi, 2017). Such inadequacies of teachers, which result in their less appealing and meaningful delivery methods (Mishra & Koehler, 2006), threaten children's interests in what is being taught and make the learning process formidable (Baranovich et al., 2019).

In this study, preschoolers are expected to learn about finances in an authentic, realistic, and meaningful context, including exposure to mannerisms that are demonstrated in a financial environment. Such learning practices offer real experiences that could stimulate children's critical thinking abilities, problem-solving skills,

curiosity, and inquisitiveness, as well as encourage hands-on involvement and equip them with extensive experience related to the natural and artificial world around them, which is exciting to explore (e.g., Bybee, 2013). Additionally, play activities could stimulate the natural integration of brain functions and learning domains (Zosh et al., 2018).

A study by Bucciol and Veronesi (2014) found that the financial literacy experience gained during childhood has a significant effect on an individual's economic standing in their adult years. It is supported by financial socialization studies which established the imperative role played by childhood experiences in shaping an individual's financial knowledge and behavior (Shim et al., 2010; Webley & Nyhus, 2013). Therefore, it can be deduced that financial education has a crucial role in developing a financially savvy generation from the tender years.

Financial literacy education has thus far been introduced through inquiry-based cooperative learning approaches, real-life case studies, didactic games, dramatic education, training, and instructions, as well as visits to prominent financial institutions (Maurer, 2014; Opletalova, 2015). These efforts, however, have shown insignificant results since the aforesaid financial literacy education does not always result in responsible behavior (Robb & Woodyard, 2011). Role-playing activities involve multiple children interacting with a particular topic or scenario, whereby each child performs in accordance with the

character he or she portrays as they engage in open roles. This role-playing approach assumes it is possible to create authentic analogies in real-life problem scenarios (Mulia, 2017). Therefore, using the SMK as a role-playing learning method with basic competencies such as recognizing needs, preferences, and self-interest is highly valued since it can develop financial attitudes and behaviors at a young age.

Against this backdrop, this paper aims to investigate the effectiveness of the SMK as an intervention to increase financial knowledge, money management behavior, and prosocial levels among preschoolers. The current research is unique in that it investigates the function of the SMK among children by examining the relationship between the SMK and their financial outcomes. The problem of a lack of play-based activities in learning and teaching in preschools has been noticed in the element of child growth and motivation, hence being unable to provide individuals with appropriate financial management behavior in the future. The findings of this study could be used to resolve problems in specific contexts by using play-based methods to learn financial management.

LITERATURE REVIEW

In recent years, there has been a significant surge in students' interest in financial education worldwide (e.g., Agnew & Harrison, 2015). As a result, teachers and education experts are figuring out ways to pique the interest of children and youth in financial education and money management.

When a child is six years old, he or she learns to establish rules, make connections, discern between different sorts of money, and classify things according to their price levels (Te'eni-Harari, 2016). For instance, in Morocco, the Fondation Marocaine pour l'Éducation Financière (FMEF) ran various social media campaigns, most notably on Facebook, to raise awareness on topics of interest in financial education among young people by using appealing formats and graphics (Slaoui et al., 2020).

A theory based on cognitive development (Piaget, 2003) provides theoretical support for this study. The theory posits that, as children equilibrate new concepts, they progress through four phases of development, namely, (1) sensorimotor, (2) preoperational, (3) concrete operations, and (4) abstract reasoning. According to Piaget (2003), children of this age would be primarily concerned with their finances and how their decisions would directly affect them. Furthermore, they would comprehend in a one-dimensional manner and focus on a single aspect of this concept. Children must understand the role and nature of money before they can appreciate more abstract economic concepts by promoting the development of responsible financial behavior. Once these concepts are mastered, they can then go on to learn about abstract concepts.

Recently, game-based learning has been identified as an entertaining and successful technique for teaching students, and it can be particularly good for educating and familiarizing students on how to handle

money since it allows them to learn from their own decisions and encourages them to be interested in financial management (e.g., Johan et al., 2021). Payback, Spent, Financial Football, Shady Sam, Money Magic, the Payoff, Hit the Road: Financial Adventure, the Uber Game, and Credit Clash are popular games for students to learn how to manage their finances (Kalmi & Sihvonen, 2021). Concerning the mentioned scenario, Sabri et al. (2019) introduced the SMK in Malaysia as an interactive game-based learning approach that encourages kids, particularly preschoolers, to cultivate an interest in money management.

Financial management behavior has evolved into a noteworthy aspect of enhancing individual well-being (Chan et al., 2012). According to Al Kholilah and Iramani (2013), financial management behavior is the ability of people to perform financial duties such as making plans, monitoring, searching, and bookkeeping in the long and short term. Therefore, using appropriate learning games in financial literacy education should be encouraged to improve students' financial management skills. As a result, every student should use a game-based learning strategy to take the initial step toward changing their financial behavior. Previous studies revealed a positive correlation between digital learning games and financial literacy education (Aprea et al., 2017). This finding is similar to the results of Chen et al. (2013), who discovered how digital games could be a favorable environment to aid children in learning about financial management.

Prosocial behaviors are defined by their intended implications for others and are carried out voluntarily rather than under compulsion (Al-Thani & Semmar, 2017; Malti & Dys, 2018). It is also defined as an activity that aims to improve another person's, even though the helper is not obligated to do so and the help recipient is not an institution but an individual (Kavussanu, 2006). Developmental and evolutionary psychologists have recognized various domains of prosocial behavior, including informing, assisting, donating, soothing, participating, and volunteering (House et al., 2020). Gentile et al. (2009) believed that prosocial games facilitated various learning, including financial learning. The General Learning Model, according to La Guardia et al. (2014), argues that any learning encounters can have affective, arousal, and/or cognitive impacts in the short term. As a result, if the game necessitates prosocial behaviors to succeed, these prosocial behaviors should be strengthened soon after the game. However, empirical evidence of the effects of prosocial games as a tool to promote financial education is lacking. Gentile et al. (2009) discovered that Singaporean middle-school pupils who participated in more prosocial games acted more prosocial.

Furthermore, prosocial game play predicted subsequent benefits in prosocial conduct in two longitudinal samples of Japanese children and adolescents. Therefore, the research objectives are to explore whether the SMK could increase preschoolers' interest in financial education

and financial management and increase the prosocial levels of preschoolers. Furthermore, past findings have shown that board games can increase these elements. Thus, the researcher of the present study postulated that:

Hypothesis 1. *The SMK has a significant positive effect on the interest of preschoolers in financial education.*

Hypothesis 2. *The SMK has a significant positive effect on the financial management behavior of preschoolers.*

Hypothesis 3. *The SMK has a significant positive effect on the prosocial levels of preschoolers.*

METHODOLOGY

A quasi-experiment was used as a research design with two randomly assigned groups. In this study, treatments are applied to experimental units in a treatment group in the design of experiments. Members of a control group get regular therapy, a placebo, or no treatment at all in comparison tests. There might be several treatment groups, multiple control groups, or both (Hair et al., 2007).

Participants and Procedures

The sample for the present study included 50 preschoolers from Selangor, Malaysia. This study selected 50 Malaysian preschoolers registered in public primary schools as research samples. The selected students possessed more or less the same capabilities and interests, as proven by their mid-year evaluations conducted by class teachers

based on the assessment standards set by the Ministry of Education (MoE) of Malaysia. Such a selection ensures equilibrium in terms of interests in financial education and financial management behavior between the two research groups (e.g., Murtagh & Heck, 2012).

They were randomized into an experimental or a control group, with 25 preschoolers in each group. This research was conducted in the Family, Adolescent, and Child Research Centre of Excellence (FACE) at Universiti Putra Malaysia by using one control class (B1) and one experimental class (B2). The difference between the two groups was the teaching approach employed. The experimental class was treated using the SMK method, while the control class was treated using the conventional method. The intervention for this study involved 3-weeks' worth of SMK activities. The SMK was given to the experimental group for one 30-minute session per week. G*Power 3.0.10 was used to determine the total number of participants (Cohen, 1992). The total sample size for the MANOVA and the comparing factors for the two groups is 50.

Instruments

The interest scale was measured using the Preschool Learning Behavior Scale (PLBS) (McDermott et al., 2002), which was created to study interest and learning behaviors. Next, the prosocial scale was measured using the Preschool and Kindergarten Behavior Scale (Merrell, 1994) to measure the prosocial levels of preschoolers. Finally, financial

management behavior was measured using the financial management behavior scale (Dew & Xiao, 2011). This study used a five-point Likert scale for the pre-and post-test. The Cronbach's α for the interest in financial education, prosocial behavior, and financial management behavior varied from 0.71 to 0.86, which indicated moderate to good internal consistency.

DATA ANALYSIS

The data were analyzed using a one-way MANOVA. The one-way MANOVA is the ideal option when one or more independent variables (control and experimental group) and numerous dependent variables (interest in financial education, financial management behavior, and prosocial behavior) are evaluated several times.

RESULTS AND DISCUSSION

To determine the significance of the SMK on the interest in financial education, financial

management behavior, and prosocial levels, a one-way MANOVA was used. Table 1 displays the average scores of each group and is separated by the assessment tool.

Table 1 shows that the mean score of the variable of interest in financial education for the control group increased to 2.1600 in the post-test, compared to the 2.1229 achieved in the pre-test. Similarly, the treatment group recorded a mean score for their post-test that increased to 3.8343, compared to the pre-test, which was only 1.6457. Data analysis shows differences in the mean value of the interest in financial education in the post-test for the treatment and control groups, which were 3.8343 and 2.1600, respectively. The mean difference between the two groups was 1.6743. It shows that the interest in the financial education of preschoolers in financial management learning increased by using the financial management game method compared to learning the conventional way.

Table 1

Descriptive analysis of the mean scores of a pre-test for the dependent variables of student interest, student financial management behavior, and student prosocial levels for the treatment and control groups

| Variable | Group | Mean | |
|----------|-----------|--------------------|--------------------|
| | | Pre-Test | Post-Test |
| SI | Control | 2.1229 (.08123) | 2.1600 (.09512) |
| | Treatment | 1.6457 (.12791) | 3.8343 (.11795) |
| FMB | Control | 2.0533 (.18459) | 2.0311 (.18570) |
| | Treatment | 2.6089 (.17309) | 4.0133 (.15818) |
| SPL | Control | 3.2074 (.07784) | 3.1881 (.18700) |
| | Treatment | 2.4133 (.09954) | 3.1511 (.11462) |

Note: Student Interest=SI; Student Financial Management Behavior=FMB; Student Prosocial Level=SPL

The increased interest rate in the students' financial education was highly significant concerning the direct engagement of financial management games, as proven by the increase in mean interest in financial education in the post-tests.

Multivariate analyses of within-subjects throughout time, as shown in Table 2, showed statistically significant differences between the control and experimental groups, $F(3, 46) = 21.44, p = 0.000$.

Table 2
Multivariate tests of within-subjects

| Effect | Value | F | Hypotheses <i>df</i> | Error <i>df</i> | <i>p</i> |
|--------------------|-------|---------------------|----------------------|-----------------|----------|
| Pillai's Trace | 0.984 | 485.03 ^b | 3.000 | 46.000 | .000 |
| Wilks' Lambda | 0.216 | 485.03 ^b | 3.000 | 46.000 | .000 |
| Hotelling's Trace | 8.727 | 485.03 ^b | 3.000 | 46.000 | .000 |
| Roy's largest Root | 8.727 | 485.03 ^b | 3.000 | 46.000 | .000 |

Note: b. Exact statistic

Table 3
Tests of between-subjects effects on pre-and post-test mean scores

| Source | DV | Type III Sum of Squares | <i>df</i> | Mean Square | F | Sig. |
|---------------------------|-----|-------------------------|-----------|-------------|----------|------|
| Control | SI | 8.957 | 1 | 8.957 | 780.271 | .000 |
| | FMB | 40.252 | 1 | 40.252 | 1303.295 | .000 |
| | SPL | 4.317 | 1 | 4.317 | 269.511 | .000 |
| Experimental | SI | 30.961 | 1 | 30.961 | 2697.071 | .000 |
| | FMB | 11.941 | 1 | 11.941 | 386.626 | .000 |
| | SPL | 3.227 | 1 | 3.227 | 201.434 | .000 |
| Control Experimental * | SI | 28.929 | 1 | 28.929 | 2520.040 | .000 |
| | FMB | 12.721 | 1 | 12.721 | 411.889 | .000 |
| | SPL | 3.582 | 1 | 3.582 | 223.610 | .000 |
| Error | SI | 1.102 | 96 | .011 | | |
| | FMB | 2.965 | 96 | .031 | | |
| | SPL | 1.538 | 96 | .016 | | |

Note: Student Interest=SI; Financial Management Behavior=SB; Student Prosocial Level=SPL

Table 4
Differences between pre-test and post-test scores: experimental vs. control group

| Assessment tool | <i>t</i> | F | <i>DF</i> | Sig. |
|-----------------|----------|----------|-----------|------|
| SI | -2.321 | 389.90 | 46 | .000 |
| FMB | -4.146 | 775.701 | 46 | .000 |
| SPL | -5.037 | 1012.226 | 46 | .000 |

Note: Student Interest=SI; Financial Management Behavior=FMB; Student Prosocial Level=SPL

Hypothesis 1. The SMK has a Significant Positive Effect on the Interest of Preschoolers in Financial Education

The findings revealed a statistically significant influence on preschoolers' interest in financial education in the control group ($F(1, 96) = 780.271$; $p = 0.000$). Table 3 reveals that the experimental group's interest scores are statistically pronounced ($F(1, 96) = 2697.071$; $p = 0.000$). As indicated in Table 4, the experimental and control groups had a significant difference in post-test scores ($t(46) = -2.321$, $p = 0.000$) after using the SMK for at least 30 minutes. Thus, Hypothesis 1 was supported.

The results confirmed that the increased interest rate in students' financial education was highly significant concerning the direct engagement with the SMK. It proves that there was effective communication between the teachers and students; which was similar to the results found in the study conducted by Roopnarine and Johnson (2005), in which Vygotsky (2012) states that mental processes quickly develop when students form speech while carrying out practical activities and that such communication processes and responses also help alter their behavioral patterns. Additionally, the children could plan and control their immediate environment. Through their play activities, they could learn to communicate, adapt to their environment, interact with friends, and recognize things that existed around them. Past research has also found that most children obtain communication skills naturally without directly learning these skills from adults (Bodrova &

Leong, 2010; Walsh & Petty, 2007). For example, Sherraden et al. (2011) observed a connection between play and financial literacy skills involving symbols, sound structures, and printed materials. The same study also observed that financial literacy skills could be cultivated through games containing symbols and printed materials.

Hypothesis 2. The SMK has a Significant Positive Effect on the Financial Management Behavior of Preschoolers

As shown in Table 4, the control group $F(1, 96) = 1303.295$; $p = 0.000$, and the experimental group $F(1, 96) = 386.626$; $p = 0.000$, both have a statistically significant effect on financial management behavior. As demonstrated in Table 4, using the SMK for at least 30 minutes every day resulted in a noteworthy change in post-test results ($t(46) = -4.146$, $p = 0.000$). These findings imply a statistically significant influence on preschoolers' financial management behavior.

Such a finding supports the financial socialization theory, which states that experiences gained during childhood have a role in shaping an individual's knowledge and financial behavior (e.g., Shim et al., 2010). According to Lusardi et al. (2010) and Buccioli and Veronesi (2014), the financial literacy experience gained in childhood is highly substantial to the future economic level of an individual. Children as young as three years old are exposed to the use of money as a medium of a transaction as a result of living in the present global era. It is a skill that they further develop in

their adulthood to comprehend the monetary system and regulations. Nonetheless, the fact remains that due to limited maturity, children experience difficulty in organizing these skills methodically and systematically, given that their knowledge is limited to only their immediate experiences (e.g., Berti et al., 1988).

Furthermore, it was found that these children only become fully cognizant of the advantages of saving, grow confident in making financial decisions, and acquire additional financial expertise when they reach adulthood because of the experience they acquire along the way. As a result, financial education becomes crucial in present-day scenarios. It plays an incredibly important and effective role in serving as a valuable experience that could help shape children's knowledge and efficient behavior, which aids in building a future generation that is financially efficient. Such exposure should begin from an early age. Past studies have also demonstrated that what is learned during childhood will impact knowledge, values, attitude, and practices in adulthood (e.g., Kim & Chatterjee, 2013).

Hypothesis 3. The SMK has a Significant Positive Effect on the Prosocial Levels of Preschoolers

According to the MANOVA, those exposed to the SMK improved significantly in prosocial behavior. In the control group, $F(1, 96) = 269.511$, $p = 0.000$, and in the experimental group, $F(1, 96) = 201.434$, $p = 0.000$, there was a statistically significant difference in prosocial behavior based on the usage of the SMK, as shown in Table

3. Furthermore, as shown in Table 4, there was a significant difference between the control and experimental group post-test scores $t(46) = -5.037$, $p = 0.000$ with the use of the SMK for at least 30 minutes. These results suggest that there is a statistically noteworthy effect on levels of prosocial behaviors of preschoolers. Thus, Hypothesis 3 was also supported.

This result shows that there has been a positive change in the development of preschoolers' prosocial behavior levels. It also confirms Piaget's (1964) theory, which recommends that children be given the freedom to choose their activities and that children are naturally more prone to developing their needs. At the same time, children will be able to choose exciting activities based on their previous experience and master a new skill. In addition, it offers the opportunity for developmental stimulation of children's cognitive, social, emotional, physical, spiritual, and linguistic faculties, should they be allowed to learn through play. Playing has also been proven to contribute to self-regulatory and social skills such as waiting for one's turn, collaborating, adhering to the rules, empathy, and motivation (Bodrova & Leong, 2010; McLachlan et al., 2018).

In addition, Casbergue and Kieff (1998) have stated that edutainment-based games, such as board games, video games, and card games, may be used in an educational environment even though they have divergent educational goals. Education-based games can be used to aid children in obtaining skills, educate them on a particular subject of interest, strengthen knowledge,

and enhance confidence. Huizinga (1950) explains that one of the means of learning is using board games, which are different from games without rules because the former requires players to adhere to the rules of the game in challenging opponents. Consequently, to add to their practical knowledge, children learn social skills that will teach them ways to interact with their peers, follow the rules of games, and understand the perspectives of others. Related studies have also shown numerous positive prosocial behaviors result from children playing board games. According to DeVries and Kohlberg (1987), competitive board games are conducive to social and moral development because they are an activity that requires the synchronization of opposite objectives in a broad and dynamic collaborative context. Such a finding suggests that competition can only exist if the opponents cooperate and mutually agree to the procedures and adhere to and enforce rules, even if the rules do not work in their favor. Such games would not run smoothly unless the players cooperated by synchronizing their thoughts.

PRACTICAL AND THEORETICAL IMPLICATIONS

The researcher has conducted the SMK as an intervention strategy that addresses financial interest, financial management behavior, and prosocial levels of preschoolers. Accordingly, the major practical contribution of the current research is that it provides much-needed empirical data on the effectiveness of the SMK. The information provided in the

current study shall allow the interventionists, policymakers, schoolteachers, and educators to design tools, actions, and initiatives based on what is being proposed in the SMK to suit the Malaysian context. It is to meet the needs of local interventionists relying solely on empirical data from western countries, even though distinct cultural factors must be considered. Furthermore, this study offers evidence-based principles and is theory-driven on the aspects and strategies for improving financial interest, financial management behavior, and prosocial levels of preschoolers. Theoretically, the study provides empirical evidence on the necessity of the SMK. It contributes to the further advancement of cognitive development, especially in identifying appropriate financial literacy concepts and teaching challenges.

CONCLUSION

From the present research findings and data analysis, it can be concluded that the use of the SMK in teaching and learning has helped improve the interest in financial education, financial management behavior, and prosocial levels among preschoolers in Malaysia. The increase in scores for the three variables demonstrated that the SMK is a highly beneficial tool in expanding the interest in financial education, financial management behavior, and prosocial levels of preschoolers in financial management. The play elements that teachers employed added meaning to the children through interactions with their surroundings and environment. The teacher's role, therefore, is to provide

opportunities that could motivate children to become involved, either individually or in groups. Teachers must also ensure that the play activities and experiences they organize are structured, involve cognitive progressions, and possess elements of social processes. Social processes in this context refer to play activities that are not conducted individually but are instead activities that involve interactions with others.

Additionally, this research could be utilized as a benchmark or to illustrate to preschool teachers the extent to which the SMK can influence the interests in financial education, financial management behavior, and prosocial levels of students. Financial management games can also be used across multiple subjects and levels related to preschoolers, which could make it a common method that preschoolers, teachers, and parents use for problem-solving and to familiarize preschoolers with critical and creative thinking. Finally, the findings demonstrated by this study could serve as a guide to teachers, school authorities, and stakeholders to increase the interest of preschoolers in learning the SMK.

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Case Study

The Dramaturgy Communication of Beggars in an Indonesian Market

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ABSTRACT

In Padangsidempuan, Indonesia, the Sangkumpul Bonang market is a prominent place for individuals begging. A beggar is a person who earns money in public in various ways in the hopes of receiving charity from others and who engages in activities by exploiting physical impairments to make others feel sorry for them. In addition, some beggars deliberately create physical disabilities and poverty that lead to feelings of compassion from others. However, these beggars' lives are not as poor as it seems; they live decent and luxurious life. The research focuses on how persons who engage in begging activities manage their front stage, backstage, and impressions. Through a study of dramaturgy, this study employs a qualitative methodology. The results demonstrate that beggars verbally managed impressions by saying, "have mercy, sir, madam." Using bowls as a symbol of asking, beggars with unclean clothes, sorrowful faces, and sluggish movements remove

their hands. Their onstage image takes advantage of physical handicaps, pretending to be crippled, and living an impoverished and nomadic existence to elicit sympathy. It contrasts with a figure in the backstage appearance who is in good physical condition, goes about her daily activities, dresses well, smiles, lives in luxury, and has good social contacts with her family and society.

Keywords: Backstage beggars, dramaturgy communication, front stage

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INTRODUCTION

Beggars are an issue in any city, especially in a metropolis (Paul & Joy, 2018; Saatci, 2013; Song et al., 2016; Zhang et al., 2020). *Cities* are relatively large residential areas inhabited by people with heterogeneous social environments (Petermann & Schönwälder, 2014). The city is a central hub of the economy, culture, government, and politics, and therefore that it has an appeal for people to come and stay (MacLeod, 2011; Qian et al., 2021). A city's population grows yearly, resulting in an imbalance of space and work opportunities (Xiao et al., 2021). The level of competition in life is high and difficult. Since some people lack skills and a high level of education, many people miss out on the opportunity to live a normal or good life (MacLeod, 2011; Qian et al., 2021; Zhang et al., 2020). It is one of the reasons why many people, especially in cities, choose to become beggars to survive.

It is happening not only in Indonesia but also in big cities in the world. This problem has occurred for a long time, and begging has been handed down from their ancestors (Hardiyantina & Sukardi, 2016). It makes begging a profession. There is a process of internalization and externalization in the family so that their children also become beggars (Ahmad et al., 2018); they create vertical networks, kinship, and new networks to expand their network (Yatim & Juliardi, 2016). In some cities and villages, this beggar has become an identity symbolized by the city of beggars (Saputra, 2019). Sumenep is labeled as a

beggar village (Hardiyantina & Sukardi, 2016).

In Jordan, some families encourage their children to beg and seek assistance from strangers. Furthermore, families are preoccupied with other duties and do not provide their children with the necessary support to educate them and discourage them from begging. Several factors have contributed to the widespread begging phenomena, including Jordanian society's current terrible predicament due to economic, social, and political situations (Al-Muhareb & Alzyoud, 2018). Many factors contribute to street begging in Tanzania, including poverty, unemployment, physical problems, parent death, and family fragmentation (Namwata et al., 2012).

Beggars are those who are paid to beg for money from others. It is necessary to do this work to exist. By understanding, beggars ask for cash or other goods from people who do not have a social obligation to support their life (Bethina et al., 2016; Pawestri & Euis, 2021). Social welfare difficulties, homeless persons, street children, neglected children, and beggars are all examples of people who engage in begging. Beggars are people who earn money by begging in public in various ways and hoping for mercy from others, according to Minister of Social Affairs Regulation No. 08 of 2012 concerning Guidelines for Data Collection and Data Processing of Persons with Social Welfare Problems and Potential Sources of Social Welfare (The Audit Board of The Republic of Indonesia, 2012). Diverse viewpoints lead to different perceptions of beggars in

terms of socioeconomic, religious, values, beliefs, and sociocultural aspects (Mansour, 2017; Rahman, 2021).

Begging is a strategy for people to satisfy the demands of life and survive (Bethina et al., 2016; Muñoz & Potter, 2014; Pawestri & Euis, 2021). Communicating with beggars is a social concern (Rahman, 2021). They are considered deviating from the prevailing values and norms. They are healthy people in perfect body condition (Mansour, 2017; Rahman, 2021). Begging is done by praying verbally, writing, or making gestures, according to Rahman (2021). This category includes singing, playing the violin, guitar, angklung, and flute, as well as performing outside shops and dwellings (Mansour, 2017; McIntosh & Erskine, 2000), which are usually done in a metropolis.

It is also what distinguishes beggars in Indonesia from beggars in other countries that their reason for begging is due to the imbalance of space and employment opportunities, the level of competition in life is high and hard, do not have the skills and higher education. As a result, so many people miss the chance to live a daily or decent life. Meanwhile, besides the reasons above, in Indonesia, begging is caused by many things, such as being passed down from generation to generation by the family. Therefore, the culture of begging is ingrained in their families, and they influence each other and create new social networks. Even more ironic, some beggar towns and villages have become identities symbolized by beggar towns or villages. In

this context, when the village is mentioned, the image is that all the villagers are working as beggars.

According to Pawestri and Euis (2021), internal and external variables cause beggars' emergence. Carelessness, being uncooperative, being mentally unstable, being physically and intellectually impaired, and not having the life independence to not rely on others are all internal causes. Meanwhile, economic, geographical, social, educational, psychological, cultural, environmental, and religious elements contribute to the begging phenomena (Mansour, 2017; Rahman, 2021). From an economic point of view, beggars are faced with family poverty and limited employment opportunities (Mansour, 2017; McIntosh & Erskine, 2000). Barren land conditions and unexpected natural disasters are geographical factors that compel people to become beggars. The passage of urbanization from villages to cities without incorporating the community in social welfare initiatives is one social aspect that pushes people to become beggars (Muñoz & Potter, 2014). Low levels of education and a lack of job skills help (Mansour, 2017; McIntosh & Erskine, 2000) begging activities from an educator. Family difficulties resulting in children's neglect are psychological elements that lead to someone becoming a beggar (Ruggiu, 2016). The community tending towards fate and customary law is another cultural factor that causes the perpetuation of beggars. Environmental factors, for example. From a religious standpoint, beggar families who

educate their children to be beggars lack comprehension of religion (Moon, 2017), and a weak faith are also less resilient in facing life's challenges.

Beggars communicate with the target by displaying unique characteristics such as pleading oral speech and asking for pity. Beggars also use nonverbal or body language that makes other people feel sorry for them and causes a distressing effect on others. It can create a world and social structure, including symbols in the communication process, so other people give them alms. Beggars use this communication to construct the reality of their life. Using verbal and nonverbal language convinces the community or its target that they do not have a decent life, are deprived and deserve to be pitied. However, when not begging, they live everyday life in their daily lives, sometimes have proper living facilities, and are sometimes even affluent.

Human social life and interaction always present themselves as a theatre play. Depending on the situation, each person's appearance can change. It occurs throughout our lives, regardless of who we are, and we continually interact with symbols in all scenarios (Charon, 1989; Dolgin & Kemnitzer, 1977; Sulaeman, Rijal, Malawat, et al., 2021). If everything is viewed as an interaction, participants will use symbols, both verbal and nonverbal, according to Mead (2008). Nonverbal symbols are body language, physical movements, mimics, artifacts, and statues (Sulaeman, Rijal, & Ridwan, 2021), while verbal symbols are communicated through

words, sounds, intonation, and others. These symbols derive meaning from the participants of the communication (Charon, 1989; Dolgin & Kemnitzer, 1977). These symbols will impact a person's conduct when speaking (Rahman, 2021; Ridwan et al., 2020). The presence of a symbol is significant in social life, particularly in multi-ethnic communities (Ridwan et al., 2020; Sulaeman, Rijal, Malawat, et al., 2021).

Symbolic communication describes a frame of reference for understanding how humans create a symbolic world when together with other people (Charon, 1989; Dolgin & Kemnitzer, 1977; Sulaeman, Rijal, Malawat, et al., 2021). Communication is symbolic because fundamental ideas form meaning from the human mind, about self, and their relationships in social interactions, to mediate and interpret meaning in society (Rahman, 2021; Ridwan et al., 2020; Sulaeman, Rijal, & Ridwan, 2021). Before acting, humans use specific meanings to their world according to the interpretation schemes conveyed to them through social processes. As a result, their behavior and the behavior of others are usually adjusted and harmonized with specific meanings. In contrast to animal reactions which are intuitive and direct, human behavior begins with these processes, which initiate human social behavior (Littlejohn & Karen, 2009; Mansour, 2017; Rahman, 2021; Sulaeman, Rijal, & Ridwan, 2021). These ideas are the foundations of human social conduct, and the concept of "role-taking" is crucial. Before acting, a "self" puts himself in

the shoes of another person and attempts to comprehend what that person wants from a man, husband, citizen, religious leader, police officer, and so on (Mead, 2008; Musgrove, 1997; Sulaeman, Rijal, & Ridwan, 2021). Only by conforming to the expectations of others will interaction become possible.

Goffman (1959) is frequently seen as Mead's (2008) "self-interpreter" in the symbolic interaction approach, emphasizing the symbolic character of human interaction and the interchange of meaning between individuals through symbols. Another variant of symbolic interaction theory apart from Mead's (2008) proposed theory is the dramaturgical theory pioneered by Goffman (1959). Dramaturgy is a play of life presented by humans. This approach splits the situations into two categories: front and back. The frontstage includes setting, personal front (self-appearance), and expressive equipment (equipment to express yourself). The backstage is the self, all hidden activities to complement acting or appearing on the front. When discussing dramaturgy, Mead interprets using the concept of the self, which influenced Goffman's theory.

According to Goffman (1959), dramaturgy is divided into front and backstage. Beggars can use the act of begging regarding communicate their attitude in life as live actors. It can shape their social values, shape their role as front-stage actors when dealing with possible donors (Shalin, 2021), and allow them to perform more naturally backstage when not

begging, in front of their families and social communities, or when preparing to become beggars. Beggars (actors) present themselves according to Goffman's (1959) theory by modifying their settings, looks, and manner. Everything is done to give the appearance that he is deserving of the moniker "beggar." They create or portray themselves in such a way that the potential philanthrope falls in love with them and is eager to offer them alms because of their outstanding performance, such as in theatrical plays. Backstage refers to the places and events that enable him to prepare for his role on the front stage. In communication science, this impression formation is called impression management. It is a self-presentation effort used by actors to cultivate specific messages on the front stage that differ from their appearance backstage. Goffman's (1959) dramatic approach has the core that, when humans interact, they want to cultivate the impressions they expect to grow in others. Dramaturgy views human beings as actors on a metaphorical stage playing their roles. Thus, the dramaturgy approach, a variant of symbolic interactionism, often uses social roles to analyze social interactions.

Roles are socially defined expectations that a person plays to give a particular image to the audience. How the actor behaves depends on his social role in certain conditions. The focus of dramaturgy is not the actor's self-concept from other situations or individual experiences but rather the socially situational self that develops and regulates specific interactions.

Goffman (1959) divides social life into two areas. First, the front region is a social place or event that allows individuals to perform a formal role or style like an actor who plays a role, also called the “front stage.” The back region is appropriate for preparing for their role in the front area, also known as the “backstage” or the dressing room, where the performers relax, prepare or practice playing their position on the front stage.

In the front appearance, a person creates an image or show whose scenario has been arranged in a way vastly different from the rear appearance. Goffman (1959) assumes that they want to present a self-image that others will accept when people interact. He calls this effort “impression management” (Boenisch, 2012; Marianne, 2009; Trencsényi & Cochrane, 2014).

It is the techniques used by actors to cultivate certain impressions in certain situations to achieve specific goals. Most attributes of human properties or activities for this self-presentation include the clothes they wear, the places they live in, the houses they live in, and the way they arrange the furniture, talk, walk, and spend their free time. Indeed, anything open about them can tell others who they are.

The phenomenon of how the interaction of beggars communicates to carry out their two social roles in society is interesting to study. This study aims at investigating how beggars communicate when they play their role as beggars in society; for instance, it includes the investigation of their appearance, utterances, and

decision to use another party (person) as a team to play the role. It also looks into how beggars function in their daily lives in their communities. Dramaturgy theory, as a symbolic interaction method (Nilson & Edelman, 1979), can explain the phenomenon of beggars communicating through verbal and nonverbal language through particular symbols, showing a beggar’s actual existence outside of his begging activities.

This condition is an important reason to conduct this research. The purpose of the explanation and the focus of the discussion is based on the theory of dramaturgy and symbolic interactionism, emphasizing the front stage, impression management, and backstage appearance of beggars in the market.

METHODS

This research uses a qualitative methodology. This method is used to analyze the dramaturgy of beggars in Sangkumpal Bonang Market, Padangsidimpuan. The qualitative research method aims to find information and focus on the problem to see the subtle reality of the social phenomenon whose meaning will be expressed (Bogdan & Steven, 1998; Rossman & Rallis, 1998; Sulaeman, Rijal, & Ridwan, 2021). This research tries to describe what it is or provide a clearer picture of the dramaturgy of beggars in *Sangkumpal Bonang Market*, Padangsidimpuan. The results are expected to objectively tell what happened without giving an assessment and intervention to the subject (Lindlof, 1995; Ridwan et al., 2020; Wolcott, 1994).

Parties who are used as research informants are referred to as research subjects. Because this study was conducted on 17 beggars at the Sangkumpal Bonang Market in Padangsidempuan, the research subjects will be subject to the conclusion. The researcher employs the snowball sampling method, which is unable to offer comprehensive data by searching for additional subjects (Lindlof, 1995; Moustakas, 1994; Rossman & Rallis, 1998; Sulaeman, Rijal, & Ridwan, 2021).

In this study, the researcher pretended to be a beggar and joined the beggar as he went about his business. The researchers conducted remote observations so that beggars would not be aware that researchers were present, allowing them to watch their behavior without being disturbed. The symptoms evaluated on the state of the beggars (begging behavior), time of activity, site of living, and the contact of the beggars with their relatives was systematically observed and recorded. The researchers paid close attention to where they worked, where they lived, and how they spoke with potential helpful people and other beggars at work. The researchers conducted in-depth interviews in addition to participant observation. Explaining the meaning of the beggar's life experience is the most crucial component of gathering data from informants. In-depth interviews are the preferred data collection strategy in beggar research. Researchers attempt to remove the formal impression by adapting to the beggars' situation; for example, the researcher wears worn and worn clothes.

This method is essential for examining impression management, particularly in the front context stage. Observations were also conducted where the beggars live to obtain data on their backstage communication behavior when beggars are outside their work activities.

RESULTS AND DISCUSSION

Actors were divided into groups and individuals in the dramaturgy communication investigation of beggars on the front stage at the Sangkumpal Bonang market. First, the beggars were divided into three groups: disabled individuals, children, and punks. Secondly, there are individual beggars.

The front stage is the part of the individual who regularly functions to appear in public with the ideal figure played by the actor. Backstage refers to the places and events that enable him to prepare for his role on the front stage. The following section will describe the actors in the dramaturgy communication of people with beggars at the *Sangkumpal Bonang* Market.

The Front Stage Beggars

The first type of beggars was separated into two groups: disabled individuals and children. Only blind beggars and children accompany the beggars with impairments who employ the group system. According to observations, Beggars talk in groups to gain the attention of possible benefactors by exploiting children's eyesight and paralyzed legs. They toured the market, from the first, second floor, and basement to the fruit market. They have a complex

where they can deliberate and rest. Because these groups of beggars pray with diverse partners, it is impossible to tell them apart at first glance. Beggars on stage in front of the group play their part by coordinating. The gang acted out their acts on stage by begging with equipment such as bowls, baskets, and damaged and soiled garments. Beggars demonstrate that they are deserving of pity by following individuals with disabilities and singing while playing musical instruments together.

The part played on the front stage shows that the youngster is the biological child of a blind beggar and has a terrible economic condition. Beggars appreciate it with physical disabilities and children who accompany them. Blind beggars and their companions are not related by blood, but they work together with children and blind individuals who wish to make a fortune as beggars. It is supported by interview data from one of the interviewees.

We beg for this as a group, I am blind, I will be accompanied by children in turns, each child will guide me one time around the market and then another child will replace it. (Informant 2, personal interview, May 11, 2021)

We are blind, where we can see the road, can't even see people. We need someone who can see it, so we invite the children around here so that they can both earn money. (Informant 5, personal interview, June 9, 2021)

A collaborative performance between the blind beggar and his friend was visible on stage. They walked and tripped while pointing their hands and making sorrowful faces, and they frequently spoke pitifully. Punk gang groups also perform communication actions like street children doing their activities at the market by begging, using musical instruments, and singing in front of prospective benefactors. The song they performed was a song with lyrics in the *Mandailing* language. "I play a musical instrument while sitting down, while singing in the *Mandailing* language" (Informant 2, personal interview, February 22, 2021). The punk gangsters dress in metal style with complete chain accessories, bracelets, and necklaces. This gang does not have a unique name, but this punk kid has a nickname for them, and the group shares the results of their begging. Usually, punk kids operate in the basement, shop houses, and around *Anugrah Plaza*. They share this location with other beggars.

Most of us from broken homes keep asking market people for more accessible snacks. (Informant 1, personal interview, May 11, 2021)

People here often call us punks, sometimes homeless, but we also ask people who visit the market. (Informant 3, personal interview, June 17, 2021)

I dress up in metal style with complete chain accessories, both bracelets and necklaces. (Informant 7, personal interview, April 28, 2021)

Secondly, there is the individual beggar's type. Individual beggars only act for their benefit, and the results are tailored to their specific requirements. Individual beggars typically sit cross-legged, hoping to elicit pity from passers-by by donning improper, filthy, tattered clothing with manual hooks. Some even play musical instruments while placing bowls in front of them. Some beggars were deafeningly quiet, speaking only through a nonverbal gesture of giving a bowl to a potential sponsor. Some tried to elicit pity by saying, "the alms, sir ... madam ... beggars sit back and expect to be pitied" (Informant 9, personal interview, May 16, 2021).

The dramaturgy communication of beggars in the market can be seen as self-identity influenced by drama, theater, or physical performances in which the beggar plays a character other than his authentic self (Ingenhoff & Richner, 2018) so that the audience can get a picture of the beggar's life and follow the show that has been presented. On the front stage, the beggars hope that the sense of self they display to the prospective benefactor will be strong enough to influence the benefactor to determine that the beggar fits into the show. Beggars present themselves as worthy of pity. It is necessary to appreciate the role that the beggar must control to attract the attention of others. Beggars manage their appearance using verbal language and display nonverbally using specific attributes.

The action communication of beggars in the market is the front stage in which they display an attitude that they deserve to

be pitied. There are communication actions carried out by beggars while performing the show. First, the movement of beggars uses codes or symbols. The beggars act on the front stage using symbols or codes, such as blind beggars. For instance, there was another beggar who was begging. The beggar also comes from the same community. It was observed that beggar companions like to code each other with a signal agreed upon. For example, giving a thumbs-up means the potential income is decent; if the thumbs are carried, it signifies paltry income. Not only that, set the distance between beggars from one another so that visitors do not suspect anything they are doing is an act and arrange this distance to get more money because potential benefactors find it challenging to give money when beggars come or close together. As coded with her hand pointing at the ATC shop house, she coded her fingers to form an X, which means she accompanies the blind beggar to the ATC shop house, and other beggars may not go there.

Performances also occur between the companion and the blind beggar in carrying out his actions to play a role on the front stage. A beggar uses a stick to appear that he cannot see, but he is only nearsighted, not blind. Beggars already understand the character of their prospective benefactors. If the generous candidate looks Muslim, he will give money; if he seems angry and does not wear a headscarf, beggars will not act with an arranged appearance, shabby negligee, messy veil with sticks, and bowed walk. A beggar uses the word as a stabilizer for his actions to get alms. "Please, madam...I ask

for alms” (Informant 13, personal interview, June 28, 2021), he said pitifully after getting donations from generous people in a plastic bowl. The beggar then asked for help from his companion to put the money in his shirt pocket. It is done to trick other people. The bowl is still empty to sign that they have not received a penny, so the prospective benefactor will feel sorry for him and give his alms.

Second, the performance is done by displaying signs of poverty. Beggars display poverty in many ways to invite pity from potential benefactors in the hope that they can give a little money. “It’s normal, it’s like pity, sir, it’s alms, sir” (Informant 11, personal interview, March 13, 2021). The beggar who builds trust with compassion will move their heart to do what the actor asks—giving alms such as money, food, and clothes. “If you ask in a pitiful voice, if someone has difficulty giving money even though we are waiting and while asking with pity” (Informant 6, personal interview, March 24, 2021). It happens because of the pity that arose after seeing what the actor was doing. The dramaturgy communication of beggars is demonstrated by mastery of the drama on the front stage in the selection of beggar characters and the role they play to perform.

Third, forced beggar behavior is a communication pattern of begging displayed on the front stage by “suppressing, frightening, and even threatening until their wishes are fulfilled.” Sometimes “the beggars get angry, and usually, this is done by beggars who are elderly as she was furious

when she was not given money” (Informant 16, personal interview, April 12, 2021). There is also disruptive behavior. Beggars and children disturbed her, wanting to ask for money if visitors did not give money, often she disturbed visitors’ activities, as “when diners ate, beggars shook the dining table, or when walking would follow these visitors” (Informant 14, personal interview, February 24, 2021). These are some ways to get this beggar’s money on the front stage. In Goffman’s (1959) view of social interaction, the exchange of meaning between these individuals is due to what people expect us to do. Then, when faced with this demand, the person performs a performance in the presence of something worthy, not another individual—playing a symbol of a specific role on the stage (Shalin, 2021). In interactions with generous candidate beggars, the beggars play a role through exchanging meanings as someone worthy of pity in the performance on the front stage.

In conclusion, there are two types of beggars. They both have different ways of communicating their intention. The first type is the involvement of disabled people and children to get people to pity them. The second type is individual beggars who work alone using properties like a bowl, dirty clothes, and others. However, both have the same intention: to attract people to pity them and give them some money. However, a different situation was encountered when they gathered with their community, which in this article is referred to as backstage.

The Backstage of Beggars

Backstage, all the actors' preparations are adjusted to what will be encountered on the set (Proehl, 2003). To conceal their identity, the individual will appear "completely" in the sense of their true identity at this stage. At this stage, beggars behave differently than in front of their benefactors, as they are no longer in the public eye. Therefore, backstage impression management differs significantly from front stage impression management. Backstage, there are some important aspects of a beggar's life. In the dramaturgy communication research of beggars on Backstage, "I gathered with their group while resting on the first floor of the *Sangkumpul Bonang* market" (Informant 11, personal interview, March 26, 2021). Based on observations, the beggars appeared happy and laughing together, ordering food to their tastes rather than starving as they appeared on stage. The backstage is also a private stage, which should be kept private. Beggars' roles differ from those they play when begging. In this place of rest, "beggars prepare all the supporting attributes, whether make-up, roles, clothes, body language, facial expressions, message content, speech, and language style" (Informant 7, personal interview, February 14, 2021).

They returned to the gate of the first floor, far from the crowd, after they finished begging and immediately shared the results of their begging. Backstage, while relaxing with their group, they demonstrated how blind beggars took turns begging. The other beggars' rest, awaiting the time when they will carry out their actions. Beggars

who are children rest while playing online games and other social media. Before acting in front of generous child beggars, he entrusted his cellphone, bracelet, and gold ring and then dressed the children to make them look dull and sad while joking with blind beggars. Begging in groups has indeed been arranged, both the partner who accompanies them and the distribution of the results. They take turns outside of working as beggars by the Association of the Blind (PERTUNE), established in 2004 and chaired by *Iran Rambe*. "Association of the Blind (PERTUNE). I am the chairman of the association, as the chairman, of course, I expect the members to get as much money as possible as beggars" (Informant 5, personal interview, March 27, 2021).

Beggars usually gather in front of the main door of the market and sit while drinking coffee, eating, and joking. The purpose is to gather to deliberate on a partner. They look familiar and understand each other. In this place, the income they have earned is also shared. They have no problems with life, let alone financial issues. Beggar wives only wait for their husbands when begging. The wife's job is to make up the children so that they look dirty and pathetic. Beggars with their families at home are harmonious and respect each other, unlike those performing on the front stage with no family and broken home. Sometimes they go out of town with their families: "The results of my work. It is quite good; it is all for the family so that they are happy I bought a car for sightseeing tours in *Bukittinggi*" (Informant 11, personal interview, March 13, 2021).

The life of the beggar backstage is a reverse reflection of the front stage. Beggars also have a community, namely PERTUNE. Children always accompany beggars with visual impairments. "Every prayer time we rest in front of the market, and we make rules about which children will accompany the blind and make arrangements to take turns" (Informant 10, personal interview, May 21, 2021). In this community, beggars prepare all their attributes, such as appearance and dress the child beggars to make them look shabby; their clothes are deliberately ripped, and their hair is messy. It is also the place to train their voice intonation in begging and the place where they rest and joke around. The preparation has been done, and the beggar is ready to play their role in the market, ATC shop-houses, and parking lots.

The punk gangsters dress in metal style with complete chain accessories, bracelets and necklaces. However, the communication action that they exhibited was different backstage. "I had a peaceful dialogue and empathy in the group, and *Rantau*, punk kids, also held Friday prayers. He changed his clothes into a sarong" (Informant 11, personal interview, June 9, 2021). Not all punk gangs have no parents; most of them live with their relatives. However, other people think they are street children who are not taken care of by families or broken home families. This punk gang does not have a unique name, and visitors call them punk gangs, but punk gangs in various regions are different.

Individual beggars only act for their benefit, and the results are for their benefit.

Individual beggars arrive and depart on their own. Individual beggars only beg for necessities; their earnings are not shared with anyone. Typically, this type of beggar performs the action in his or her unique manner. The tone of voice is regulated, beginning with the clothes, and there is no community (Serafis, 2020).

In their daily life, some of these beggars mingle with the local community, and some do not mingle at all. Those who associate with the community are in *artisan* groups, *wirid*, and various other events. Those who do not mix are very individualistic, do not care about their surroundings and surroundings, nor do they care about anything. Beggars are not ignored in the community; beggars carry out social activities every day. It differs from the front stage, which shows that they are society's lowest. The stage behind this is also called a private stage, which other people cannot know. The individual arena has a different role from the front stage; there are specific reasons for unique covers or not highlighting the same position on the front stage. At this stage, individuals will appear "completely" in the sense of their identity.

Beggars engage in different communication actions when they are in the presence of a potential benefactor. Their social appearance is top-class, with a loud tone of voice, trudging, and happy facial expressions, as opposed to the fake appearance made by beggars on the front stage. Because beggars are never separated from the use of certain symbols in their lives, the effort to analyze the impression

management carried out by beggars can be more easily studied from a dramaturgy perspective through Goffman's (1959) self-presentation study with attention to the front stage and backstage aspects (Raz, 2014).

Beggars appear to be poor people who deserve to be pitied on stage, but backstage, they have a good life because their income is growing. The money given to beggars is sufficient to support them. They can even purchase whatever they want. Their income is not much different from that of civil servants and traders. The income of a beggar per day is between 100–300 thousand rupiah. The amount of income is not permanent but can increase to more, particularly on Saturdays, Sundays, Eid, New Year, and the holy month of Ramadan. To get maximum results, beggars carry out the communication action by moving to other big cities like Medan, Bukittinggi, Padang, Palembang, and Jakarta. In these cities, they earn 500 thousand rupiahs per day. With such a significant income, it can be understood that they are begging not because of poverty. However, begging has become an informal sector because the appeal of begging is promising enough to meet life's needs.

To sum up, beggars do not show how they are to society. They only show their identity and how they are in their community. While society thinks they do not have or live with family or relatives, some do. Also, they tend to show people that they live poorly while some live well. A different situation was also encountered when they did impression management in the frontstage.

The Impression Management of Beggars

According to Goffman (1959), when people interact with other people, they want to present an image that others will accept. It is known as impression management, or the techniques used by actors to cultivate specific impressions to achieve specific goals using symbols on stage. The management of verbal impressions through language is the first component of this. For example, management is spoken to the prospective benefactor in the beggar's language. When the beggar first meets their prospective benefactor to get alms, and then when they meet the prospective benefactor, the performance on the front stage begins (regardless of giving or refusing to donate).

While some beggars just sat, in the case of beggars walking around the market, they mostly use spoken words like greetings or direct requests. The verbal language that is pronounced as a greeting is mostly "*Assalamu'alaikum* or excuse me. Alms, sir, madam! I am sorry, sir, I do not have money to eat...excuse me, madam, share a little sustenance" (Informant 6, personal interview, April 13, 2021). Beggars also repeated the phrase "Love, Mother ... Pity Sir" (Informant 13, personal interview, March 25, 2021) to market visitors. In addition, "I beggar who recited verses from the Qur'an, and some beggars sang an Islamic song entitled "*Jagalah Hati*" (Informant 14, personal interview, April 12, 2021).

On the front stage, beggars use spoken words to obtain pity and attract the attention

of generous prospective people to get the maximum result. Some beggars are silent, considering the energy they must spend talking about the possibility that they will get money in a short time. However, the role of language or verbal symbols is not dominant. Beggars, after meeting their prospective benefactors, when a generous candidate gives or does not give alms, generally make a good impression by saying "*tarimokasih da ibu* (thank you, madam)" (Informant 14, personal interview, May 11, 2021) and some praying for generosity. "O Allah, add to this maam's fortune, be healthy and give her what she wants, save her wherever she is" (Informant 3, personal interview, February 27, 2021) while raising her hands. The beggar does not say a word when they are not given alms. Some beggars are angry because they are not given alms. One beggar, pretending to be blind, said in the mandating language: "*Na kikit Maho, Halak na kayo pe mate do* (you are stingy, the rich person is also dead)" (Informant 13, personal interview, March 18, 2021). Beggars get angry if they are not given money, even more so at generous candidates who are indifferent when beggars approach. Sometimes beggars stay quiet and then go to other better candidates.

The second component is written impression management. Beggars use writing to manage the impression of compassion for potential benefactors. Beggars only use writing when performing their actions on the front stage, namely when the beggar show occurs. Nevertheless, outside these activities, beggars do not use

them. As carrying a toddler with verbal communication, "Asking for help for a child's life as sincere as possible" (Informant 17, personal interview, April 15, 2021, using the phrase "Alms Aid for Mosques and Orphans" (Informant 3, personal interview, March 26, 2021). On the front stage, beggars create an impression by writing so that the generous ones are interested in giving alms, whatever the beggars do to smooth their performances. However, backstage, they only kept the writing and replaced it the next day, "Sometimes, I have made to achieve the expected results by typing the text with a marker" (Informant 13, personal interview, March 13, 2021).

As Goffman (1959) explained, beggars perform nonverbal impression management; impression management on the front stage emphasizes the nonverbal communication process, using nonverbal symbols such as clothes, gestures, and facial expressions, which is never done backstage. When confronted with a generous candidate, almost all beggars have low tones in front stage appearance. It was not observed that the beggar spoke in a high and loud tone, but when backstage, namely the place where fellow beggars rest or live, the lazy manner vanished and was replaced by an angry shouting voice. A low, lazy tone of voice is used when begging to attract the attention of potential benefactors.

Beggars use gestures and signs to communicate their message. For example, most people raised their hands in response to a request for alms. Beggars use begging signals by handing them a bowl, container,

or cup; nearly all market beggars use this tool. They also made a variety of facial expressions. According to Goffman (1959), facial expressions are part of the personal front, namely the person regulated by beggars. On stage, an actor conceals or conceals his identity. Beggars change their self-image at this stage by adjusting everything, including their facial expressions, which range from sad, disappointed, and flat (Shen et al., 2017). The appearance of a beggar's face begs his prospective benefactor with an expression of exhausted, lazy, and sorrowful sadness. Then, when a generous candidate refuses to give alms if he does not get a donation, the beggars will show a disappointed and sad face.

On the front stage, the beggars create an image for the performance, and this scenario has been arranged and differs from backstage. Appearance becomes a symbol for beggars in performing their performances. Appearances are divided into two types: the first appearance because it was not planned (for example, physical disability, due to birth or an accident or illness); the second is intentional, such as worn clothes, bandaged feet, and others. Usually, they design their appearance by highlighting dresses directed to begging activities. The impression management made by beggars brings children, charity boxes, and worn or torn clothes.

In conclusion, beggars manage impressions by using different ways. First, some of the beggars use verbal language to manage their image. Next, some use written

language with expressions that will get people to feel sorry for them. Finally, using a bowl, container, or cup also completes their action, and there is always a tendency to use a low tone of voice to get the prospective benefactors to pity them.

CONCLUSION

On the front stage, two categories of actors are in begging at the *Sangkumpul Bonang* market. The first group of beggars carries out a collective begging communication action. The results are divided into two, namely blind beggars who are always accompanied by children and the gang of punk children who beg with musical instruments in groups. Second, individual beggars engage in communication action themselves, and the costs are only used to meet personal needs. Their performances scope from speech to writing to gestures to demonstrate that they are deserving of pity. Beggars use coercive, invading communication to obtain money. The beggars utter a pitying sentence in front of their generous prospective audience. When given donations and signs, some say greetings, ask for pity when asking for alms, pray, and stretch out their hands, bowls, and baskets to prospective benefactors. Their bodies are bent, and their movements are slow. The expressions on the faces of beggars when they are not given alms make them look disappointed and sad. However, when they received donations, their expressions were bright. There are also beggars, whether they are given to or not, whose expression is flat and silent. The appearance of beggars is not threatened,

as beggars with physical disabilities use assertiveness to beg. Planned beggars wear dirty, torn, and shabby clothes. On the front stage, beggars seem like poor people who deserve to be pitied, while backstage, they have a decent life because their income is up-and-coming. When in a family and environment, beggars are friendly, kind, and caring for others and often give things to family and other people.

The researchers suggest that the local government needs breakthroughs to reduce social ailments carried out by beggars. It is recommended that beggars accept suggestions from the government and the community by not carrying out begging but looking for other, more decent work and deepening religion. Other researchers can continue this research regarding the communication behavior of beggars in the market or social service communication techniques in overcoming homelessness and beggars. This research can also be continued regarding actions regarding religious development with group guidance services to beggars at the *Sangkumpul Bonang* market.

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‘Invisible Yet Static’: An Analysis of Structural Violence with Reference to Kilvenmani Massacre, India

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ABSTRACT

Violence remains one of modern society’s most pressing global public health issues. As a result, the current study’s objective is to examine the text, *The Gypsy Goddess*, in the concept of Structural Violence, which is one of the most lethal forms of violence, from a broader perspective in terms of political, economic, gender and health aspects. The methodology of the study incorporates a documentary text, *The Gypsy Goddess* by Meena Kandasamy, which aids with the illustrations of actual records and a survey of the victims of the Kilvenmani massacre, which happened in the state of Tamil Nadu, India, in which poor agricultural peasants were burned alive by wealthy landlords. The study’s major findings offer a comprehensive look at the physical and psychological causes and consequences of underlying Structural Violence processes worldwide with reference to the select text. According to the text, the study’s findings suggest that structural violence contributing factors are multifaceted and systemic. Besides, it reveals that people’s collective efforts, combined with modified legal interventions, can help combat Structural Violence by creating awareness and providing impoverished communities with adequate services and resources.

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INTRODUCTION

Secular customs have long been ingrained in Indian culture. It is built on a synthesis of many spiritual cultures and traditional movements (Hariharasudan & Pandeewari, 2020). The goal of social structures is to

achieve social harmony. However, due to the caste system's social and cultural practices, violence has become institutionalized over time. The use of legal means to address vices done in the name of caste is useless. Even in liberal economic and political settings, India's profoundly ingrained and violent socio-cultural and economic practices have survived. People acquire traditional morality conventions rather than the self-reflective and rational moral ideals of modern times since people are raised with caste notions and feelings imposed upon them by sectarians. Individuals granted or forbidden rights and benefits depending on their position in communities have varying degrees of favor with the prevailing culture throughout history (Eldridge & Johnson, 2011).

Caste-based social discrimination and economic marginalization are deeply embedded in Indian society (Mosse, 2018). Caste-based violence and massacres have a long history, and the idioms of purity and impurity, mainly as they apply to the lower castes, continue to legitimize them (Gorringer et al., 2017). The marginalized groups of southern Indian society, formerly Untouchables and now referred to as Dalits, account for one-fifth of the total Indian population and face severe discrimination and prejudice across all social spheres due to their position in the caste hierarchy (Pankaj, 2019).

Violence against Dalits is unlikely to impact the country's collective consciousness (Yadav, 2017). Ironically, as Nandy (2006) points out, violence against

Dalits becomes more visible in the public sphere as part of daily life, and the Indian public sphere begins to form around the "principles of forgetfulness" (p. 7). As a result, society does not regard inhuman acts such as untouchability as unethical. As customary norms governed intercaste relations, even unfair norms were accepted without question. Discriminatory behaviors, such as untouchability or living in secluded locations, were not imposed but regarded as common sense.

One such powerful historical incident of Dalits' brutality is the Kilvenmani incident, which took place on December 25, 1968, in the village of Kilvenmani, Tanjore district, Tamil Nadu (India), in which landlords set fire to agricultural laborers' huts in response to their strikes and demands for higher wages. The Kilvenmani incident is widely regarded as one of the first and most heinous crimes committed against Dalits in post-independence India (Teltumbde, 2008). It has been a somber reminder of how oppressed people are treated when they demand what is rightfully theirs since the dawn of time. The Kilvenmani incident is inextricably linked to politics, gender, and caste issues, making it more than just a class conflict (Kanagasabai, 2014). Caste influences people's daily lives and is viewed as a structural problem in society, affecting the socio-economic status and government entitlements for the poor and marginalized, resulting in Structural Violence (Pankaj, 2019; Wessler, 2020).

Structural Violence is an important theory for identifying the determinants of

fundamental crimes against humanity that lead to human insecurity, poverty, group violence, non-peaceful democratic power transitions, diseases and health-related issues, and economic decline. As a result, this paper focuses on Structural Violence in social, political, economic, and gender aspects concerning renowned Indian writer Meena Kandasamy's historical fiction *The Gypsy Goddess*. Kandasamy's work reflects a largely voiceless community whose voices are often shunned and ignored. Therefore, writing about Dalit experiences, according to Gowthaman (1994), must be an Indian and Tamil version of global oppressed people's literature.

Accordingly, *The Gypsy Goddess* is a powerful, lyrical account of Kilvenmani and its aftermath that defies many established rules while remaining brutally true to its original concept – recounting a horror that had been relegated to non-existent pages in mainstream Indian literature (Muralidharan, 2018). Besides, it was chosen as the independent newspaper's debut of the year and nominated for several awards, including the International Dylan Thomas Prize. It has also been translated into several languages all over the world.

This study aims to demonstrate the violence inherent in globalization and provide a theoretical approach to preventing and eliminating globalization's structural violence. It seeks to investigate how incidents of violence and trauma are presented in the text and how such examples are incorporated into a sociological understanding of structural violence. By

examining the interconnectedness of various forms of violence and the special purpose of the narrative, the article intends to add to an interdisciplinary viewpoint that emphasizes the dialogue between literary studies and its sub-discipline of narratology, on the one hand, sociology on the other. The study aims to understand the numerous and frequently conflicting processes that create and maintain inequality for individuals and communities on several levels. Besides, the study also focuses on the historical origins of present inequality.

A literature review is crucial in research since they aid in familiarizing with the current knowledge in a given topic and the field's boundaries and limitations. Violence is unquestionably a complex process involving significant ambiguity in destroying and creating order (Imbusch, 2003; Weart, 1998). According to Mills's (1959) observation, an individual's life and history of society are inextricably linked. Similarly, one cannot be studied without understanding the other to understand the complexities of violence. As the world becomes interdependent, Structural Violence impacts everyone's quality of life (Christie, 1997). How society's resources are distributed affects its living standard and survival chances. A more equitable distribution will lengthen society's average lifespan in most circumstances. People suffering the consequences of inequitable distribution are examples of Structural Violence or violence built into the social order (Høivik, 1977). Aside from low socio-economic position, improper criminalization

was also a significant issue; nevertheless, the most powerful factor was judicial violence, which reinforced the marginalized people's negative opinion of the legal system (Khoso et al., 2016; Watts & Hodgson, 2019).

The social structure is considered a 'social fact' in which specific sectors of individuals' actions are restrained due to inbuilt structures (Hinsley, 1967; Nafziger & Auvinen, 2002). Inconsistent power relationships in social systems result in unequal life chances, causing individuals or groups to suffer by preventing them from achieving their basic needs (Thomason, 2015; Vorobej, 2008). According to Mun and Fee (2010), identity modifications will eventually necessitate structural changes. It will subsequently influence how an individual perceives another because they have many other things to think about. It will result in the formation of a new type of identity. Thus, race and ethnicity are only components of the structure formed by people's acts and those who choose to believe them (Mun & Fee, 2010). According to several studies, literature offers an extraordinary opportunity by focusing on individual experiences of indigence and accommodating the multiplicity of voices that articulate and voice these experiences (Kehinde, 2021; Moore, 2006).

In terms of the scope of this study, the analysis is primarily focused on the historical record of the massacre that occurred in Kilvenmani village in 1968 to oppressed sections, as documented in Meena Kandasamy's book *The Gypsy Goddess*. This article begins with

a definition of structural violence and examines the political, economic, gender, and psychological dimensions of structural violence in the chosen text. Accordingly, the current study is organized to investigate the considered text based on the theoretical framework of Structural Violence, followed by methodology, discussion, and conclusion.

Theoretical Background

The term "Structural Violence" was first used in 1969 in an article by Johan Galtung, a European peace studies researcher, in which he uses the term "Structural Violence" as one of the six dimensions of his six-fold typology of violence. In his words, Structural Violence is a "process with ups and downs" (Galtung, 1969, p. 3), with mistreatment serving as a functional centerpiece around which the violent structure thrives. Several critics argue that Galtung's work is still compatible with modern theory and practice and that this method is especially well suited to analyzing our present situation and collective past. The social order, which he saw mirrored in a society's status hierarchy, was a primary cause of the violence that impeded human development. The privileged members of a society have greater access to resources due to Structural Violence, while the disadvantaged members have limited or no access to resources (Galtung, 1990). Galtung proposes calculating the number of avoidable deaths as one way to define Structural Violence. For example, Structural Violence occurs when people die due to a lack of food or shelter when both

are available elsewhere. His concept of Structural Violence has the advantage of encompassing poverty, starvation, subordination, and social exclusion in the definition of violence. It allows for the theorization of unequal access to power and resources as a form of violence, shifting the focus of violence away from isolated incidents and toward a broader range of social interactions (Dilts et al., 2012; Y. Winter, 2012).

Structural violence is the primary and most significant notion in any study of violence, but it is a frequently overlooked concern in post-conflict and transitory societies due to the confined domain of actions in which dominating processes usually operate (Lee, 2019; McGill, 2017). According to Biebricher and Johnson (2012), Structural Violence is the emergence of a distinctly new liberal formation of late-modern capitalism, widely referred to as “neoliberalism.” Health, economic, gender, and racial injustices are all examples of Structural Violence. Culture, politics, symbolism, and everyday violence are all instances of derivative forms. Homicides, suicides, mass murders, and war are all highly stimulated by Structural Violence (Lee, 2019). It is the most violent and powerful cause of other forms of violence (Butchart & Engström, 2002). Internal armed conflicts and human rights violations are inextricably linked to the global presence of Structural Violence (McGill, 2017).

Paul Farmer categorizes Structural Violence by gender, ethnicity or race, and socioeconomic status. He believes that each

of these identities impacts how Structural Violence affects a person’s life (Farmer, 2004). Furthermore, he claims that racial classifications have been used to deny fundamental rights to many groups, thus playing an essential role in human inequality and suffering discourse. Those who live in poverty, according to Farmer (2004), are most likely to be victims of Structural Violence. Over time, it causes pain by systematically trapping people in poverty and material susceptibility (Bornstein, 2005). It should also be noted that Structural Violence has a significant impact on the health determinants of marginalized people’s lives, especially people living in poverty. Some physicians, one among them is Dr. Norman Bethune, have been regarded as national heroes in China and the father of “Social Surgery,” and have even identified Structural Violence as a cause of preventable premature mortality and morbidity among children (Zakrison et al., 2019). Patriarchy, social stratification, and power dynamics define society and are part of women’s violence. Feminist anthropologists admit that reduced Structural Violence shares a core concern about oppression with feminism, as patriarchal barriers take many forms, ranging from direct gender-specific violence (e.g., female infanticide and rape) to Structural Violence resulting from economic inequalities caused by the “masculinization of wealth” (Hariharasudan, 2020; McKay, 1996; Reardon, 1985).

The study of Structural Violence allows for the development of a more socially critical approach to the problem. It opens a

new horizon on the issue, challenging the narrow, individually focused interpretation of violence prevalent in much of psychology and criminology (Whittington et al., 2020). The global system is structured in such a way that many of its members die systematically more than others because of unequal distribution of wealth and opportunities—in other terms, the existing global system demonstrates a high level of Structural Violence (Alcock & Köhler, 1979). Often subtle, the oppression is multigenerational and normalized by those who experience and perpetuate it (Klaus, 2012; Kotze, 1978). As Winter points out, Structural Violence mainly relies on invisibility language, assuming that its persistence over time and across generations is a product of its invisibility (Y. Winter, 2012). It is engrained in pervasive social structures and normalized by stable institutions and consistent experience while “normalizing the abnormal,” as it is almost imperceptible (Zakrison et al., 2019). Indeed, Galtung described it as “as natural as the air around us,” emphasizing its hegemonic nature of it and how it is accepted as normal: “Structural Violence is silent and unseen; it is essentially static, like the calm waters” (Galtung, 1990, p. 296). This acceptance allows Structural Violence to appear as peaceful coexistence among groups while the oppressed suffer in silence because of the denial of basic respect for their humanity (Eldridge & Johnson, 2011; Hirschfeld, 2017). Structural Violence can only be reduced if production and distribution systems are more equitably organized. As

Galtung and others have proposed, we would be able to stop violence if we could merely “see” it, as Galtung and others have proposed. The following section discusses structural violence’s political, economic, gender, and psychological elements in the selected work.

MATERIALS AND METHODS

Structural Violence has received surprisingly little attention, and even when it is mentioned, residual hierarchical preconceptions tend to minimize its significance, most commonly by focusing primarily on local issues while neglecting the impact of more significant political and economic linkages (Chapman & Berggren, 2005). In addition, the study of violence has traditionally been fragmented across divergent fields of study, with little cross-disciplinary collaboration, creating a barrier to decoding the underlying processes that lead to violence and hindering research and prevention efforts (Lee, 2019). According to Fu (2015), Structural Violence is a valuable concept for considering how inequalities are caused by structural and systemic relationships rather than individual or interpersonal problems. Another study contends that the best way to study Structural Violence is through “real-life” examples that examine the experiences of those affected (Sen, 1982).

Furthermore, Literary narratives that branch out to tell stories about violence against marginalized people gain even more credibility: they mitigate amnesia by allowing readers to “remember,” and they also challenge official State and Judiciary

narratives, allowing “alternative truths” to emerge. This method is likely to inform future “lived experience” research, assisting in developing a more refined understanding of Structural Violence. *The Gypsy Goddess* by Meena Kandasamy serves this purpose as it provides a witness description of events, criticizing landlord violence, police complicity, and unspeakable violence perpetrated against women and children through the statements of survivors of the Kilvenmani massacre. A sense of necessity drives the evidence, a strong desire to tell the story and not forget it. The disposition of Ramalingam exemplifies this, a massacre survivor who says, “I want you to write this all down and put it in the papers and tell the truth to the whole world. Let everyone read about what happened here and let them burn with anger” (Kandasamy, 2014, p. 182). The text’s mix of letters, statements, documents, digressions, novelistic narration, and metafictional intrusions is intended to involve both the writer and the reader in transmitting the massacre “the truth to the entire world” (Menozzi, 2021, p. 175). As a result, the study’s methodology focuses on the theoretical framework of Structural Violence’s primary areas of politics, economy, gender, and health by connecting them to real-life events in Kilvenmani, Tamil Nadu, with the text *The Gypsy Goddess* serving as documentary proof.

The Political Aspect of Structural Violence

Structural Violence is a group phenomenon,

not an individual one. It arises and resides within collective social entities, even when there is no obvious perpetrator in the sense of a visible, active agent intent on causing harm (Fink, 2010). It could be an entire society imposing its power and values on ‘inferior’ societies or specific groups within societies exerting control over others, consciously or unconsciously (Brady & Burton, 2019; Vorobej, 2008). Similarly, in the select text, Maayi, an older woman who survived the massacre, perfectly encapsulates the incident:

We were told about the tax-free lands that local kings showered on the Brahmins. We were told that Marx had written about this. We were told that because we worked with our hands, we were the working class. We were also told that because we worked and because they hated work, they hated us. (Kandasamy, 2014, p. 69)

Besides, she recounts how her people were not allowed to sit with members of higher castes, how they were forced to carry *serattai*, a coconut shell, to the tea stall because they were not served in tumblers, and how they were forced to stare at the ground without catching the gaze of any members of the dominant caste. Finally, Ramalingam describes how the Cheri men, women, and children were forced to prostrate at the mirasdar’s feet until the practice became ingrained, and people fell without hesitation like palm trees severed at their roots (Kandasamy, 2014).

The regular operation of dominating global political institutions results in irrevocable human, societal, and environmental disasters through self-amplifying feedback loops that our predominant ideologies and metrics register as social benefits (Singer & Clair, 2003). Due to the much longer histories of political mobilization of subaltern groups in South India, they may conflate correlation with causality (Gupta, 2013). Peasant oppression in Kilvenman results from a socially authorized caste hierarchy that coincided with the appropriation of common land and the expropriation of Dalits. The people of Kilvenmani describe how, on paper, they oversaw the land, but in practice, they continued to do menial tasks, utterly unaware of their financial worth. These descriptions of caste as having one set of people who read books, one set of crooks, one collection of misbehaving people, and one group of enslaved people encapsulates the oppressive political ideologies' coercion of caste (Kandasamy, 2014).

Structural Violence can occur without the intent to kill; for example, it can result from a desire to increase one's wealth and power. Political repression can be used to perpetuate Structural Violence, in which those in power gain benefits at the expense of those with less political power (Johansen & Jones, 2010; Stewart-Harawira, 2005; Whittington et al., 2020). When Structural Violence occurs, some actors can execute and/or prolong social arrangements that cause harm to others while providing them with disproportionate benefits (Srikantia,

2016). The fact that the more advantaged classes have collective negotiating power over how and where resources are allocated causes suffering among the lower strata of society. This viewpoint of Structural Violence corresponds to the massacre that occurred in Kilvenmani, where wealthy landlords tried to bully the poor peasants back to work by imposing crippling fines, using the police to intimidate them, and savagely assaulting women because of the peasants' demands for their rightful wages and better working conditions, which resulted in the killing of innocent agricultural laborers.

According to Farmer, the poor of the world are disproportionately victims of Structural Violence, and their lives are determined mainly by bureaucrats, politicians, and destructive policies and programs like a structural adjustment. The origins of the conflict can be traced back to a more extended period in which feudalism survives in postcolonial India's capitalist state as a remnant of a previous, pre-capitalist form of exploitation that has been reframed as tools of "modern" structures like the Police, judiciary, state, and forcible economic development. *The Gypsy Goddess* reflects Gopalakrishna Naidu, a wealthy landlord and leader of the Paddy Producers Association, who makes direct threats and warnings while the police, under the shadow of politicians, ignore or fabricate cases, and close murder cases as mysterious deaths in accordance with the landlords' orders. It also depicts how landlords are permitted to possess firearms with full

licenses and how they hire henchmen under police protection. The cases of Ratnam and others in Kilvenmani demonstrate that Police also practice untouchability and are waiting for their vengeance as they recount their plight “Killing us in custody, opening fire on our meetings.... We had not suffered as much even under the white man’ police” (Kandasamy, 2014, p. 226). Inspector Rajavel’s macabre tabulation of charred corpses of Kilvenmani massacre victims exemplifies the brutality of political repression and the plight of poor peasants as follows: “Male, age not known, nobody can identify a body; height 4’10;” marital status not known; protruding tongue, body burnt below the hip, hand flexed at the elbow, blackened blood all over the body” (p. 151).

The emotional impact of this tabulation is significant, as human remains are treated as non-living artifacts, denying them their identity and individuality and hence their freedom to live. Gilligan describes these deaths as “non-natural” and attributes them to the stress, disgrace, discrimination, and dehumanization of lower social status (Gilligan, 1996; Menozzi, 2021). Kandasamy offers specifics of the court’s ruling to highlight how guardians of the law collaborated with the wealthy and were thus biased in another instance of analyzing the judiciary’s part in exacerbating the injustices meted out to Dalit farm laborers. To give just one obvious example, survivors of the massacre describe how the court rejected their testimony, claiming that everything they said was faulty, deceitful,

contradictory, reeking of falsehood, lacking credibility, and an afterthought. They are accused of inconsistency by the Special Additional First-Class Magistrate, who uses his command of the English language, which “could shoot like darts, [and] curl and coil around itself” (Kandasamy, 2014, p. 248). On the other hand, the victims struggle to put the unspeakable into a partially coherent narrative, but most fail, and the official institutions are dissatisfied with their versions. “There could be no hope for justice in a land where ninety out of a hundred judges were revengeful, casteist, and selfish” (p. 249), Ramalingam says, recognizing that the High Court judges were better at defending the landlords than their defense lawyers and that all the accused were acquitted while many villagers whose loved ones were killed in the massacre were imprisoned.

The use of power and influence by dominant groups to prevent subordinate groups from changing organized relationships and practices that benefit their interests is highlighted in these cases. As a result of coercive practices aimed at shaping needs in ways that materially help those in irrational positions of power, subordinate groups are forced to obey the dictates of dominant ideologies, whether through illogical scarcity or emotional constraint. The workers’ struggle at Kilvenmani is depicted as an aberration or exception in Kandasamy’s novel through these incidents, demonstrating how subjugation and suppression of agricultural

laborers are pivotal to India's politics and economy in relation to structural violence.

The Economic Aspect of Structural Violence

Economic systems also influence the way of caste hierarchies function. The inability to break the cycle of discrimination is exacerbated by socially regulated wages and social rules that determine who is excluded based on gender, caste, or age. South Asia, known for its poor economic status, has 69 % of the world's population but suffers from 96% of its Structural Violence (Cross, 2013). Kandasamy's story offers a graphic description of how capitalism operates on the edges, where employees are kept in de facto slavery and bondage, live in great poverty and starvation, and are exposed to hyper-exploitation at the hands of the local rural elite, who generally conceal from the outside world. Unjust economic power structures create conditions in which certain social groups have more capital than others, and the materially wealthy exploit the less fortunate. *The Gypsy Goddess* exemplifies how the government has framed all laws to protect the ruling class and their political and economic interests. For instance, to protect the interests of the ruling classes, the Pannaiyal Protection Act and the Land Ceiling Act reduced agricultural laborers to the status of daily wage-earning coolies. For every peasant protest, the landlords use their economic power to take turns in retaliation, a code of honor that allows them to swap and circulate their rowdies to steal goats,

chickens, brass vessels, paddy stores, and even small scraps of money carefully hidden by women.

Disparities in economic power are the root causes of modern slavery; individuals from low-income countries are being subordinated to slavery and human trafficking in return for a higher standard of living. In response to poor peasant demands, angry landlords deprived them of work in their lands and throughout East Tanjore. The shopkeepers deny goods to the Cheri people on the orders of the landlords, depriving them of their basic needs. The peasants, who describe this as a complete social boycott, recall how Gopala Krishna Naidu reduced them to enslaved people by demanding fines, refusing to give them work or loans, and how they starved and persevered through those trying days of hunger, fear, and fortitude. These sorts of incidents appear to be the catalyst for the massacre, in which local criminals brutally murder innocent Kilvenmani residents after they begin protesting the landlords for their rightful wages. Any effort to ameliorate living and working conditions is confronted with violence and persecution, with modern forms of enslavement and expropriation justified by religion and caste. Among other forms of cruelty, landlords used public whipping and forced feeding of *saanippaal* (cow dung mixed with water) to punish laborers. Kandasamy's words perfectly capture the hushed agony of the poor peasants:

How would this world know about the rapes and murders of agricultural workers that take place behind the

fifteen-foot-high compound walls of landlords? The same landlords who massacre a whole village and walk away with honors? (Kandasamy, 2014, p. 86).

Individuals from the marginalized sector are systematically excluded from full participation in civic and social life because of these overarching social and economic factors and are compelled to live lives shaped by stigma, isolation, homelessness, and denial of rights (Kelly, 2005; Pickett & Wilkinson, 2015). Poverty, for example, is characterized by a state of extreme, structural, systemic, and long-term economic deprivation, which usually results in powerlessness. It can also be compared with the views of Indian economist Amartya Sen (Nobel Laureate), who demonstrates that mass deaths during famines are caused by a lack of purchasing power among the poor, who cannot afford to buy food that is already available in their countries (Sen, 2003). The stories of Karuppaayi, a pregnant woman who survived by eating handfuls of mud, and poorly paid laborers who were hungry enough to smoke out rodent holes and steal back the grains of paddy stolen by rats, show the depth of poverty that arose because of their low economic status.

Evans (2018) also claims that socio-economic inequalities based on unequal access to land and other resources were at the heart of apartheid as a political project that aided the continuation of economic deprivation. "Even an old jute sack is a luxury in this season, our children sleep like mice with their heads inside old cardboard

cartons so that the cold does not bite their little noses" (Kandasamy, 2014, p. 75), they say, describing how drops of water continue to trickle down their thatched huts' roofs. Regarding land distribution, the landless agricultural laborers who till the soil have no rights and own nothing, not even the land on which their tiny mud-walled huts stand, not even a change of clothes. People symbolized the inhumane level of subjugation huddled under a blanket of the night sky while landlords constructed cement shelters for their cows. The text also emphasizes the enduring violence of caste oppression, the struggle for land reform, and the disastrous consequences of economic development policies like the Indian government's 1960s "Green Revolution," a state-led plan to industrialize agriculture that pushed the poor further into poverty: "We have been swindled in the name of gods, in the name of religion, in the name of caste. Now, we are being swindled in the name of development" (Kandasamy, 2014, p. 93).

The Gender Aspect of Structural Violence

Gender inequity is a form of Structural Violence. The social structures and institutions of gender are inextricably linked (Anglin, 1998; Montesanti, 2015). Galtung (1969) exemplified gendered Structural Violence as "when one husband beats his wife, there is a clear case of personal violence, but when one million husbands keep one million wives in ignorance, there is Structural Violence" (p. 187). Structural Violence against women has become a

global epidemic, causing chaos in women's physical, psychological, sexual, and economic lives (Rani et al., 2019). Women are victims of "Structural Violence," which includes rape, physical assault, stalking, domestic violence, psychological violence, unintended pregnancies, induced abortions, and sexually transmitted infections, such as HIV, gynecological issues, and other forms of problems caused by the social structures (Sangeetha et al., 2022).

With approximately 35 million women "missing," India has one of the lowest sex ratios in the world. Indian women face outdated and repressive governance structures, an inefficient legal justice system, weak law enforcement, and male-dominated sociopolitical structures (Ahammed, 2019; Anderson & Ray, 2015; Reardon, 1985). Kandasamy's text illustrates the incidents of Tranquebar reeling from the shock of witnessing the sixty-fifth rape in three weeks, the landlords' gang rape of a fourteen-year-old girl, Thangamma, a pregnant woman pummeled by a gang of twenty armed men, and Anju being brutally beaten and torn apart her red blouse, which symbolizes communism and burns it in front of everyone, and Veerapan's young daughter, traumatized by rape, stopped speaking for no apparent reason, women struggle to make a meal out of scraps. The long wait for women to draw water from wells highlights the plight of women. Maayi claims that the police atrocities against female workers are so heinous that they are impossible to write. She describes how women were always stripped naked in

front of everyone before being killed, "Poor women they shriveled in shame. The ones who died from the beatings were silently buried. The ones who survived swallowed their shame and some poison" (Kandasamy, 2014, p. 85).

The best way to understand the health of poor women is to look at it from the perspective of Structural Violence (Mukherjee et al., 2011; Sinha et al., 2017). The most egregious example of a lack of concern for women's survival is childbirth. Because of socio-economic factors, marginalized women are more likely to give birth to low-birth-weight infants, and their newborns have a higher infant mortality rate (Shannon et al., 2017). Chronic stress associated with being treated differently by society is identified as the cause of these persistent differences in birth outcomes (Braveman et al., 2001; Christian, 2012; El-Sayed et al., 2015; Witt et al., 2015). According to the World Health Organization Africa (2017), nearly 300,000 childbirth-related deaths occurred worldwide, the majority of which occurred in low and middle-income countries and the majority of which were preventable.

Evidence suggests that maternal mortality is much higher in poorer strata due to a lack of proper medical assistance: limited access to maternity services; inadequate HIV services; long distances to facilities; lack of basic information; and lack of emergency obstetric care and others (Aguirre et al., 2019; Caprioli, 2005). It is demonstrated in the text in the case of Chinnamma, who died of septic shock

caused by an agricultural sickle cutting her umbilical cord during childbirth. The case of Kunjammal's child, who was suffocated in the mud after being wriggled by an insect that fell into the cradle, suggests that strict work constraints were imposed, allowing women to take shorter breaks to attend to their children's needs. It proves to be the mounting evidence that women working hourly jobs bear a more significant burden than men due to hazardous working conditions in terms of hypertension, injury risk, the severity of the injury, absenteeism rates, and time to return to work after illness (Clougherty et al., 2010; Sue, 2010). The text depicts not only their enslavement but also the daring, strong bond that keeps their spirit alive and fearless:

The Police punish them by making them kneel and walk a few miles on their knees until they have no choice but to crawl. These blows do not break them. They are bold beyond the bruised skin and the bleeding knee. The jails are full of fighting Madonnas. They are not afraid of arrests. (Kandasamy, 2014, p. 92)

The preceding passage highlights the bravery with which women oppose their oppressors and risk their lives to retain their dignity and strive for their right to a brighter future, contributing to the establishment of a distinct space for them by echoing the Dalit feminist movement's key objectives. It is evidenced from the text that gender-based Structural Violence is common in the select text.

The Health Aspect of Structural Violence

Human health is integrally shaped by various circumstances, as has long been acknowledged. Bacteria and viruses are pathogens, but so are a wide range of social, economic, and political forces operating at diverse spatial dimensions (Herrick & Bell, 2020). Structural Violence frequently has a long-term negative impact on public health, such as lower life expectancy and increased suffering (Srikantia, 2016; Wright, 1942). The term "Structural Violence" is similar to the term "structural determinants of health," which was popularized by the World Health Organization's (2009) Commission on the Social Determinants of Health. As defined by the CSDH, the structural determinants of health cause social stratification and social class divisions while also representing an individual's socioeconomic status within "hierarchies of power, prestige, and access to resources" (De Maio & Ansell, 2018, p. 10). Individuals from lower socio-economic groups also have a more extended untreated illness period, linked to more severe illness and poor treatment outcomes (Addington et al., 2004; Croudace et al., 2000).

Structural Violence impacts the disease's diagnosis, staging, and treatment, as well as its associated pathologies. These disease course and outcome determinants are shaped by social forces influencing infection risk (Farmer et al., 2006). Likewise, the text of Kandasamy exemplifies this with her detailed portrayal of the plight of agricultural laborers who live in deplorable conditions, do not own land, are in debt,

and lose their young children to starvation and their elderly to disease due to a lack of adequate food and medicine. When children began to die regularly, the media labeled them “mystery deaths,” while the victims claim, “It was a mystery to people who didn’t know about starvation, only the children of toilers and collies died, not the children of landlords” (Kandasamy, 2014, p. 268). Galtung’s theory of Structural Violence is relevant here because it reminds us of the severe psychological and mental health drawbacks that marginalized people face in authoritarian social environments. The victims were unable to be transported to a hospital, and doctors refused to visit the Cheri, according to Pattu. Letchumi claims that all the injured men were only given turmeric as a treatment and that the Anjal Aluppu Marundhu, a cheap herbal powder for pain, fever, chills, and cold, was their only source of medicine.

According to several studies, discrimination based on socio-economic status has been linked to poor mental health, reduced neurological responses, and chronic stress-related psychological issues. One such condition is schizophrenia, a mental illness characterized by delusions, hallucinations, disorganized speech, difficulty thinking, and other psychological and physical symptoms. Faris and Dunham (1939) hypothesized that rather than schizophrenia being a result of belonging to a lower socio-economic group, belonging to a lower socio-economic group may result from schizophrenia. Kandasamy does an excellent job of articulating the psychological state of

the massacre survivors. For instance, “A Survival Guide,” Chapter 13 of *The Gypsy Goddess*, is a collection of true stories about survivors’ traumas. As each of these traumas is unspeakable, personal, and thus untransferable, the character of Maayi is used as a link among all these seemingly disconnected narratives. She narrates Letchumi’s strangeness, who believes her dead friends are still alive inside her, and lives her life as a hallucination, Karuppaiah, terrified by the incident, refuses to speak and kills himself when his memory fails him, Packiyam, who refuses to allow a stitch of cloth to cover her body, remained naked throughout the day as a result of the memory of being beaten up naked by the landlords, the collective memory of a desperate mother who hurls her one-year-old infant out of the blazing shack, only to be apprehended by leering mobsters, chopped into pieces, and thrown back haunts the people of Kilvenmani even today, and the list goes on.

The most disturbing effect of such Structural Violence and muted pain was that they had no viable means or mediums to express and ameliorate the trauma they had experienced within the existing social order (Van der Merwe & Gobodo-Madikizela, 2009). Due to a lack of socially sanctioned ways of expressing their problems, lower caste members’ marginalization and trauma were regularly perpetuated and intensified as they repressed their outraged protestations and assimilated their worthlessness and lack of self-defeating beliefs. Such domination disempowers the victims by instilling a profound sense of loss and amplifying their

disgrace, humiliation, and vulnerability, thereby exacerbating their inner breakdown (Gee & Ford, 2011; Weinstein et al., 2017).

RESULTS AND DISCUSSION

The current study's findings suggest that understanding this type of violence should lead to a reconsideration of social movements and social change to reduce structural harm significantly. The Indian government is secular and seeks to prevent religious dominance through various means. The Indian Constitution protects fundamental rights based on these secular values. However, this is not to argue that these rights are not violated in Indian society. Indeed, because such violations occur regularly, a constitutional process is required to prevent them. Realizing that such rights exist makes us more aware of their infringement and allows us to intervene when they occur.

In a pluralistic society, expanding religious freedom and promoting non-violence instead of simply adopting official neutrality is the most significant way to foster secularism. Our responsibility is to guarantee that the new generation respects and appreciates its religious traditions and those of other religions in the country through value education. The words of Maulana AbulKalam Azad, India's first Education Minister, demonstrate this clearly:

Our language, our poetry, literature, society, our tastes, our dresses, our traditions, and the innumerable realities of our daily life bear the zeal of common

life and a unified society... our social intercourse for over 1,000 years has blended into a united nationalism. (Azad, 1944, p. 25)

Accordingly, the only way for people to avoid and assist marginalized sectors in dealing with Structural Violence is to become aware of the constraints imposed by their social structures. Accordingly, the researchers' current study utilizes spatial information provided by real-life textual examples to influence readers' perceptions of the victims' experiences and, more specifically, to potentially impact readers' identification with these people's struggles for freedom against the dominant world. According to the literature review, no study has dealt with the Kilvenmani Massacre. There is a rare depiction of real-life examples of structural violence in the existing literature, which typically concentrates primarily on theoretical issues. The current research fills a significant gap in the field by providing a unified text synthesizing knowledge on various violence aspects. The present study is noteworthy because it examines the broader relationship between political, economic, gender, and health aspects of Structural Violence with reference to the real-life massacre depicted in the text, *The Gypsy Goddess*, thus making it unique.

Furthermore, Structural Violence has received scant attention. Even when the concept is invoked, residual, dominant social assumptions minimize its significance, often focusing only on local aspects while

ignoring the impact of broader political and economic relationships. The text's analysis focuses not only on the surface of Structural Violence as a corpus in which Structural Violence elements can be detected but also on the psychological impact on people at a social level can be understood. As a confessional narrative, the study, through the text, verifies the truth of centuries-old socio-cultural norms that have become sacred in societies where inequality, inhumanity, subjugation, and victimization of women in the name of culture and religion are justified and practiced in everyday life. As the name implies, Structural Violence refers to structural harm because institutions and other structures cause it and violence because it results in injury and death (D. D. Winter & Leighton, 2001). The study's findings conclude that, while the contributory factors to Structural Violence are complex and systemic, people's collective efforts, combined with modified legal interventions, can help combat Structural Violence by providing impoverished communities with access to adequate services and resources and transforming lives in a disenfranchised community.

CONCLUSION

The study emphasizes the urgent need to pay close attention to Structural Violence, which has the potential to cause a wide range of harm to people, particularly women and marginalized sectors. The study's novelty is using real-life textual examples to influence readers' perceptions of the victims' experiences, potentially affecting readers'

identification with the victims' lives under dominant hegemony. Accordingly, from the theoretical application of the present study, *The Gypsy Goddess*' investigative elements allow Kandasamy to confront readers with brutality, frightening hostility, legal discrimination, and an unfair and intolerable reality that no traditional realism novelist could have conveyed with such intensity, letting readers connect with the victim's and community's historical understanding. Furthermore, the researchers believe that expanding Structural Violence research is a promising way to support efforts to improve well-being and promote equality among marginalized groups. However, the study has some limitations in that it only examines Structural Violence among marginalized communities. The current study's limitations provide scope and recommendations for future research concerning Structural Violence among migrants, transgender, refugees, lesbians, and gay and bisexual individuals, as there is little knowledge about Structural Violence pertaining to them.

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Stakeholder Engagement Process in Water Saving Initiatives for Sustainable Tourist Destination in Samui Island, Thailand

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ABSTRACT

This paper is based on the water-saving initiatives for sustainable tourist destinations launched by the government sector under a project called Save Water, Save Samui (SWSS) at Samui Island, a famous tourist destination in Thailand. For this project, a mixed-methodologies research approach was employed. This research aims to identify stakeholder engagement processes for water-saving initiatives. Quantitative research methods were conducted through a questionnaire-based survey, which provided supportive information from guests and hotels voluntarily involved in the SWSS project. Qualitative research methods were conducted through focus group discussions with hotel staff and in-depth interviews with representatives from hotel businesses, government officers, and locals. Findings showed that stakeholder engagement processes in the SWSS project appeared at three levels: information, response, and involvement. Lessons from the SWSS project addressed limiting aspects of the stakeholder engagement processes, including poor information dissemination, small numbers and few stakeholders involved, inconsistency across the project, and unclear incentive strategies for stakeholder engagement. To move forward, establishing a collaborative relationship among stakeholders is required to

facilitate network extension, with the goal of an inclusive and collective action strategy to pursue water saving for tourist destinations in the long term.

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INTRODUCTION

For decades, tourism has been identified as one of the main industries for country development worldwide. Many countries define tourism industries as a main driving force for economic development by providing new sources of income generation, job creation and employment opportunities, and increasing investment.

Meanwhile, tourism also generates negative impacts in regions that lack proper planning and management for both host destinations' environmental and socio-economic aspects. The United Nations Environment Programme (UNEP; 2009) emphasized that, like any production sector, tourism has negative impacts and positive effects on the environment, society and economy at local, national and global levels. Although there have been positive impacts of tourism in terms of environment protection and conservation programs demonstrated recently, most previous studies have more intensively addressed the possible negative impacts of tourism activities (Aronsson, 2000; Ashley et al., 2001; Pongponrat & Chantradon, 2012; Soontayatron, 2010; Tisdell, 2001).

Recently, Burbano et al. (2022) mentioned that tourism is one of the fastest-growing industries in the world, and since its benefits can be diffused into remote regions, local communities can be attracted by apparent opportunities such as tourism-dependent economies, where market volatility, as well as social, economic, political and regulatory pressures, can put local communities at risk (Sun et al., 2022).

Furthermore, as alternative livelihoods in tourism are promoted, traditional livelihoods such as farming and fishing can be displaced, making local communities increasingly vulnerable to market volatility (Burbano & Meredith, 2020).

Saviolidis et al. (2021) confirmed that tourism is frequently promoted for its positive impacts on economies, employment and job creation; however, it has become increasingly recognized that tourism has many negative effects on the environment. Those effects range from local pressures such as the depletion of local water resources and pollution to global issues such as land-use change and greenhouse gas emissions. Local impacts are site-specific and differ from area to area, often depending on the level of development and the degree of implementation of planning and management.

Sørensen and Grindsted (2021) were concerned about problems with tourism development when growth-oriented approaches have dominated much of sustainable tourism development, which has been accused of prioritizing economic development over social and environmental sustainability. Sustainability in tourism seems to be a matter of moral judgment, ideology, and branding. Meanwhile, there is little evidence that tourism practices contribute to sustainability (Sørensen & Bærenholdt, 2020).

When a tourism destination's development has not been properly planned, or if environmental management is lacking, it may lead to serious problems for locals,

such as sewage pollution, insufficient water resources, ineffective management, and biodiversity degradation. Among various negative impacts of tourism on the environment of the host destination, the effects on water resources are one of the most relevant (Briassoulis, 2002; Deng & Burnett, 2002; Dworak et al., 2007; Essex et al., 2004; Gikas & Tchobanoglous, 2009; Gopalakrishnan & Cox, 2003; UNEP, 2009; Tortella & Tirado, 2011).

Water resources and management are important for tourism, especially hotels and resorts. Therefore, engagement with stakeholders is required, across government, public and private sectors, to convey concepts into actions for sustainability.

Previous studies have proposed new socially and environmentally sustainable green growth, steady-state and degrowth approaches to tourism development. Drivers leading tourism towards sustainability include regulatory instruments, environmental policies, management measures and technological developments; however, new business models and tourist practices are also fundamental (Sørensen & Bærenholdt, 2020).

According to Chen (2021), sustainable destinations must integrate interdisciplinary knowledge, available information, and moral responsibility. That will only be possible if all stakeholders, including relevant industries, governments, and communities, collaborate to establish more socially inclusive policies and regulations for sustainability. Stakeholder engagement is crucial for directing sustainable tourism development at destinations.

Interestingly, the tourism industry can be reshaped into a model more inclusive of the stakeholders that rely on it, including host communities. It is confirmed by Everingham and Chassagne (2020), who noted that the future of the tourism industries must be small-scale and local and benefit host communities. Moreover, Zhang and Tavitiyaman (2022) emphasized that global society demands sustainability in environmental preservation and in the community to uphold the quality of life in the long term.

The growth of the tourism industry largely runs opposite to the direction of sustainability because its development induces inequities between local communities and tourists. However, the emergence of social development is considered the integration of societal improvements and economic values creation itself, meaning the coexistence of stakeholders' equities and business development is possible by incorporating engagement and sustainability principles.

Samui Island, as a target area of the research, is one of the main tourist destinations in the Gulf of Thailand. It is the third largest island of Thailand, where tourism has been developed intensively and rapidly, from simple bamboo bungalows to high-rise buildings with modern fittings and fancy styles, from local-owned family businesses to international cooperative properties. However, like other popular island tourist destinations, unsustainable tourism development has created various socio-environmental and economic problems

in the Samui community since it became a world tourist destination (Pongponrat, 2006).

Solid waste and wastewater have become major problems challenging local authorities to find effective resource management measures. Responses include initiatives to reduce consumption and reduce volumes of waste and wasted water. In addition, studies show that tourism is increasingly recognized as a significant water-consuming sector at local, regional, and global scales. Therefore, the efficient use of water resources is now considered a key sustainability challenge for the tourism industry (Bohdanowicz & Martinac, 2007; Chen, 2021; Pigram, 2001).

Samui Island was selected as one of the island tourist destinations to implement the 'Green Island Project.' The Tourism Authority of Thailand (TAT) launched the project on behalf of the Royal Thai Government (RTG). Among the '7 Green' concepts, the 'Green Hotel Project' was launched by the Department of Environmental Quality Promotion (DEQP) under the Ministry of Natural Resources and Environment.

Sustainable Consumption and Production (SCP) initiatives were conducted under the SWITCH-Asia program in a collaboration between the European Union (EU) and the RTG. It gave government authorities at different levels more opportunities for stakeholder engagement to promote sustainability at local levels, including Samui Island.

This paper is based on a mixed-methodology research approach. It consists of in-depth interviews, focuses group discussions, and a questionnaires-based survey. It aims to identify stakeholder engagement processes in water-saving initiatives on Samui Island.

Research questions focused on how stakeholders engaged through the project. The project initiative launched by DEQP called 'Save Water, Save Samui' (SWSS) was selected as a case study to help identify stakeholder engagement processes. The hotel-sector on Samui Island was selected for the research, as hotels are one of the main consumers of water resources in the tourism industry.

Findings were that there was a broad consensus for promoting water-saving initiatives toward sustainable tourism, which would require joint efforts of different stakeholders through engagement processes. Lessons from the case study include the importance of awareness-raising activities, shared experiences, and stakeholder engagement in the sustainability project.

Understanding the awareness and roles of different stakeholders involved in the project helped further develop a collective action strategy. That facilitated wider reach and engagement through network extension, shared communication sources for information distribution, knowledge transfers, and the establishment of collaborative relationships among related stakeholders.

LITERATURE

Stakeholder Engagement for Sustainability

Since the 1990s, participation has become a buzzword in development contexts since it has several interpretations regarding purposes, forms, and implications. The nature of participation in the development process gives rise to much controversy regarding its definition and modalities since there is no single universally accepted definition. Pongponrat (2006) mentioned that people's participation could be viewed through different aspects, including "who" will be involved, in "what" roles and responsibilities, and "how" to implement it based on those identified roles and responsibilities through the process of decision-making, implementation, monitoring and evaluation, and benefit sharing on the matters that affect their livings as a collective action.

Annesi et al. (2021) mentioned that several thoracal framework models for engagement, participation and governance processes all emphasize two-way communication or open dialogue for social conversation. Therefore, terms such as citizen participation, people's participation, community participation and popular participation are used interchangeably, transforming and adapting concepts of stakeholder involvement, engagement, co-management, and social connection, including digital platforms as social contexts change.

Stakeholder engagement has become a mainstream approach for pursuing

sustainable development, which requires collective action. It can be seen as an organization's ability to establish collaborative relationships with various stakeholders (Rueda-Manzanares et al., 2008). It includes a set of initiatives or practices that organizations develop to positively engage related stakeholders in activities that benefit society and the environment (Greenwood, 2007; Sulkowski et al., 2018).

Stakeholder engagement focuses on types of stakeholder groups, classification of engagement, a pattern of engagement, degree of involvement, quality of engagement, factors influencing engagement, numbers of stakeholders involved in the engagement actions, communication, dialogue, consultations, commitment, contributions, and extension of relationships among stakeholders (Garcés-Ayerbe et al., 2019; Greenwood, 2007; Herremans et al., 2016; Manning et al., 2018).

According to a systemic perspective provided by Lievens and Blazevic (2021), stakeholder engagement takes place in multiple stakeholder networks, in which value creation and appropriation are not limited to individuals or constellations of stakeholders but involve the service ecosystem as a whole, with levels of stakeholder engagement and platforms on which stakeholder engagement take place. It is supported by De Luca et al. (2022), which find that stakeholder engagement requires the involvement of stakeholders by an effective communication strategy, which encourages two-way symmetric

communication between organizations and stakeholders to generate mutual understanding and satisfaction within the relationship.

Stakeholder engagement processes include four categories: mapping stakeholders, examining engagement models, addressing stakeholders' concerns, and planning actions (De Luca et al., 2022). There is also the need to prioritize the categories of different stakeholders, as each stakeholder has different impacts on the sustainable performance of the development activities.

To align sustainability with stakeholder engagement concepts, Rosato et al. (2021) found that, despite the existence of paradoxes related to impacts from the tourism industry on natural resources, policymakers could favor the diffusion of strategies useful to encourage the transition to more sustainable practices both by local communities and tourism business. Furthermore, stakeholder engagement is also aligned with social engagement and the probability that an individual will participate in exchanges of social concerns, consisting of giving or receiving something from those with whom they interact, without any external constraint (Diallo et al., 2022). Thus, it refers to a behavioral and societal approach in line with prior studies in sustainability (Chuah et al., 2020).

When considering water consumption, especially in tourist destinations, it significantly depends upon an adequate water supply in quantity and quality (Essex et al., 2004; Krantz, 2010). Tortella and

Tirado (2011) mentioned in their studies that quantifying water consumption by the tourist sector is complicated because water consumption by tourists per capita was between two and three times the local water demand in developed countries and up to fifteen times in developing countries (UNEP, 2009).

Water consumption problems are critical in coastal tourist destinations with limited water resources for domestic consumption, leading to a deterioration of water supplies and a social conflict between tourism and non-tourism sectors. Furthermore, issues arise concerning the quality of water supplies, prices, and resource allocations, complicating the sustainability of any tourist industry. Therefore, sustainable consumption and production concepts are being applied to various sectors important for country development, including water consumption in the tourism industry.

Q. Liu et al. (2022) and Sharma et al. (2020) supported that the environmental sustainability of the lodging industry is a complex, multi-scale and global challenge that requires saving water and energy, reducing carbon emissions, and waste management. In addition, there are response strategies such as applying new technologies, innovative infrastructures or appliances, and people management strategies such as promoting staff training and increasing customer engagement.

Interestingly, Kronenberg and Fuch (2021) found that a long-term notion of sustainable tourism's role as a demand-driven industry is currently debated,

and its potential to achieve the SDGs is questioned. It is particularly evident in workforce and employment conditions, which generally receive little attention in the tourism-related SDG discourse. However, Burbano and Meredith (2020) stated that this is an important potential pathway to sustainable tourism and, more broadly, to meeting sustainable development since it implies maintaining ecosystem integrity in conservation areas through low-impact, non-consumptive resource use while also providing employment, improved infrastructure, and increased business opportunities for local communities.

Y. Liu et al. (2021) mentioned that under Goal 12 of the SDGs, SCP is about doing more and better with less. Before this, SCP was introduced early to the world development agenda at the United Nations (UN) in 1992 through the Conference of Environment and Development in Rio de Janeiro, emphasizing global sustainable development. As a result, SCP was recognized as important and incorporated into the Johannesburg Plan of Implementation. The 10-Year Framework of Programs on Sustainable Consumption and Production Patterns (10YFP) was developed through multi-stakeholders and partnerships at the Rio+20 UN Conference on Sustainable Development. SCP was described as the consumption and production of services that are necessary to satisfy main needs and to ensure a better quality of life, concurrently reducing consumption of natural resources, toxic emissions, and wastes throughout all their life cycles to cause no threat to the

demands of generations yet unborn (Welford et al., 1998).

It is necessary to incorporate them all in developing the consumption and production ecosystem, considering the significance of engagement among various stakeholders. It is because higher levels of consumption influence higher production levels in ecosystems consisting of multiple stakeholders. Consequently, it is important to consider education and training, knowledge distribution, raising awareness, sustainable consumer choices, societal initiatives, public campaigns, new business models for sustainability, and greater stakeholder engagement choices (Krantz, 2010; Nash, 2009).

Wu et al. (2021) emphasized that sustainable tourism policy also plays a fundamental role in leading the uptake of sustainable practices by local businesses in a destination. Nevertheless, the issue is complex because it is inevitably linked with other policies and changes at political, economic, and socio-cultural levels. Koens et al. (2021) found that developing trust and cooperation among stakeholders is key to successful planning and collaboration, which may come into play as an emergent *modus operandi* to increase social capital while facilitating strategic planning and co-production of knowledge.

In Thailand, the study by Mungkung et al. (2021) mentioned that SCP is related to sustainable lifestyle and education, which has been incorporated into many national strategies. However, the main challenge is to convince people to follow it. The

Department of Environmental Quality Promotion (DEQP) has been implementing the “Green for ALL” program, which includes encouraging schools to develop a curriculum on environmental education. Moreover, DEQP has initiated the Green Card to stimulate the purchase of eco products. The SCP activities in Thailand on sustainable procurement are well established and developed continuously.

Samui Island and Water Resources Conditions

Samui Island, located in southern Thailand, is ranked among the top island tourist destinations in Thailand and worldwide, with more than one million visitors annually. Geographically, it is Thailand’s third-largest island occupying a total area of 252 sq. km. Local people fished and farmed coconuts there long before tourism became a major income-generating source leading the Island into massive tourism development (Pongponrat, 2006). Moreover, Samui Island also experienced high rates of immigration, as people moved to find income-generating opportunities in the area. It caused problems due to an overuse of local resources, including water (Pongponrat & Chantradon, 2012).

On Samui Island, the registered population is 69,820, with roughly 200,000 unregistered people. Seven sub-districts cover 43,770 households (KohSamui City Municipality, 2020). Approximately 3,000 visitors visit Samui Island daily, both Thais and foreigners. There are 465 registered hotels with more than 16,000

rooms available for visitors. It comprises 276 small-scale hotels (less than 30 guest rooms), 168 medium-scale hotels (more than 30 but not exceeding 100 guest rooms), and 21 large-scale hotels (more than 100 guest rooms). Most tourism activities concentrate around Chaweng beach, Lamai beach, and BoPhut beach and generate around 562,436 USD annually (KohSamui City Municipality, 2020). Samui City Municipality Office records that residents of Samui Island require water consumption of around 4,434 cubic meters per day; meanwhile, visitors require around 5,106 cubic meters per day. Although Samui Island has several water resources, such as natural water from underground and swamp forests, fresh water in reservoirs, and domestic water supply provided by Provincial Waterworks Authority, water shortage is a major problem on the island. It is due to the rapid increase in water consumption by locals and the tourism sector without proper water management. In addition, an increasing number of unregistered residents has also become a contributing factor to water shortages. It is because governmental infrastructure, planning and budgets, may have failed to foresee such many of these people on the Island.

Consequently, water shortages affect all Samui Island’s people, including locals, visitors, and immigrants, especially during the dry season around March to May. In response, many hotel businesses use underground water to supplement water supplies and sometimes buy water from a private water supply, which is costly.

The Samui community, consisting of government authorities, the tourism business sector and locals, has been actively involved in projects related to environmental restoration and conservations launched by different stakeholders.

Samui Island and the SWSS Project

As Samui Island is developing to be a sustainable tourist destination, support policies and plans have been provided by different organizations. Sustainable consumption and production (SCP) promotions are one of Thailand's six key strategies in the 12th National Economic and Social Development Plan.

The Office of Natural Resources and Environmental Policy and Planning (ONEP), under the Ministry of Natural Resources and Environment (MONRE), has collaborated with the EU, through the SWITCH-Asia Program, to implement the SCP Roadmap 2017-2036 in Thailand. The core strategies promote and enhance sustainable consumption and production within society. Consequently, various policies, programs, and projects have been established and implemented for country development to pursue sustainability, at different levels, especially at the local level.

One of the major stakeholders related to SCP in Thailand is the Department of Environmental Quality Promotion (DEQP), under MONRE. It is responsible for providing SCP knowledge, raising awareness on resource efficiency through promotional campaigns, and providing rewards for private sectors. For example,

DEQP developed a program called Awareness Raising on Sustainable Consumption and Production to raise awareness of the water shortage on Samui Island. It was implemented on the Island as a pilot project in 2014 and has continued with several activities. With this program, the campaign project called Save Water, Save Samui (SWSS) was launched, aiming to support sustainable tourist destination development through public awareness raising and motivate tourism businesses, visitors, and locals to get involved with water saving on Samui Island.

Within the SWSS project, public relations strategies were pursued, and campaign materials with the monkey mascot logo were distributed to ten hotels voluntarily involved in the project during a pilot period. These campaign materials included posters, door hangers, brochures, hangers-on mirrors, billboards, small tabletop signs, small tent cards, beach chair covers, mini-information cards, and CDs for an introduction of Samui water-saving initiatives, with briefings on tips like how to save water while staying in a hotel. Public relations tools were distributed to targeted hotels for years, with support from campaign projects from time to time, along with a monitoring and evaluation process for improvement.

METHODOLOGY

This research aims to identify stakeholder engagement processes in water-saving initiatives. The initiative project called Save Water, Save Samui (SWSS) was selected as

a case study as it is a pilot project on water saving for a sustainable tourist destination launched by DEQP. Research questions focused on how stakeholders were involved through the engagement process. Both quantitative and qualitative methods were employed, based on a mixed-methodology approach for data collection and analysis.

A questionnaire survey was conducted voluntarily with 154 guests who had stayed in the hotels involved in the SWSS project. It was to examine water consumption behavior and awareness of water saving during their stay in the hotels and as supportive information for analysis.

Meanwhile, focus group discussions were conducted with thirty-eight hotel staff employed at operational levels, exploring their awareness and perception of the SWSS project. Each focus group allowed one hour for discussion among six to seven members, facilitated by the academic advisory team. A series of in-depth interviews were also conducted with sixteen key informants, consisting of six government officers and ten management-level representatives from targeted hotels.

Quantitative data analysis was applied by breaking down descriptions statistically, providing an overview of awareness and perceptions. Meanwhile, content analysis with a narrative approach was conducted for qualitative data analysis to identify stakeholder engagement processes and lessons learned. Finally, validation of the research results was conducted through a triangulation approach for cross-analysis of data collected from the questionnaire

survey, focus group discussions and in-depth interviews.

FINDINGS

Stakeholder Engagement Process in SWSS

The SWSS project presented a collaboration among sectors, including DEQP and Samui City Municipality, hotel businesses, and visitors. This section has three sub-sections addressing three major stakeholders and their engagement process in the water-saving initiatives for Samui Island.

Government Engagement. ‘Save Water, Save Samui Campaign Day’ was an event to raise public awareness by engaging locals and visitors in various water-saving activities. It also facilitated public engagement with the government sector. Campaign Day was a two-day event at the community open space in the popular Bo Phut area and accommodated a condensed population of locals and visitors.

The Campaign Day was organized jointly by the DEQP, the Samui City Municipality and the academic advisory team. The aim was to raise awareness and disseminate knowledge concerning water resources and conservation for locals and visitors.

Large posters around the area provided brief but clear information about Samui’s water consumption and tips on water saving. In addition, there was a set of street performances called ‘spirit of water’ to present stories about the value of water resources, how water resources can be

polluted, and life without insufficient and clean water resources.

There was a painting activity called ‘art from the heart,’ which engaged people to paint a monkey magnet in their way and take it home as a souvenir from Samui Island. Another engagement activity was based on a co-creation concept called ‘saying out loud.’ This activity encouraged people to write down their opinions and suggestions, on water consumption problems and solutions for sustainability, on blank large-sized clothes, all together in different languages and pen colors. These co-creative works were exhibited at other public events on Samui Island to promote and extend the SWSS project’s impacts.

Based on the findings from the interviews with representatives from government authorities, stakeholder engagement is required to involve people in a local development project. Policies and plans for developing projects and activities implemented for locals were announced through various communication channels, such as government websites and social media.

However, involvement from many people was limited due to time constraints; they did not receive the information, or they misconceived their expected roles as local citizens who need to support local development.

Some interviewees discussed needs for stakeholder engagement, such as, Samui relies intensively on the tourism business where time is money, and running a business is the most important thing of

concern. Nevertheless, the government needs to find ways to raise awareness on water problems and identify concrete and possible solutions.

Another opinion also,

we need to work as a team for Samui in the long term, exchange knowledge and ideas, and find an appropriate way to work together for water saving. It is slow to implement since we must start from people’s perceptions and awareness.

Government authorities mentioned a need to integrate knowledge about water-saving concepts and practices, creative and innovative ideas for engaging in awareness-raising activities, and collaboration among stakeholders to pursue water consumption and production for sustainability.

Hotel Business Engagement. There were ten hotel businesses voluntarily involved in the SWSS project. They used the campaign materials provided by DEQP, later reproduced by the hotels on their own, in different hotel areas, such as placing a campaign door hanger on each guest room door, putting a campaign hanger on a mirror in each bathroom, putting a campaign tent card on a desk in each guest room and on each table in the restaurant and café areas within a hotel. The Campaign CD was also played around hotel lobby areas to promote the SWSS project. In addition, the academic advisory team trained hotel staff in basic water-saving activities that could be implemented in different hotel operations.

From the in-depth interviews with the hotel owners, most hotel owners thought that the government authorities should be a center for collaboration among stakeholders. Samui City Municipality was mentioned because of its main local government role in the area. Some sample excerpts from the interviews include, “The municipality has both authority and budget to enforce a water consumption project. The question is, “why don’t they put more consideration on the water issue since it is critical on the Island now?” or

If the municipality gave a clear direction on how we can deal with the water shortage in Samui, we would follow because it will also benefit our hotel. Nevertheless, we do not know exactly what a water-saving plan is for Samui.

It indicates that the local authority plays an important role in local development. Therefore, the municipality needs to announce concrete plans and clear directions to tackle critical issues, such as water shortages, for public awareness and collaboration among stakeholders.

The hotel owners also commented on the SWSS project, which was a good project to raise awareness of water saving at Samui and help save hotel operational costs. However, the project covered only a small group of hotels. They commented that it should be extended to cover a wider group of targets, including other tourism businesses. “Water saving requires a consensus. Everyone needs to be informed, included, and supported. Some hotels keep working on water savings, but other hotels, tour operators or restaurants

[do not]. Of course, local people need to get involved, too.”

In the interviews, hotel owners also mentioned that many other hotel-owner friends did not know about this project. They were concerned about why their friends did not engage in the project. Their friends also were unaware of other critically needed water-saving projects on the Island, “How can tourism survive if we have water shortages? Samui is isolated from the mainland, which limits resources available”. Some hotel owners also suggested that there should be a project that calls for broader community participation among different sectors and stakeholders on the Island, such as the hotel association, the tourism association, NGOs, local interest groups, women’s groups, and youth groups.

Findings from the focus group discussions among hotel staff, at an operational level, such as front officers and housekeepers, indicate that in their observations, visitors from Europe were more concerned about water saving when compared with Thai, Chinese, and Indian visitors. Therefore, more awareness should be directed to these target groups differently to target cultural, behavioral and language differences. So far, the supply of campaign materials promoting water saving has been limited and not widely distributed within the Samui community, “We are happy that our hotels are involved in the SWSS project. It is good for Samui” and “we are proud of our hotel when guests provide good comments on the ongoing water saving activities.”

The hotel staff also mentioned in the focus group discussions that “we got a brief training on water saving guidelines for each function, which helps us understand more about how to save water. It is something we can do for our household as well.” Furthermore, the hotel staff agree with the SWSS project and are willing to follow the guidelines. However, they also mentioned that there should be an open platform to share ideas and comments on water saving within the hotel for more practical or the best practices in different functions. “Somehow, what we learn in training does not match the work conditions, in reality, so we think it would be great if there is a chance for us to exchange opinions for better operations.”

Findings show that the hotel staff agrees that the hotel owner’s decisions are very important for water-saving policies and guidelines. The decisions made should be translated and conveyed to the operational level staff to help them understand the

directions of the hotel management, which will be helpful for better implementation of water savings.

Visitors Engagement. Visitors engaged in the Campaign Day, and hotel guests staying at the ten targeted hotels, were asked about their water consumption behaviors and perceptions about water saving. Questionnaire surveys were randomly and voluntarily conducted with guests, with different languages used in the questionnaires (English, German, Russian, and Chinese). There were 154 completed questionnaires; most respondents were female (53%), with most aged between 20 and 30 (43.7%). The education levels of most respondents were bachelor’s degrees (71.5%), and most were visiting Samui Island for the first time (51%). The tourist nationality most represented was Chinese (48.2%). A profile of respondents is presented in Table 1.

Table 1
Profile of respondents (n = 154)

| Items | Number of respondents | Percentage |
|------------------------|-----------------------|------------|
| Gender | | |
| Male | 72 | 47 |
| Female | 82 | 53 |
| Age | | |
| 20 years old and below | 8 | 5.5 |
| 21–30 years old | 67 | 43.7 |
| 31–40 years old | 40 | 25.7 |
| 41–50 years old | 21 | 13.3 |
| 51–60 years old | 10 | 6.3 |
| Above 60 years old | 8 | 5.5 |

Table 1 (*Continue*)

| Items | Number of respondents | Percentage |
|---|-----------------------|------------|
| Level of Education | | |
| High school | 35 | 22.8 |
| Bachelor's degree | 110 | 71.5 |
| Above bachelor's degree | 9 | 5.7 |
| Major Tourist Nationalities | | |
| Chinese | 74 | 48.2 |
| British | 24 | 15.8 |
| Swedish | 14 | 9.3 |
| Russian | 29 | 18.6 |
| Others (e.g., India, Japan, German, Korea, etc.) | 13 | 8.1 |
| Times of Visiting Samui | | |
| First time | 78 | 51 |
| 2–3 times | 53 | 34.3 |
| 4–5 times | 12 | 7.8 |
| More than five times | 11 | 6.9 |

Source: Field survey

Based on the findings in Table 2, visitors were aware of the water shortage in Samui Island during the dry season from the news. Most respondents (70%) noticed SWSS campaign materials around the hotel area and in their rooms. The most noticeable campaign material was the tent card, which

they could easily find anywhere around the hotel area. The tent card was easy to read and gave some tips which were helpful for them to support water saving. Of the respondents, 37% said the campaign materials and related awareness raising would help change their water-saving behaviors.

Table 2

Visitors perceptions of water saving (n = 154)

| Items | Number of respondents | Percentage |
|--|-----------------------|------------|
| Awareness of water shortage problem on Samui Island | | |
| Aware | 111 | 72 |
| Not aware | 43 | 28 |
| Notice SWSS campaign materials around hotel areas | | |
| Noticed | 108 | 70 |
| Not noticed | 46 | 30 |

Table 2 (Continue)

| Items | Number of respondents | Percentage |
|---|-----------------------|------------|
| Read the Green-Hotel Practice Manual (available in Guest Room) | | |
| Read | 79 | 51 |
| Did not read | 75 | 49 |
| Involvement in Water Saving Practice | | |
| Involved | 82 | 53.2 |
| Never involved | 72 | 46.8 |
| Idea on SWSS Campaign to Change Behavior | | |
| SWSS helped to change behavior for water saving | 57 | 37 |
| SWSS does not help to change behavior for water saving | 97 | 63 |

Source: Field survey

When asked about water consumption behaviors during their stay in the hotel, most respondents said that they take a shower (84.2%). Meanwhile, some respondents said that they use the bathtub (13.8%), and a small number used both methods for washing (2%). The findings also show that only some respondents use a glass of water

for brushing teeth (19.2%), while most of the respondents turn off the water during their shaving (34.6%). Only a few respondents never turn off the water while soaping in the shower (9.3%). Many respondents reuse their towels (31.1%) and use the bed linen for more than one night (32.5%).

Table 3

Visitors' water consumption behavior (multiple answers)

| Item | Number of respondents (n = 154) | Percentage |
|--|------------------------------------|------------|
| Taking shower | 130 | 84.2 |
| Using bathtub | 21 | 13.8 |
| Taking a shower and using a bathtub | 3 | 2 |
| Using a glass of water for brushing teeth | 30 | 19.2 |
| Turning off water during shaving | 53 | 34.6 |
| Never turn off the water while soaping in the shower | 14 | 9.3 |
| Reusing towels for more than one day | 48 | 31.1 |
| Using bed-linen more than one night | 50 | 32.5 |

Source: Field survey

Table 3 above presents information to support an overview of visitors' water consumption behaviors during their hotel stay and provides ideas for developing future water-saving campaigns (Table 3). Findings from the questionnaire survey show that SWSS campaign materials could help make visitors aware of water-saving initiatives.

However, it was too early to evaluate changed behaviors. Changing water-saving practices requires consistent campaign promotion and monitoring to assess behavior change over time. It also requires involvement from hotel sector participants and their staff, who can help educate and persuade visitors about water-saving practices, and locals to conduct water conservation as a collective action for the sustainability of the local tourist industry and their way of life.

DISCUSSIONS

Based on the research findings, the SWSS project was launched by the government sector collaboration between DEQP and the Samui City Municipality to introduce water-saving initiatives for a sustainable tourist destination. It generated an open platform for stakeholder engagement to include the hotel business, visitors, and locals, with knowledge transfer facilitated by the academic advisor team.

The government sectors prefer involvement based on their authority. Through a voluntary evaluation process, DEQP could provide certification for those hotel businesses involved in the project.

That certification can then be used for hotel marketing campaigns and materials. In addition, it creates opportunities to generate social recognition through government news and other media channels; hotels can use it to benefit their business regarding brand, image, and positioning concerning water consumption.

Throughout the project, knowledge and training provided to hotel staff by the academic advisory team also helped develop their capacity. The academic sector is an important stakeholder engaged in the project. They provide knowledge and training inputs while monitoring the project's progress (Annesi et al., 2021). Greenwood (2007) supports these findings and Sulkowski et al. (2018), who found that when organizations develop a set of initiatives or practices to engage related stakeholders in activities positively, it provides benefits to society and the environment (Chuah et al., 2020; Diallo et al., 2022).

Therefore, collaborative relationships could be established through this stakeholder engagement process for local network formulation, knowledge transfer, exchange of ideas and experiences, and as a resource for further development projects. In addition, an informal stakeholder network was also formed through the SWSS engagement process for further collaboration (Koens et al., 2021; Wu et al., 2021).

Figure 1 presents stakeholder engagement with key components within different stages, comprising inputs, processes, and outputs of the SWSS project.

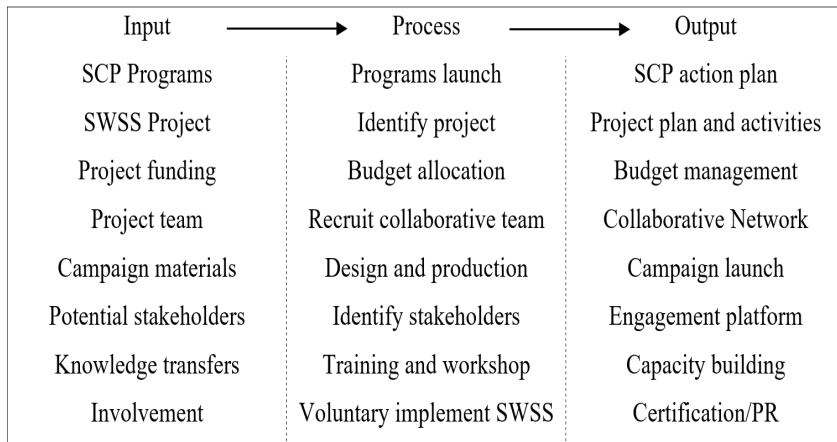


Figure 1. Stakeholder engagement key components

The SWSS project also presented the abilities of organizations such as government sectors to establish collaborative relationships with various stakeholders in this research. This is supported by studies of Rueda-Manzanares et al. (2008). On the other hand, guests or visitors of the hotel also received opportunities to be involved and engage in water consumption directly since they were counted as the main group of water consumers. Water saving requires actual actions. Therefore, guests can conduct it directly, providing interactive engagement opportunities for environmental conversation.

Regarding the level of stakeholder engagement addressed by Morsing and Schultz (2006), the information strategy was implemented through public awareness campaigns and events, along with campaign materials established or used in hotel areas. Training opportunities were also provided to the hotel staff, aiming to raise awareness

and enable knowledge transfer for water-saving practices. Response strategies were conducted through different approaches, including recruitment for hotels participating in the SWSS project and collaboration with the academic advisory team. As mentioned earlier, the level of involvement was conducted through various activities such as training, knowledge transfer or public campaign launches. Network formation also occurred among various stakeholders (De Luca et al., 2022; Lievens & Blazevic, 2021).

DEQP and the academic advisory team regularly conducted a monitoring and evaluation process to identify and confirm the project's positive results, problems, and constraints for future improvement. Meanwhile, the potential to engage more stakeholders in the project and identify future directions was discussed.

Figure 2 presents stakeholder engagement processes at different levels

| Level of Involvement | Stakeholders Engagement | | | |
|--------------------------|---|-------------------------|---|--------------------------------|
| | Government | Hotels | Visitors | Locals |
| Information distribution | Government announcement | Meeting with government | Campaign materials | Public awareness campaign days |
| ↓ | Training provided by the academic advisory team | | indicated knowledge and tips for water saving | |
| Knowledge transfers | | | | |
| ↓ | | | | |
| Response | Authority enforcement | Voluntary involvement | Voluntary involvement | Voluntary involvement |
| ↓ | | | | |
| Implementation | Collective action | | | |
| ↓ | | | | |
| Monitoring & evaluation | Academic advisory team conducted project evaluation through a questionnaire survey and interviews with stakeholders | | | |

Figure 2. Stakeholder engagement process

and stages, from information distribution, training, response, and implementation of the SWSS project, to monitoring and evaluation.

According to theories and concepts of stakeholder engagement, research on the SWSS project provided concrete examples of how a stakeholder engagement process operates, from when it was launched to the implementation of water-saving initiatives involving different stakeholders at different stages.

There were no tax incentives or government subsidies. However, SWSS leveraged stakeholder engagement processes to indicate collaborative relationships among stakeholders. It included voluntary-

based participation in the SWSS project and implementation by hotel businesses to support sustainability. In return, stakeholders could develop better relationships with the government and other businesses in their local area for future support. Meanwhile, hotels can use their participation in the SWSS project to support their claims and marketing strategies as a ‘green hotel,’ which is increasingly important for mainstream sustainable tourism.

For SWSS, a limited number of local hotel businesses engaged in the project. The public campaign for raising awareness was also limited to a certain area and ran over only two days. Consequently, public information dissemination was limited.

Continuing the project would be difficult without consistent practice, training, and activities to maintain awareness, understanding of current conditions, and knowledge of implementing water-saving strategies matched with experimental conditions.

It relates to informal enforcement by government sectors, as it relies on stakeholders participating voluntarily. Leveraging social capital alone to influence engagement is not enough to pursue a long-term water-saving project since other factors are also required to stimulate engagement and economic benefits--concrete and consistent guidelines to follow; continuously supported activities for hotel business, visitors, and residents to participate; and water-saving practices and consensus actions to pursue; while increasing capacity to implement engagement across various stakeholders.

CONCLUSION

The SWSS project presented the way stakeholders can implement water-saving initiatives, for sustainable water consumption and production, at tourist destinations. Reasons for stakeholder engagement in the project were also identified. However, it was clear that social capital factors likely influence stakeholder engagement. The lessons learned from the project include limiting aspects of this stakeholder engagement, including poor initial information dissemination, the small number of stakeholders involved, and inconsistency.

The research affirms that better stakeholder engagement is required for SCP to deliver water-saving outcomes. This approach is recommended to utilize resources from government sectors (i.e., authority to call for public engagement, budget allocation to support, information and directions dissemination), hotel businesses, visitors, and residents' sectors (i.e., knowledge, understanding, awareness, network, co-creation, collaboration) to work collectively for their local, sustainable development. In addition, establishing a formal network for sustainable water consumption; and promoting collaboration between government sectors and the public in wider areas, with upscaling extension, should be implemented.

Once this formal network is established, comprehensive plans detailing the roles and responsibilities of each stakeholder sector will be distributed. The network would function as a co-creator for idea-sharing, decision making, implementation, and monitoring and evaluation stages for more effective and active water consumption and production strategies and practices. In addition, important water-saving knowledge would be provided to the public frequently through various communication channels suitable for visitors and locals.

Although there are still challenges to implementing SWSS or similar sustainable consumption projects, SWSS showed a practical change to processes when stakeholders engage for sustainability beyond just debating theories. It addressed requirements for an extension strategy,

including information distribution, concrete incentives, public relations, social recognition, and even enforcement. As a result, it is anticipated that more stakeholders will be recruited for engagement and participation in collective actions that can help to sustain water-saving activities while supporting sustainable tourist destination development in the long term.

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Code-Switching and Code-Mixing in the Practice of Judgement Writing in Malaysia

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ABSTRACT

This study explores the use of code-switching and code-mixing in the practice of writing the grounds of judgement in the Malaysian Judicial System. As these grounds of judgement are official documents published for the public interest, a lack of lexical accuracies for the important terms and phrases may lead to poor linguistic representation of the legal text. Thus, thirty-two samples of grounds of judgement written in the national language from 2015 to 2021 were extracted from The Current Law Journal and analysed according to Appel and Muysken and Malik's theories on code-switching and code-mixing in terms of the frequency used in the legal text. Findings revealed extensive use of intra-over inter-sentential code-switching in the form of insertion, alternation, and congruent lexicalisation of code-mixing. These were driven by the absence of specific legal terms in the national language, the lack of registrational competence among the writers as well as the functions of the

legal terms to serve the pragmatic contexts of the text, emphasise a point or highlight the semantic significance of the terms, and reflect the identity of the writers. The present study shows limited linguistic corpus on legal terms in the national language; therefore, language experts should intensify their efforts to expand the corpus and increase awareness of the terms through language courses for legal practitioners.

Keywords: Applied linguistics, code-mixing, code-switching, grounds of judgement, judgement writing

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INTRODUCTION

The Malaysian Courts have always recognised the importance of Bahasa Melayu as the national language since the use of the English language is only allowed if the prosecution or defence representatives have asked for ‘a leave of court’ to conduct the proceeding in English (Federal Constitution, art. 152(4); National Language Act 1963/67, s. 8; Muslim et al., 2011). Nevertheless, this is only permitted after considering the interests of justice to provide a fair trial to both parties involved (e.g., public prosecutor v the accused, or plaintiff v defendant). Even as early as 1990, the Chief Judge of Malaya, Hashim Yeop A. Sani, had instructed all Judges and Judicial Commissioners to present him with at least one verdict in the national language to get some insights on the issues concerning the use of the national language in the court (Chief Judge of Malaya’s Circular No. 3, 1990, as cited in Dato’ Seri Anwar Ibrahim v Tun Dr Mahathir Mohamad, 2010). It suggests that all written and oral submissions presented by the defence counsels and deputy public prosecutors, as well as the judgement writing of the Court, should be in Bahasa Melayu.

Nevertheless, the use of Bahasa Melayu as the court language stipulated in the constitution and acts lacks equivalent terms (Abu Bakar, 2015). Legal practitioners and language experts need to address this linguistic challenge mutually and respectively. For example, the freedom of exemption in The National Language Act 1963/67 has prompted most civil

legal practitioners to opt for English in their proceedings (Abu Bakar, 2015; Powell, 2020; Rozman, 2018). Many court documents, such as legal contracts, agreements, and affidavits, were drafted in English (Rozman, 2018). The main reasons for the option of the English language were the absence of appropriate and accurate legal terms in the national language corpus and some issues of terminological translations such as missing terms, lack of technical knowledge, and multiple meanings of English words (Abu Bakar, 2021; Powell, 2020). Even though there are written rules regarding the language used in proceedings, there are also unwritten rules for their choice of language in selected situations (Powell, 2020; Rozman, 2018).

Since language plays an imperative role in delivering an accurate message in this field, the use of Bahasa Melayu in the courtroom still faces challenging linguistic demands as its use is mixed with the English language (Abu Bakar, 2015; Othman et al., 2019; Rozman, 2018). A notable example is the common practice of code-switching and code-mixing between Bahasa Melayu and English in the Bahasa Melayu “grounds of judgement” (i.e., reasons of judgements). The concern is that legal practitioners often perceive the changes of some terms through code-switching or code-mixing as a sign of proficiency rather than deficiency (Abu Bakar, 2015; Powell, 2020). They view that the law should operate in the language most easily understood by them and the public, thus allowing flexibility of code-mixing in the lexico-grammatical

aspects of the language. Common Law most likely influences this in the Malaysian legal system, where English is the language used in the legal precedents (Rozman, 2018). Therefore, to a certain extent, the use of the English language is still necessary when there are cases or circumstances requiring references to such laws. Hence, while analysing the corpus, it is also important to consider the factors for the code changes of lexical and phrasal terms in the practice of judgement writing in Malaysia.

Muysken (1995) mentioned that code-switching is the alternative linguistic technique commonly used by bilinguals of two or more languages to make meaningful communication. Thus, the use of code-switching and code-mixing often occurs in situations where the aim is to address any insufficient or unsuspecting circumstances to facilitate the delivery of information. In legal situations, the use of code-switching and code-mixing is common when judges ascribe specific meanings to words or when lawyers need to use the right words to effectuate the wishes of their clients (Hyatt, 2018; Othman et al., 2019). The selection of words or terms used is imperative to ensure that the most suitable words are used in the given context. In some situations, commonly recognisable words may take on different connotations or new meanings when used in the courtroom (e.g., grounds of judgement, trial, and soon on). These specialised meanings of words in law are distinctly known as “terms of art”. These distinct words are often foreign or unavailable in other languages apart from

English or in languages where the specific terms have been coined (Hyatt, 2018). In this case, Bahasa Melayu may not have the precise terms for specific references to be used in the legal context because most of the legal references are in English (Rozman, 2018). Hence, there seems to be a need to use the language with precision to avoid confusion, as literal substitution of one word with another may result in poor evaluation and misunderstanding of the intended message.

Due to the current limitation of Bahasa Melayu in the legal field, such as in the writing of the grounds of judgement of a case, it is inevitable to apply code-switching and code-mixing of the adequate terms from Bahasa Melayu to English to ensure that the accurate message is delivered to the recipients. It can be one of the ways that people in this field can communicate efficiently and effectively. As these grounds of judgements, categorised as official documents, are published for the public interest, there is a need to analyse the types of code-switching and code-mixing used in these documents. The findings will provide insights on the measures that the legal practitioners can take to improve these official documents for public reference. The results will also serve as a guideline for future researchers and language experts to expand the existing corpus so that the use of Bahasa Melayu in the Malaysian Judicial System could further be strengthened. Thus, the present study sought to answer the following research questions (RQs) on code-switching, code-mixing, and their

functions: (i) What are the frequencies of the types of code-switching and code-mixing in the selected grounds of judgements? (ii) How frequently are the functions of code-switching and code-mixing used in writing of the grounds judgement?

LITERATURE REVIEW

Code-switching is a common practice in bilingual interactions whereby speakers mix words, phrases, and sentences of two or more languages, dialects, or speech styles (Bokamba, 1989; Hymes, 1974; Mujahid et al., 2020; Ononye, 2018). The switching between these units occurs within one speech event involving alternation and interchange of more than one language (Milroy & Muysken, 1995) while retaining the syntactic rules of either language (Mujahid et al., 2020; Ononye, 2018; Poplack, 1980). Muysken (1995) and Muthusamy (2010) posited that code-switching demands a high level of bilingual competence, thus explaining the code-switcher's ability to produce comprehensible and grammatically sound utterances containing linguistic units of various languages.

Code-switching is interrelated to code-mixing in which the latter is a more subtle form of language alternation in which the fundamental distinction of code-switching is still open to discussion. Some scholars did not differentiate the two concepts. For instance, Clyne (1991) did not distinguish between code-switching and code-mixing, claiming that both concepts refer to the same acts of using L2 after L1 alternately. Similarly, Muysken (2000) and Ononye

(2018) described code-mixing as using linguistic units of two languages in the same sentences, a definition akin to code-switching. Li (1998) elaborated that code-mixing is the admixture of linguistic units on the phonological, lexical, grammatical, and orthographical levels. However, other scholars attempted to distinguish code-mixing from code-switching by proposing that code-mixing is a natural communication phenomenon that functions much deeper (Kachru, 1978; Maschler, 1998). Nevertheless, both concepts function under the language alternation principle, fluidly using the elements of several languages in a single utterance (Mujahid et al., 2020).

The switching of language units can occur in three instances: inter-sentential, intra-sentential, and tag-switching. Inter-sentential code-switching refers to switching units at the sentence-based level (Appel & Muysken, 2005) and the clausal level (Romaine, 1989). Meanwhile, intra-sentential code-switching refers to the language switching at the word or phrasal level (Romaine, 1989). Finally, tag-switching refers to inserting tag or interjection components from one language to another (Muysken, 2000). Muysken mentioned that three distinctive processes occur during language mixing. The first process refers to insertion, which is the process of embedding units from one language to another. Secondly, it is alternation, which is the process of a true switching in grammar and lexicon from one language to another. The third process is congruent lexicalisation, which refers to

interchanging lexicons from two languages with similar grammatical structures.

Bilingual speakers utilise Code-switching and mixing for different purposes. Appel and Muysken (2005) explained that switching has several functions: referential, directive, integrative, expressive, phatic, metalinguistic, and poetic. Referential function refers to switching when speakers use units from another language because they lack knowledge of the main language. Directive function refers to the action of excluding other interlocutors by switching to a language they do not understand (similarly, to include others by switching to the language they understand). Meanwhile, expressive function refers to switching as a form of identity, whereas phatic function refers to switching to change the tone of discourse. Metalinguistic function refers to the use of one language to make comments regarding another language. Finally, poetic function refers to switching for puns, jokes, and other word-play purposes.

Similarly, Malik (1994) proposed a model categorising code-switching into distinctive functions. The functions include lack of facility, lack of registral competence, the reflection of the mood of the speaker, amplification and emphasis of a point, stress on the semantic significance, a reflection of the identity with a group, an act to addressing different audiences, the attraction of attention, and finally, an act to serve the pragmatic contexts and habitual expression. However, due to the specific examination of legal grounds of judgements, the present study employed only five functions by Appel

and Muysken (2005) and six functions by Malik (1994).

The elements of code-switching and code-mixing discussed by Appel and Muysken (2005) and Malik (1994) are central to several bilingualism studies. For example, Wibowo et al. (2017) found that the occurrence of intra-sentential code-switching was demonstrated in a formal speech by the Indonesian president. Furthermore, they identified that the code-switching used in this situation was for emphasis. In comparison, within the Malaysian political sphere, it was found that both inter-sentential and intra-sentential levels of code-switching were used in the country's parliamentary debate (Khalil & Firdaus, 2018). Similarly, this study found that code-switching was also used for emphasis. However, several other functions were also observed, such as the speaker's mood, lack of equivalent terminology, habitual expression, and pragmatic reasons.

Since code-switching and code-mixing occur among bilingual and multilingual speakers, it is only natural that these practices are widespread in the Malaysian context. The occurrences of code-switching and code-mixing with English are often observed, especially in Malaysia as the *de facto* second language. For instance, when speakers of the same ethnic group converse, their mother tongue becomes the dominant language, with English and Bahasa Melayu as the embedding languages (Muthusamy, 2010). Within the general social sphere, it was found that Malaysians usually code-switch to show identity in a

group (Hadei et al., 2016; Stapa & Khan, 2016). Consequently, they code-switch to express their emotions to provide further elaboration, clarification and emphasis when interacting with people within their group (Stapa & Khan, 2016). Similarly, in the education setting, it was also observed that code-switching was used to show identity in a group, although other findings like emphasising and amplifying points, lack of registral competence, and mood of the speakers were also reported (Azlan & Narasuman, 2013). Meanwhile, in the business context, it was observed that code-switching was an established practice since the 1990s, whereby employees ranging from shop floor level, middle level, and the administrative level practised code-switching between Bahasa Melayu, English, and Chinese/Indian languages (Morais, 1995).

Within the context of legal discourse, several studies looked into the interaction between language and the laws (Haynes, 2017; Oxburgh et al., 2015). It was also found that studies on the written judicial decision have specifically been gaining traction from numerous researchers (Bavelas & Coates, 2001; Charalambous, 2015; MacMartin & Wood, 2005). However, in the Malaysian context, limited studies were published on the use of Bahasa Melayu in the Malaysian Judicial System. These studies only highlighted the inconsistent patterns in the language demonstrated through code-switching and code-mixing of Bahasa Melayu and English without addressing their linguistic properties (Powell, 2020;

Rozman, 2018). The direction of the studies was also focused on finding the flaws in the constitution and acts, but the reasons behind the language choice were not examined in detail. As a result, recommendations were given from a legal standpoint without any concrete or significant data. A relevant study by Razali and Sulong (2016) discusses the practice of judgement writing and its application in the Shariah Court of Malaysia. However, this study only explored the history of the judgement writing practice, its significance, and its implementation by only addressing the general issues in the language used.

Despite the lack of focus on the linguistic aspects of studies of the Malaysian legal discourse, a limited number of studies have emerged to address this gap. A study by Ibrahim and Awang (2011) investigated Malaysian judicial opinions in civil trials on the use of modal verbs and language markers to express the stance and attitude of the judges. Meanwhile, Othman et al. (2019) analysed the discursive strategies adopted by the judges to reformulate the description of a rape crime. Nonetheless, both studies only focused on using the English language in the Malaysian legal discourse. Outside Malaysia, the occurrences of code-switching and code-mixing in the legal context were observed by Silaban and Marpaung (2020). This study was conducted in the context of a talk show program involving Indonesian lawyers in which code-switching and code-mixing were utilised because of the foreign language's and for inclusivity to accommodate viewers from diverse

linguistic backgrounds. In this sense, the findings closely followed Malik's (1994) model in terms of the component of showing identity with a group and pragmatic reasons, respectively. Based on these studies, it was revealed that code-switching and code-mixing in the legal context in Malaysia is evidently an understudied area. Studies of these concepts within the Malaysian context have thus far focused on the social and educational fields. Therefore, the present study sought to fill the scarcity of studies by providing empirical data concerning code-switching and code-mixing in the legal context in Malaysia.

METHODOLOGY

The grounds of judgement (or reasons of judgements) are the reasoning the judge gives in support of a judgement or order (Lake v Lake, 1955). In the present study, thirty-two (32) grounds of judgement written in the national language from 2015 to 2021 were extracted from The Current Law Journal for further analysis. The selection of the samples employed criterion sampling, one of the types of purposive sampling in a quantitative study. Criterion sampling was chosen as it relies on the evaluation of the research experts to select a sample with a specific purpose in mind. In selecting the sample, researchers were the language experts who selected samples with several predefined criteria as; (i) grounds of judgements from 2015 to 2021, (ii) grounds of judgement written in Bahasa Melayu, (iii) judgements of a civil or criminal case, (iv) grounds of judgements that use code-switching and code-mixing.

These samples extracted within the last six (6) years were selected to study the use of code-switching and code-mixing. The period reflects the implementation of Bahasa Melayu as the language of the court, which is 58 to 64 years after *Merdeka* Day and 52 to 58 years after the National Act Language 1963/67 came into force (Federal Constitution, art. 152(4); National Language Act 1963/67, s. 8; Muslim et al., 2011). Then, as most higher court cases use English in their proceedings, only samples written in Bahasa Melayu (ii) were listed from the timeframe (Abu Bakar, 2021). The list was then narrowed down to judgements of a civil or a criminal case (iii) to exclude Syariah cases (i.e., Islamic system of law) from the samples where Bahasa Melayu is predominantly used in the proceedings (Razali & Sulong, 2016). Finally, samples with code-switching and code-mixing were selected to specify where the types of code-switching and code-mixing could be identified and how they were used in the practice of judgement writing in Malaysia for further analysis.

Two main variables were studied in the present study. Two linguistic constructs, respectively, represented each variable. The first variable was represented by i) Types of code-switching (i.e., inter-sentential, intra-sentential, and tag-switching) and ii) Types of code-mixing (i.e., alternation, insertion, and congruent lexicalisation). Both variables correspond to each other in that the inter-sentential structure is tantamount to the alternation structure. At the same time, the intra-sentential and tag-switching structures are commensurate with the role of insertion and congruent lexicalisation. The difference is that the former operates at a higher level

(i.e., sentential and clausal levels) while the latter operates at a lower level (i.e., phrasal and lexical levels). In addition, code-switching and code-mixing types could be assigned with the nominal measurement value for statistical analysis. It could also be reassigned to the ordinal measurement scale for further analyses to explore its relational role with the second variable.

Two function-oriented models operationally defined the second variable of the present study: i) Five (5) Functions by Appel and Muysken (2005) and ii) Six (6) Functions by Malik (1994). Table 1 summarises the two types and two function models and their operational definitions for reference during the codification.

Table 1

Operational definitions of variable 1 (types) and variable 2 (functions) of code-switching and code-mixing

| Operational Definitions of Variable 1 (i.e., Types of Code-Switching and Code-Mixing) | | |
|---|-------------------------|--|
| Operational levels | Types of code-switching | Types of code-mixing |
| Sentence or Clause Levels | Inter-Sentential | Alternation |
| Phrasal or Lexical Levels | Intra-Sentential | Congruent Lexicalisation |
| | Tag-switching | Insertion |
| Operational Definitions of Variable 2 (i.e., Functions of Code-Switching and Code-Mixing) | | |
| Five (5) Functions by Appel and Muysken (2005) | | Six (6) Functions by Malik (1994) |
| Referential function: The absence of legal terms in Bahasa Melayu or lack of register/writers are not aware of the existence of such words in Bahasa Melayu | | Lack of facility (the absence of specific legal terms in Bahasa Melayu—e.g., <i>prima facie</i> (the case at first sight), <i>mens rea</i> (criminal intent/ guilty of mind) |
| Directive function: To differentiate various roles/doers (e.g., Court, Judge, Plaintiff, Defendant) | | Lack of registrational competence (the lack of register among the writers - the way a speaker uses language differently in different circumstances) Register: the style of language, grammar, and words used for e, e.g., informal register/ academic register, lingo. |
| Expressive function: To describe the qualities of doers or the elements presented. e.g., <i>Mahkamah</i> (the Court), <i>yang tertuduh</i> (the accused), <i>saksi</i> (the witness), <i>bukti</i> (evidence) | | Semantic significance (the importance of meaning) |
| Phatic function: (Emotion) To show emotion that helps to amplify a point, pity, anger, stress on the verdict/actions, and others. | | To show identity with a group (identity as the Judge, the one that delivers the verdict, the one that upholds the law) |
| Metalinguistic function: Myers-Scotton (1979) asserted that speakers sometimes switch code to comment on another language (To emphasise the importance of meaning) | | To amplify and emphasise a point (to highlight a point) |
| | | Pragmatic reasons (to serve the context of the text) |

A template of an excel spreadsheet was created and customised for coding analyses. The customised features have several columns for lines extracted from the grounds of judgements, its page number for reference, drop-down lists of the types of code-switching, types of code-mixing, and their functions by Appel and Muysken (2005), as well as functions by Malik (1994). Finally, the last column was created for additional remarks (i.e., definitions based on <http://prpm.dbp.gov.my>—Pusat Rujukan Persuratan Melayu, explanation, and other examples for a clearer understanding of the code-switched words to guide the researchers in the coding process). The customised spreadsheet was used as the analysis tool for copying the lines from the ground of judgements which contain the units of code-switched constituents (i.e., code-switched words/ phrases/ clauses/ sentences) and pasting them onto the customised excel spreadsheet. Each unit was highlighted in bold to differentiate it from the words in Bahasa Melayu along the same lines. Then, the analysis was done by identifying and then coding (i.e., selecting from the dropdown lists) the types of code-switching (i.e., inter-sentential, intra-sentential, and tag-switching) and types of code-mixing (i.e., insertion, congruent lexicalisation, and alternation) in the spreadsheet. After that, the functions of the identified codes were also determined and annotated with additional remarks in the following columns to give further insights into each code-switching and code-mixing category and their relevant functions.

Another researcher was assigned as the second coder to re-code eight (8) or 25% of the selected samples to ensure intercoder reliability. The percentage was in line with a previous inter-rater reliability done by Connor (1990), who reanalysed 40 scripts from 150 sample essays in her study on rhetorical linguistic features, representing approximately 25% of the total sample. In their study, Lehman and Sułkowski (2020) also successfully established inter-rater reliability between the principal and secondary coders. Statistically, a dichotomous variable is analysed with phi correlation coefficient (ϕ). In contrast, a variable with more than two sub-levels/ subcategories is analysed with Cramer's V correlation coefficient (V) within a range of 0 to 1.0 to measure the association and consistency of codifications between the principal and secondary coders. It is important to note that despite having three subcategories, only two subcategories of the types of code-switching were found in the eight re-coded grounds of judgement, hence the statistical application of the phi correlation. As for the other variables (i.e., types of code-mixing and the other two function models), Cramer's V correlations were employed. Correlational analyses showed that there were strong correlations between coders for the analyses of the types of code-switching ($\phi \geq 0.99, p < .05$), the types of code-mixing ($V \geq 0.99, p < .05$), the functions by Malik (1994; $V \geq 0.811, p < .05$) and moderate correlation for the analysis of functions by Appel and Muysken (2005; $V \geq .342, p < .05$).

Once the coding process was completed, Statistical Package for Social Sciences (SPSS) was used to carry out two statistical tests: Chi-square (χ^2) and Contingency Correlation Coefficient (C). The former was carried out to analyse the variables assigned to the nominal measurement scale (i.e., types of code-switching, code-mixing, and two function models). The latter was used to analyse the variables reassigned to the ordinal scale of measurement (i.e., types of code-switching and code-mixing from the lowest to highest textual structure) against the nominal scale of measurements (i.e., two function models). It was done to explore how the reassigned ordinal types of code-switching and mixing and the two existing nominal function models interacted with each other.

RESULTS AND DISCUSSION

Overall Analysis of Lexical Density

Table 2 shows that 448 units of code-switched constituents were identified in the affected lines of the 32 samples of the grounds of judgements against the total number of words, 9015. The number of units of the code-switched constituents was divided by the total number of units for the words in all samples to generate the total percentage for the code-switched constituents. From the above, the code-switched/mixed constituents occur at 0.05% (i.e., rounded up from 0.0497%) from the total number of words in the affected lines of the grounds of judgements.

Table 2

Number of units of the code-switched constituents against the total number of words

| Items | Number of units | Percentage |
|---|-----------------|------------|
| Code-Switched Constituents | 448 | 0.0497% |
| Total number of words in the affected lines of all 32 samples | 9015 | 100.00% |

Research Question 1: What are the frequencies of the types of Code-Switching and Code-Mixing used in the selected grounds of judgements?

Table 3

Observed frequency counts and chi-square for types of code-switching

| | Observed N | Expected N | Test statistics for types of code-switching | | |
|------------------|------------|------------|---|------|---------|
| Inter-sentential | 16 | 224.0 | Chi-Square | | 386.286 |
| Intra-sentential | 432 | 224.0 | df | | 1 |
| Tag-switching | 0 | 0 | Asymp. (2-tailed) | Sig. | .000 |
| Total | 448 | | | | |

Based on Table 3, it was found that the frequency of intra-sentential code-switching occurrences (432) differed from the frequencies of inter-sentential code-switching occurrences (16). Tag-switching (0) is nowhere to be found in the analysis. These intra-sentential frequencies were also significantly different from inter-sentential

code-switching, χ^2 ($df=1$, $N = 448$) = 386.286, $p < .01$. It can be concluded from the above findings that code-switching is more frequently used at the intra-sentential level (i.e., phrasal, and lexical levels) than the inter-sentential level (i.e., sentence or clause-based levels) when delivering the grounds of judgement.

Table 4

Observed frequency counts and chi-square for types of code-mixing

| | Observed N | Expected N | Test statistics for types of code-mixing | | |
|------------------------------|---------------|---------------|---|------|---------|
| Alternation | 16 | 149.3 | Chi-Square | | 774.835 |
| Insertion | 427 | 149.3 | df | | 2 |
| Congruent Lexicalisations | 5 | 149.3 | Asymp. (2-tailed) | Sig. | .000 |
| Total | 448 | | | | |

Table 4 shows that there were differences in the frequency of insertion occurrences (427), alternation occurrences (16), and congruent occurrences (5) in all the 32 grounds of judgements. These differences were also found to be significant from one another, χ^2 ($df=2$, $N = 448$) = 774.835, $p < .01$.

It can be concluded that code-mixing is applied more commonly at the insertion level (i.e., phrases, words) than alternation level (i.e., clauses and sentences) and congruent lexicalisation (i.e., two adjacent words with similar grammatical structures). The former part of the conclusion also agrees with the

previous conclusion derived from Table 2 that code-switching and mixing are more frequently present at lexical and phrasal levels than clausal and sentential levels in the delivery of the grounds of judgements. For illustration, some example words/phrases of intra-sentential code-switching (=insertion of the code-mixing) include ‘...*kes prima facie*...’, and ‘...*bersifat penafian semata-mata dan afterthought*.’

Research Question 2: How frequently are the functions of code-switching and code-mixing used in writing the grounds of judgement?

Table 5

Observed frequency counts and chi-square for functions by Appel and Muysken (2005)

| | Observed N | Expected N | Test statistics for types of functions | | |
|-------------------------|------------|------------|--|------|---------|
| Referential Function | 206 | 89.6 | Chi-Square | | 279.679 |
| Directive Function | 8 | 89.6 | df | | 3 |
| Expressive Function | 66 | 89.6 | Asymp. (2-tailed) | Sig. | .000 |
| Phatic Function | 38 | 89.6 | | | |
| Metalinguistic Function | 130 | 89.6 | | | |
| Total | 448 | | | | |

Table 5 shows the analysis based on Appel and Muysken's (2005). Functions, it was found that there were differences in the frequency of referential function occurrences (206), metalinguistic function (130), expressive functions (66), phatic function (38) and directive function (8) on all the grounds of judgements. These differences were also found to be significant from one another, χ^2 ($df=4$, $N = 448$) = 276.679, $p < .01$.

For contextual illustration, constituents such as '*...membuktikan kes **prima facie** terhadap tertuduh.*', and '*...sedangkan HMS telahpun **functus officio**...*' were utilised to reflect the referential function. As for metalinguistic function, examples entailed constituents such as '*...dan keseriusan jenayah itu sendiri (**gravity of the offence**).*', and '*...telah dijumpai berdekatan (**close proximity**) dengan dadah.*'. Examples such as '*...mengenakan hukuman yang bersifat **deterrent**...*', and '*...bukanlah bermakna Mahkamah ini **trivialise** keseriusan jenayah*

yang dilakukan...' were minimally used to indicate the directive function.

Thus, it can be concluded that Bahasa Melayu lacks sufficient or equivalent words/ phrases to represent legal concepts. It resulted in the highest presence of code-switching for the referential

function to accommodate the appropriate legal situations. Similar is the case for the metalinguistic function, which is the second most important function in legal judgements when the writers code-switched into the English language to comment on the words/ phrases in Bahasa Melayu to emphasise the importance of their meaning. On the contrary, the judgements were also found to be lacking in using code-switched/mixed constituents to exert power or positions due to the least application of words or phrases for directive function.

Analysis of Malik's function (1994) in Table 6 revealed that there were differences in the frequency counts of 'Lack of Registrat Competence' (132), 'To Amplify

Table 6

Observed frequency counts and chi-square for functions by Malik (1994)

| | Observed N | Expected N | Test statistics for types of functions | | |
|----------------------------------|---------------|---------------|--|------|---------|
| Lack of [legal] facility | 68 | 74.7 | Chi-Square | | 113.402 |
| Lack of registrat competence | 132 | 74.7 | df | | 4 |
| Semantic significance | 83 | 74.7 | Asymp. (2-tailed) | Sig. | .000 |
| To show identity with a group | 7 | 74.7 | | | |
| To amplify and emphasize a point | 94 | 74.7 | | | |
| Pragmatic reasons | 64 | 74.7 | | | |
| Total | 448 | | | | |

and Emphasise a Point' (94), 'Semantic Significance' (83), 'Lack of [legal] facility' (68), 'Pragmatic Reasons' (64) and 'To show identity with a group' (7) occurrences in all the grounds of judgements. These differences were also found to be significant from one function to the other functions, $\chi^2(df=5, N = 448) = 113.402, p < .01$.

Therefore, it is concluded that lack of registrat competence is the most important function used to indicate that there is a significant lack of equivalent words from Bahasa Melayu (e.g., '*tiada keperluan untuk independent corroboration bagi kes*', '*...telah menggunakan double presumption yang menyalahi undang-undang.*') to be presented in the legal grounds of judgement. Findings also show a significant need to use code-switching/mixing to amplify or highlight a point (e.g., '*wujudnya overwhelming evidence yang menjustifikasikan dapatan.*', '*...mengikut*

tafsiran whims and fancies pihak-pihak.') in the delivered grounds of judgement. Finally, contrary to the common expectation, code-switching or mixing in the grounds of judgement was applied the least to differentiate identities between relevant court parties (i.e., the roles of the plaintiff, defendant, the Judge).

To find out if certain types are associated with certain functions of code-switching or mixing, contingency correlation coefficient analysis was done, as shown in Table 7. Based on significant findings from the previous analysis for each respective type and function, only one type (i.e., code-mixing) and one function (Appel & Muysken, 2005) were employed herein as the findings should be reflective of the other type and function counterparts. It was found that there was a significant correlation between Types of Code-switching and Functions by Appel and Muysken (2005), ($C=0.221, p < .01$).

Table 7

Contingency correlation coefficient between types (code-switching) and functions (Appel & Muysken, 2005)

| Functions (Appel & Muysken, 2005) | | | | | | | Symmetric measures |
|-----------------------------------|-------------|-----------|------------|--------|----------------|-------|---------------------------------|
| | Referential | Directive | Expressive | Phatic | Metalinguistic | Total | |
| Types of Code-Switching | 1 | 1 | 7 | 4 | 3 | 16 | Contingency coefficient .221 |
| | 205 | 7 | 59 | 34 | 127 | 432 | Asymp. Sig. (2-tailed) .000 |
| | 206 | 8 | 66 | 38 | 130 | 448 | |

Further investigation revealed that intra-sentential code-switching was associated with referential and metalinguistic functions more than the phatic and directive functions.

CONCLUSION

This study examined the frequency of use of code-switching and code-mixing in the practice of judgement writing in the Malaysian Judicial System. From the above findings, it can be concluded that code-switching and code-mixing are markedly used in the legal field in Malaysia. Therefore, it concurred with Rozman (2018) and Powell (2020) about the visible occurrence of code-switching and code-mixing in the formal legal context. Furthermore, Silaban and Marpaung (2020) also consented by demonstrating the legal application of code-switching and code-mixing in the spoken discourse. Hence, the present study’s findings complemented Silaban and Marpaung (2020) by concluding about the significant use of code-switching and code-mixing in the written discourse of a legal text.

Furthermore, the present study also concludes that although code-switching is frequently exhibited on the grounds of judgements, the code changes more frequently at the intra-sentential level than at the inter-sentential level. Tag-switching, on the other hand, is not a common type of code-switching in this context. Like code-switching, code-mixing is most commonly applied as insertion rather than as alternation or congruent lexicalisation. Nonetheless, the latter’s use is not foreign on the grounds of judgements.

Since language is needed with precision to avoid confusion, errors, or serious misunderstanding, there is flexibility in the language used and its grammatical aspects. Code-switching and code-mixing between Bahasa Melayu and English were used predominantly on these grounds of judgements due to the lack of sufficient or equivalent words or phrases in Bahasa Melayu to represent legal concepts. The lack of registral competence is the notable reason for using English words or phrases on these grounds of judgement. Such changes were also encouraged to provide more context to the audience and emphasise significant points in the judgement. It is supported by Khalil and Firdaus (2018) on the importance of code-switching in emphasising important ideas in a text. There are also other circumstances where the changes are applied to reflect the identities of the relevant parties in the courts.

Although code-switching and code-mixing serve as an alternative competence for bilinguals to engage in a social and professional situation, selecting words or phrases is intentional and imperative in this field. Hence, there is an immediate need to expand the corpus to provide enough context for legal practitioners' reference in writing their legal discourse. The findings of this present study provided information in the form of concrete data by fulfilling the gaps identified earlier in the previous studies (Razali & Sulong, 2016; Silaban & Marpaung, 2020). Therefore, this information can be used by language

experts and legal practitioners to develop possible strategies to increase awareness of the terms in Bahasa Melayu, such as through specialised language courses for legal practitioners. Through the results of this study and the efforts of relevant parties, it is hoped that the use of Bahasa Melayu could be further strengthened in the Malaysian Judicial System.

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Semiotic Analysis of Three QSR Instagram Posts During COVID-19 Outbreak

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ABSTRACT

The COVID-19 outbreak has impacted various aspects of human life, and this includes the economy. Therefore, businesses must address their survival promptly by implementing more aggressive and creative marketing methods that use social media platforms. Although touted as Malaysia's top three quick service restaurants (QSR), the pandemic also affected KFC, McDonald's, and Pizza Hut. Therefore, this research was conducted to investigate the advertisement language of these three brands' Instagram posts. The paper intends first to study how text producers use linguistic and non-linguistic representations to position their businesses amidst the COVID-19 pandemic. Second, it aims to explain how specific language use, image, and style can bring about meaning to customers of the position of the brands during these trying times. The theory that underpins this paper is M. A. K. Halliday's Social Semiotic Theory of Language (1978). Semiotic analysis was employed as an analytic tool due to its ability to foreground aspects that may not be noticeable in plain reading. The data for this study was collected from the Instagram pages of the three brands during the period of the first Movement Control Order (MCO) exercised in Malaysia from March 18 to May 3, 2020.

Keywords: Branding strategies, COVID-19, Instagram advertising, QSR, semiotics

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INTRODUCTION

The size of the global market for quick-service restaurants (QSR) has been steadily growing year after year. The sector's value was approximately 875.26 billion U.S. dollars in 2019, up from 862.58 billion U.S. dollars the previous year (Lock, 2021a). However, the sector was expected to shrink

in 2020 due to the global stay-at-home regulations imposed to prevent the spread of the coronavirus or COVID-19 (Lock, 2021a). It is corroborated by Kim et al. (2005) and Tse et al. (2006), who assert that natural and manufactured disasters frequently impacted businesses prior to the pandemic. Fast-food restaurants suffered a detrimental impact from COVID-19, with most operating at less than 20% capacity, resulting in severe financial losses. While many restaurants were in dire financial straits, many individuals were laid off unexpectedly (Nhamo et al., 2020). Because of the coronavirus pandemic, the overall income of the QSR industry in the United States plummeted to 239 billion U.S. dollars in 2020 from 273 U.S. billion dollars in 2019 (Lock, 2021b).

Following the Movement Control Order issuing, the Malaysian government ordered fast-food businesses to cease dining operations. The outlets are only allowed to operate their businesses via drive-through and takeaway counters (Daim, 2020). Although no specific data is available regarding the amount lost in the fast-food industry during the COVID-19 pandemic, Malaysia's economy is said to be losing RM2.4 billion daily (Mohd Yassin, 2021). Therefore, research is critical to understand better how the fast-food business is dealing with the pandemic threat. This idea resulted in the implementation of the present study. As the present research identified and analysed the content of fast-food Instagram advertisement posts and how the posts were presented in relation to COVID-19,

it is also imperative to discover and extract the meanings of the linguistic and graphic elements utilised in the advertisements.

Changes in Business Practices During COVID-19 Pandemic

The impact of the COVID-19 pandemic on numerous businesses around the world is evident, and it has altered many aspects of how people live, behave, and carry out their daily activities. Living in fear of a pandemic has created multiple barriers in businesses, especially in the aviation, tourism, retail, and food industries (Donthu & Gustafsson, 2020). Many people have lost their jobs because of the outbreak. Bartik et al. (2020) have confirmed that many small businesses have experienced severe disruption and shut down operations. In another study, it was found that without proper measures to minimise the effects of the COVID-19 economic crisis, 42% of the recent abrupt unemployment in the United States could result in permanent job loss (Barrero et al., 2020).

However, despite massive closures in many business operations, blatant changes are expected to emerge in the online world. After more than a year of facing the pandemic, online industries such as online communication, entertainment, education, and shopping are all seeing extraordinary growth (Donthu & Gustafsson, 2020). They have asserted that as more time is spent at home, people's consumption patterns have evolved, with an increase in demand for takeout, snacks, alcohol, and cleaning supplies. Other growing industries include

healthcare, pharmaceuticals, herbs and vitamins. This change of practice proves that certain businesses could thrive despite operating in a pandemic outbreak and continue to develop dynamically if effective countermeasures are taken promptly.

Instagram as a Platform for Advertising

Instagram has a massive influence on people's everyday life. Instagram is a communicative platform that allows businesses to engage with essential stakeholders, such as present and potential customers (Casaló et al., 2017). Besides, it is a portable and visual arena where businesses may promote their products and services at a minimal cost while having a strong persuasive impact. According to Kusumasondjaja and Tjiptono (2019), users are exposed to a plethora of visual content when they use Instagram, including images uploaded by other users and product information offered by merchants. Instagram users, therefore, are overwhelmed with information by only looking at posted photographs. As a result, to effectively draw interest from the users, marketers must produce advertisements that can capture and hold customers' attention long enough for them to comprehend the advertisements cognitively before moving on to other images. (Kusumasondjaja & Tjiptono, 2019).

Since its introduction, according to Kusumasondjaja and Tjiptono (2019), Instagram has made the food business one of the most visible industries on social media. Johnson (2015) also argues that food is currently one of the most popular

items advertised on Instagram. Rummo et al. (2020) propose that food and beverage companies use Instagram to upload photos with captions as part of their branding communication plan to gain more followers. When a new follower is added to an account, other connected users will be able to access brand-related photos, messages, and descriptions, as well as postings from their relatives and friends in their social networking circle. Therefore, it is evident that Instagram, with its features, can offer a product more exposure for marketing purposes.

Problem Statement

According to Taylor (2020), the need to immediately adjust to the shifting circumstances is crucial to those in the advertising and marketing industry in reaction to the pandemic's enormous impact on businesses. Mason et al. (2021) verify that in terms of product validation, consumers' natural ability to contact their social influencers has been hampered by the COVID-19 pandemic. Nevertheless, social media platforms enable customers to communicate with a larger number of people without having to interact with them physically (Mason et al., 2021). It is because digital media is less affected than other forms of media since individuals who are quarantined could have more time to access the internet at home (Taylor, 2020). The ideas above seem to imply that the utilisation of social media for advertising products is vital during the pandemic to cater to consumers' needs. Thus, the present

study intends to discover how three QSR brands which are McDonald's, KFC, and Pizza Hut (limited to franchises in Malaysia only), advertise their products and services on Instagram by looking at linguistic and visual presentations in relation to the COVID-19 crisis as well as the new norms. According to Statista's (Statista Research Department, 2021) publication titled, "Malaysia-visited fast-food restaurants 2018," the top three most visited fast-food restaurants in Malaysia in 2018 were KFC (82.81%), McDonald's (81.34%), and Pizza Hut (57.18%). Due to the data's recent nature, these three QSR restaurants were included in this analysis fast-food Besides, in terms of the availability and prevalence of these fast-food restaurants on Instagram, the data displayed by Starngage ("Top 1000 food & drink", n.d.) in the list entitled, "Top 1000 food & drink Instagram influencers in Malaysia in 2021" show that McDonald's, KFC and Pizza Hut are also among the top 60 food influencers on Instagram in Malaysia.

According to Taylor (2020), there will certainly be a higher emphasis on advertisements that make use of emotional appeals during the pandemic. As a result, additional research into the role of emotion in the processing of advertisements and the effectiveness of emotional appeals is required (Taylor, 2020). The present study aims at discovering such aspects of product advertising of the three fast-food brands mentioned earlier to respond to this proposal. DiResta et al. (2020)

claim that when addressing the COVID-19 pandemic, brands must be courteous, use intelligent marketing, and be sensitive to their customers' conditions. Consumers are expected to return if brands can acknowledge the pandemic crisis well while reflecting good values. It can be achieved by utilising marketing campaigns and scheduled content timeframes and reviewing the language and images used in commercials and marketing materials, including awareness of consumers' heightened anxiety during this time (DiResta et al., 2020). However, it is unclear how the incorporation of linguistic styles and visuals in the advertisements of the products of these three QSR brands, namely, McDonald's, KFC and Pizza Hut, was executed on the brands' Malaysian Instagram accounts during the pandemic. DiResta et al. pose this question in their discussion of marketing strategies during the COVID-19 period; "How do we currently promote our product or service in the midst of the COVID-19 crisis in a way that resonates with consumers?" (2020, para. 6). The present study was conducted to answer this question, with a limitation of focusing on the three fast-food brands mentioned previously. To our knowledge, no study has focused on these three businesses targeting Malaysian customers in terms of their language and visual messages in their advertisements addressing both their products and COVID-19 on Instagram. Thus, the execution of the present study is hoped to address the literature gap issue in the Malaysian context.

Research Objectives

This study aims to contribute to an academic tradition of advertising discourse analysis by examining the Instagram advertisements of three QSR businesses, namely KFC, McDonald's, and Pizza Hut, during the first deployment of the Movement Control Order (MCO) in Malaysia. Condensed meanings related to the representation of these brands offered by the advertisements were examined. Semiotic analysis was employed using Halliday's Systemic Functional Linguistics (SFL) principles for the study of texts and images contained in the businesses' Instagram advertisements and their corresponding captions. Semiotics is the study of signs, while semiotic analysis studies how signs are made, communicated, and organised into languages or codes (Childs & Fowler, 2006). In our study of Instagram posts, images and captions (i.e., language) are studied to see how they operate in society. The analysis mainly focuses on how these brands used their marketing strategies during the first MCO owing to the COVID-19 outbreak. Hence, this study's objective is to explore how the three selected QSR brands represented their business images and services through different visuals, graphics, and language patterns in their Instagram advertisements during the COVID-19 global pandemic. Moreover, in alliance with this research objective, the study aims at answering the following research questions:

1. How did the three selected QSR brands represent their business images and services in their

Instagram advertisements during the COVID-19 global pandemic?

2. How did the three selected QSR brands use visuals and graphics in their Instagram advertisements during the COVID-19 global pandemic?
3. What language patterns were employed by the three selected QSR brands in their Instagram advertisements during the COVID-19 global pandemic?

LITERATURE REVIEW

There may be other studies conducted on linguistic and graphic features of the three QSRs' advertisements (e.g., Bragg et al., 2020; Guidry et al., 2015; Salleh et al., 2015; Vassallo et al., 2018), but the best knowledge of the researchers, there is little research performed specifically to analyse these QSRs' advertisements during the MCO where there were restrictions imposed on restaurant operators. According to Lai et al. (2020), restaurants and cafes around the country were hit hard by the news of the lockdown, with stringent rules prohibiting customers from dining. However, the National Security Council (2020, as cited in Lai et al., 2020) believe that such businesses may still be permitted to operate, but solely for the purpose of fulfilling takeout orders or deliveries. Thus, the present study's uniqueness is evident, considering the MCO period when the advertisements were posted on Instagram compared to the previous normal time when food operators were not affected by the

COVID-19 pandemic. Besides, most recent studies of QSRs in relation to COVID-19 only highlight the issues of dietary habits in terms of fast-food consumption (e.g., Bohlouli et al., 2021; Husain & Ashkanani, 2020; Sidor & Rzymiski, 2020) rather than investigating the presentations of the fast-food itself in the advertisements. More studies should be executed on the part of the QSR businesses, particularly on how they strategize their product representations to address COVID-19 and the “new normal” that comes with it.

The study of semiotics is becoming increasingly prominent in analysing advertisements on social media due to the technological affordances that the users rampantly employ. Marketers have resorted to social media, particularly during COVID-19, to raise awareness of their services and products and form relationships with users. As a result of social media’s ability to engage users in affective communication (KhosraviNik, 2018), advertising and marketing activities become more relatable and interpersonal. With such tools, the messages could be interpreted objectively due to the emotive connection between marketers and users. COVID-19 is still around, and many new behaviours, advertisements’ signs and visuals have been adopted to respond to the changes as part of a concerted effort to make everyone feel at ease. In other words, under any circumstances, the business operates as usual. It is evident in Starr et al. (2021) that even though the pandemic has caused global pandemonium, businesses should

move on in spreading positivity. The action of ‘living with ease in the pandemic era’ has been propagated in Singapore through advertisements to materialise the bond marketers would like to have with the people in combating and surviving COVID-19 collectively. Some commercials in Singapore have included uplifting taglines, visuals and signs that incorporate affective messaging aimed at reducing pandemic fear and anxiety. However, there is still a scarcity of literature on this topic, particularly when it comes to how visuals and signs are utilised in social media marketing to participate in emotive communication during the COVID-19 pandemic. As a result, this study could enrich the body of knowledge in such discourse, especially on fast-food advertisements on social media during the outbreak.

METHOD

Theoretical Approach

This research is a qualitative study that focuses on text and visual analysis. We chose Halliday’s Systemic Functional Linguistics (SFL) as our framework to account for aspects of language and visuals. Since language is a medium of communication, its roles and functions are deemed essential to build and sustain relationships between society members. According to Halliday, as cited by O’Donnell (2017), SFL is used to determine how language is represented to produce and build numerous discourses around us rather than how it is processed in the speaker’s mind. Thus, language becomes

a tool to deliver messages and engender more new discourses on top of the existing ones.

In the *Introduction of Language as Social Semiotics*, Halliday (1978) concurs that “language is a social fact”, a statement earlier made by Ferdinand de Saussure. Halliday explains that it is so because “language arises in the life of the individual through an ongoing exchange with meanings with significant others” (1978, p. 1). He explains this through the process of children’s language development; when children learn, they are not simply learning things around them but also construing the reality around them through language. Thus, social reality is a semiotic construct. Ledin and Machin (2018) viewed Halliday’s Systemic Functional Linguistics (SFL), developed in 1978, as a grand theory in understanding language functions. It has three broad metafunctions, namely Ideational, Interpersonal and Textual. These three language metafunctions define how language works in our environment. According to Rashid and Jameel (2017), ideational is the relationship between the process, the participants, and the circumstances. It clarifies the relationship between the external and internal world of our experience. In other words, because of ‘who is doing what to whom?’ the speaker’s experience is deemed vital in the function of ideational (Rashid & Jameel, 2017; Richardson, 2017). The ideational function involves an English transitivity system linked to six key components: material, mental, relational, verbal, existential, and

behavioural. The interpersonal function emphasises the speaker’s relationship with the audience in that he expresses his attitude and judgement to influence others’ attitudes. The last one is textual, and it deals with text production and information flow in a text. It emphasises the relevance of the message and the relationship between the language and its surroundings. Simply expressed, a textual function is linked to the linguistic world and the context of the situation. This theory is essential to scaffold the entire concept of understanding language in specific situations with specific participants and processes in this study. Therefore, it is justifiable to use this theory in analysing the linguistic representations in the advertisements of the three selected QSR brands in the present study.

Methodological Approach

Apart from linguistic analysis, the present study also employed semiotic analysis to examine signs and symbols that appear in the Instagram advertisements studied. Semiotics refers to the signs, symbols, and signification constructs of the social reality of culture. In other words, the interaction between language and semiotics makes up culture. Semiotic analysis is an in-depth examination of the unconscious cultural patterns that affect consumer behaviour and responses to textual messages and images. These consider sociocultural setting, interlocutors involved (addresser-addressee), and whether the message is verbal and visual and sociolinguistic parameters.

As mentioned in the previous section, i.e., Theoretical Approach, Halliday's (1978) SFL is chosen as this study's main framework in multimodality analysis. However, Halliday has proposed more flexibility, and language should not be viewed as a monolithic function of grammar. According to Halliday (1978, as cited in Ledin & Machin, 2020), language is creatively created by the users, who are usually influenced by their background and culture in a particular society. To put it another way, Halliday argues that language is more than just a means of communication; it must also hold meanings and values that reflect the unique conditions of each community. Therefore, in this study, this framework guides our analysis in determining the function of language (both text and visuals) in two ways; firstly, how language makes meanings through advertisements and, secondly, how the brands build and maintain the relationships with their audience during the COVID-19 pandemic.

To study advertisements, Berger (1986) recommends the analysis of mood, design, the relationship between images, spaces, background, plot, language used, typeface, item advertised, aesthetic decisions and attitudes reflected by the advertisements. These suggestions are suitable, whether traditional or new media such as Instagram posts. Kress and Leeuwen (1996, 2001, as cited in Ledin & Machin, 2020) also point out that analysing language frequently requires more than just text. Today, the signs and visuals that accompany the text are irreducible in the age of technology,

and they provide significant meaning to the overall construction of language. In this light, it has been demonstrated that our communication strategy has evolved and reflects our world's realities. In this study, the visuals tend to overpower the text. According to Ledin and Machin (2020), advertisements frequently represent more than simply the idea of "selling items" because they can also suggest other functions such as giving commands and making rhymes to create and sustain relationships with the audience. Thus, the entire system of language could be interpreted beyond its intended purpose by looking at signs, images, texts, and illustrations and how they are combined and positioned, as it has the power to create relationships and representations that construct the life of the entire community in each context.

Data Collection

Advertisements posted by the top three QSRs in Malaysia were collected throughout the first Movement Control Order in Malaysia (MCO), which was implemented from 18 March to 3 May 2020. During the MCO, all advertisements were retrieved from the restaurants' Malaysian Instagram accounts, which mostly focused on their activities in accordance with all applicable laws. However, we also discovered that the brands did not publish a post every day over the timeframe, resulting in a variation in the number of advertisements for each brand. Therefore, the analysis was made on 54 advertisements: 19 from Pizza Hut, 18 from KFC and 17 from McDonald's.

Sampling

Brand and COVID-19. The first COVID-19 case in Malaysia was detected on January 25, 2020 (Elengoe, 2020). As the number of cases increased, Malaysia implemented a Movement Control Order (MCO) to control the disease; the first phase was from March 18 to 31, 2020.

On March 18, 2020, KFC advertised a series of ten posts in a day. All posts were related to standard operating procedures observed by the company in relation to food ordering and delivery and practices of good hygiene. KFC used self-order kiosks, online orders, and drive-through methods as their new ordering practice in response to the COVID-19 pandemic. The delivery protocols involved contactless delivery and taped takeaway bags. In addition, sanitisation of self-order kiosks, delivery bags and hands, and health check-ups for crew members and KFC despatch riders were practices of good hygiene exercised by the brand.

McDonald's Malaysia advertised their business on Instagram regarding the MCO four days after March 18, 2020, the first day of the MCO. After that, a series of related posts were issued over one week on March 22, 2020 (Sunday), March 26, 2020 (Thursday), March 28, 2020 (Saturday), March 29, 2020 (Sunday) and March 30, 2020 (Monday). Following that, it stopped highlighting the MCO and COVID-19 in its posts and focused on its regular advertising of food and drinks and its operating hours, apart from Ramadan.

Pizza Hut's postings related to COVID-19 and MCO started only on March 27, 2020, during the third MCO phase, which fell between March 29 to May 3, 2020. The advertisements on MCO were posted among the posts on Ramadan until May 1, 2020.

Each brand announced its occupational safety operations related to COVID 19 and the MCO at different times. Among them, KFC was the earliest, on the first day of the phase of MCO. McDonald's began on the fourth day of the first phase, while Pizza Hut was the last to post.

ANALYSIS

Replication of Hashtag Signs

McDonald's launched a succession of #KitaBoleh themes emulating the tagline in the video campaign aired on Malaysian television featuring Prime Minister Muhyiddin Yasin and other politicians making a nationwide call to inform the public of the need to fight COVID-19 (Figure 1). In addition, this brand utilised and adapted the #KitaBoleh tagline in its series of advertising. #KitaBoleh is believed to be inspired by *Malaysia Boleh*, a phrase coined by Tun Mahathir Mohamad, the former Prime Minister of Malaysia, to encourage Malaysian athletes to participate in international events. McDonald's adaptations of #KitaBoleh were '#KitaBoleh kongsi rezeki' (We can share sustenance), '#KitaBoleh memikul cabaran in bersama-sama' (We can take this challenge together) and '#KitaBoleh video call je' (We can just



Figure 1. Replication of hashtag signs (McDonald's)

video call). “Walaupun kita tak boleh dekat #KitaBoleh berjuang bersama” literally means if we cannot be near, we still can fight together. These repeated uses of hashtag slogans were posted alongside their brand products.

KFC employed the #StaySafe in its advertisements. #StaySafe is a common expression conveyed during the pandemic wishing and advising other people to

be safe and to take care of themselves. #HappyKatRumah, Pizza Hut's choice of the hashtag was an adaptation of #DudukRumah, the government's call to stay at home as a preventive measure to protect Malaysians and their families from infections (Figure 2).

These stylistic adaptations and adoption of hashtag signs exhibit commercial business support of the national agenda where both

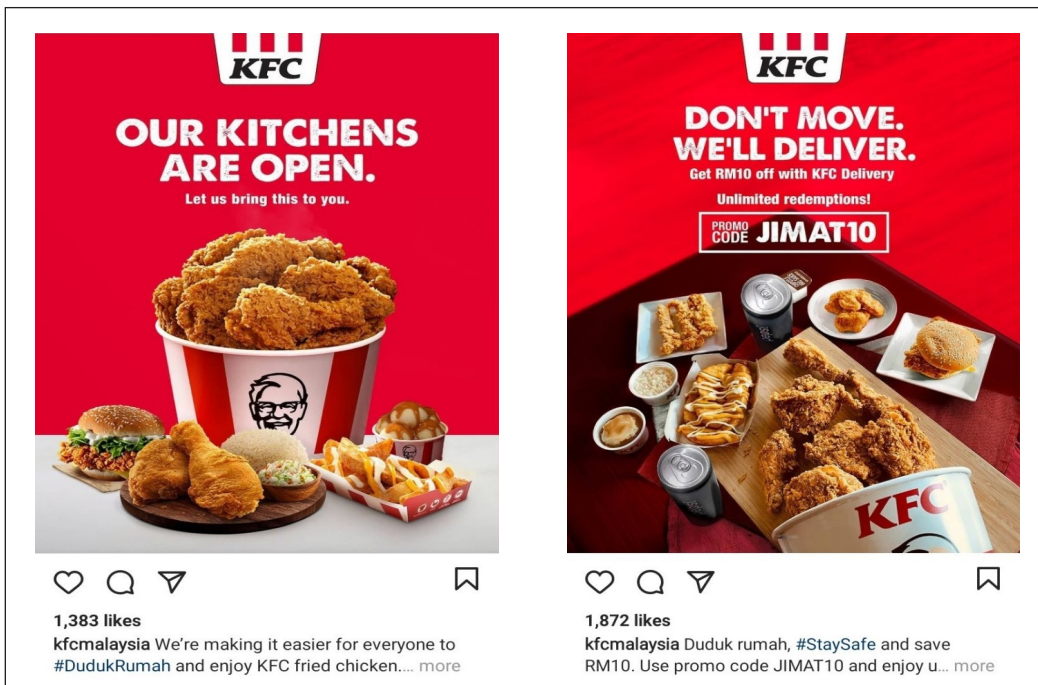


Figure 2. Replication of hashtag signs (KFC)

parties stand together in the face of adversity. Saxton et al. (2015) described hashtags as the use of pound sign (#) to create random and massive participation in the online community. It has become influential because when hashtags are used with online advocacy activities, movements may expand naturally among like-minded individuals and groups and virally to other social media users. Moreover, in many social movements and marketing circumstances, the hashtag helps the organisation organise messages, make them simpler to discover, and connect them to existing knowledge and action groups (Saxton et al., 2015).

Choice of Image and Graphics Patterns

Three sets of related images were employed in Pizza Hut's Instagram posts. First, there were five images of real employees of Pizza Hut at work (Figure 3). In one image, a pizzaiolo named Sethulingam was shown preparing a pizza. He wore a facemask, a

barrier to assist in preventing respiratory droplets from travelling into the air when talking, in addition to the typical personal hygiene practises in the kitchen, such as wearing a disposable kitchen hair-net and a pair of clear plastic gloves. Other real-life staff represented in the posts were Muad, the team member and Adib, Fatin and Ridwan, the delivery riders. These pictures of staff in different poses showed a new method of doing business amidst the MCO. All staff were named, depicting the brand's recognition of its unsung heroes. Based on these efforts also demonstrates the company's dedication to being authentic and honest by using employee-centred advertising to maintain its image while also interacting with customers.

Another set of images displayed the practice of social distancing adopted by the company- open palm hand gestures and split a pizza. It can be deduced that the literal explanation of the former refers to sanitised

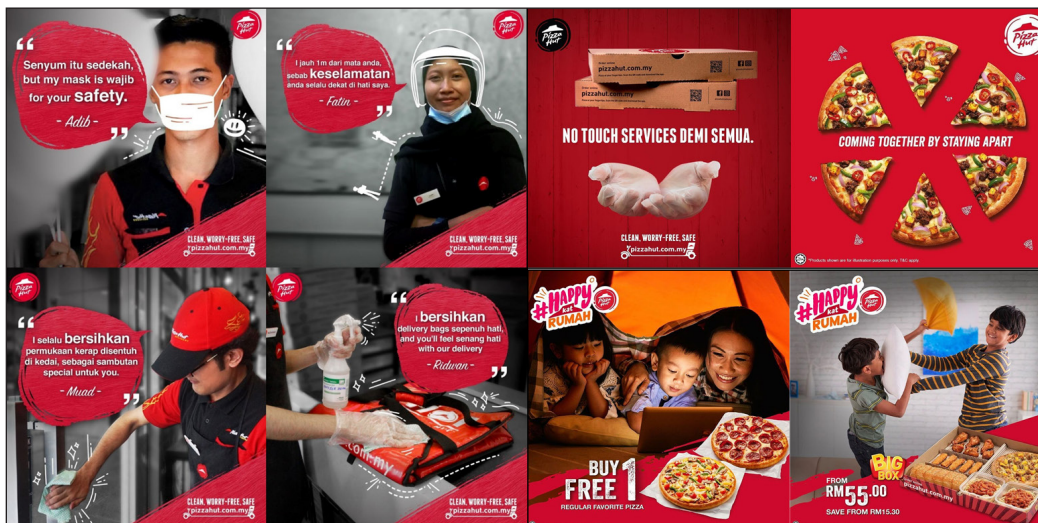


Figure 3. Choice of image and graphic patterns (Pizza Hut)

hands, while its symbolic meaning alludes to hospitality in rendering services in the new reality. The split pizza image, and the caption *Coming Together by Staying Apart* connote physical distancing. The third image set illustrated the excitement and fun of remaining at home and eating pizza, with one picture depicting children and their mother camping in the living room and the other showing youngsters joyously throwing pillows at each other. Both activities seem to correlate having pizza with happiness.

KFC posted vector images of ten standard operating procedures on March 18, 2020 (Figure 4). Vector graphics were easily sized and customised using computer software as creating ten advertisements using human models can be costly and time-consuming. All images came with captions underneath. Similarly, McDonald's one-week posts that comprised six advertisements related to COVID-19 were also computer generated (Figure 1). McDonald's captions needed to be read with the accompanying images.



Figure 4. Choice of image and graphic patterns (KFC)

‘#Kita boleh happy dengan famili’ caption was posted alongside the image of a Happy Meal set to suggest *We can be happy eating McDonald’s’ Happy Family set*. #Kita boleh video call je’ or *We can video call* was below the image of McDonald’s’ food on a tiled video conference screen which can be interpreted as the possibility of virtual dinners with family and friends. The **first-person point of view** ‘we’ repetition implies a relationship that involves the brand and its consumers.

KFC posts (other than those of the vector images) were written in uppercase letters (Figure 5). This marketing method is an attention-seeking device to attract readers. For example, the **typographical** feature STANDING TOGETHER TO SERVE THE NATION and white **emboldened typeface** against the red background shows a KFC rider at the centre, flanked by GrabFood and Foodpanda riders on the left with Pizza Hut and McDonald’s on the right facing. The riders are illustrated looking

over their shoulders at the KFC *abang* rider, who clenches his fist in the air, which exhibits an image of solidarity, camaraderie, and unity among food courier service riders. The background post is a Kuala Lumpur cityscape with the sun appearing at the horizon, symbolising hope in times of darkness.

Language Patterns

Pizza Hut’s advertisements featured text code mixed with English and Malay (Figure 3). Code-mixing is common in Malaysia’s multilingual and pluralistic society, whether in a formal (David, 2003) or informal context. This language form has also permeated media texts (Bukhari et al., 2015; Halim & Maros, 2014). Here, Adib was quoted saying, ‘**Senyum itu sedekah**, but my face mask is **wajib** for your safety’ to mean a smile is an act of charity but wearing a facemask is obligatory or ‘wajib’ in Islamic Fiqh (jurisprudence). *Sedekah* in Malay comes from the Arabic, *sadaqah* to mean an act of charity and the call to smile is based on an authentic *hadith* (a collection of Prophet Muhammad’s sayings and daily practices) narrated by Bukhari where the Prophet (S.A.W.) said, “Your smiling in the face of your brother is charity” (“What has been related about various kinds of ma’ruf”, n.d.) Charity is ‘sadaqah’ in Arabic or ‘sedekah’ in Malay. Fatin, the rider uses Malay except for the pronoun reference, ‘I’ to address herself in, ‘**I** jauh 1m dari mata anda, sebab keselamatan anda selalu dekat di hati saya’ (I stay 1m away from you for safety purposes, but



Figure 5. Choice of image (KFC)

you are close to my heart). Muad says, ‘**I** selalu bersihkan permukaan kerap disentuh di kedai, sebagai sambutan **special** untuk **you**’ (I always clean frequently touched surfaces at the store to welcome you). Using pronoun references, ‘I’ and ‘you’ are common among Malay speakers when speaking Malay (Othman, 2006). Words of stay safe, safety, ‘keselamatan’ (safety) and ‘bersihkan’ (clean) are in bigger fonts than the rest of the text to manifest the food chain’s commitment to adhering to hygienic practices. The exception is Sethulingam, who uses only English. His words are merely adaptations of viral signs by medical personnel on social media- *We stay at work for you. You stay at home for us.* The brand’s Instagram caption says *I come to work every day to make your favourite pizza, so you can stay at home.* The adapted lines maintain most of the original sentence structures and words but tune them to adapt

to the act of pizza making. McDonald’s, like Pizza Hut, also employs some code-mixing. McDonald’s’ *Happy* is used to replace ‘gembira’ in ‘Kita boleh **happy** dengan famili. Using ‘gembira’ is too formal in social media texts. In “Kita boleh **video call** je”, the *video call* replaces the lengthy and mouthful ‘membuat panggilan video’, simplifying the production of words.

KFC’s eleven posts on March 18 were written in dual languages, English and Malay (Figure 4 & 6). The English posts were placed on top with wordings in the brand’s iconic bright red. Below the English caption is the equivalent meaning in Malay written in black and in a smaller size. Advertising in dual languages accommodated a diverse range of consumers in Malaysia, both international and local. KFC’s global slogan, *Finger Lickin’ Good*, was not used in any posts. It is because it may be seen as unsanitary, especially during the COVID-19 pandemic situation. However, KFC chose to honour its trademark of ‘G-dropping’ (pronunciation of the weak ending **-ing** as /m/ rather than /ŋ/) in ‘**STILL FRYIN’**’.

In short, Pizza Hut and McDonald’s used code-mixing in their posts. According to Instagram users’ statistics in Malaysia in 2020, people aged 25-34 were the largest group of users. Overall, 75% of Instagram users are between the ages of 12-34 (“Instagram users in Malaysia,” 2020), and this group of people are very likely also the consumers of these brands. The use of memes to be humorous and language that evokes a sense of informality, relaxation and casualness in the texts show that they



Figure 6. Language patterns (KFC)

are aware of their brand consumers. On the other hand, KFC adopted a more formal approach which perhaps addresses a more diverse consumer background. KFC was the first fast-food restaurant in Malaysia, beginning its business in 1973 (Lim, 2008), and the earliest consumer age group would have been elderly consumers, likely in their 50–60s. Thus, the marketing language adopted is a more standard language form to include consumers of those in the senior citizens' category.

As shown in Table 1, we discovered that three brands followed the ongoing campaigns across the country by using certain hashtags to embrace the spirit of unity and togetherness in the fight against the COVID-19 global pandemic. Furthermore, in terms of the images and graphic patterns, the brands made their standard operating procedures (SOPs) public to prove their adherence to the rules and regulations in determining their roles and places as top QSR brands in Malaysia. Furthermore, code-mixing (English and Malay) can be employed in all three brands' posts.

DISCUSSION

This study examined how the top three QSR brands reacted to Malaysia's first MCO, which was enforced from March 18 to March 31, 2020. The overall takeaway that we can deduce from the visual impressions gathered over such a period can be explained in numerous ways. To begin with, the quantity of postings uploaded by the brands demonstrates their commitment to staying relevant in the industry. In addition, the

active role played by the brands via their Instagram accounts proves that they are strong and can stand the test of time.

The following discussion is based on Table 1. All three brands followed the ongoing campaigns across the country by using hashtags (#) to embrace the spirit of unity and togetherness in the fight against COVID-19. Veszelszki (2016) claims that hashtags can link social media users with comparable fields of interest, and those hashtags are frequently exploited as a device by social movements. Thus, to establish a sense of solidarity and togetherness that easily connects them to their consumers and to continue increasing brand awareness, hashtags were imbued with ideas linked to being safe and doing everything as a team.

In terms of the images and graphic patterns, the brands made their standard operating procedures (SOPs) public to prove their adherence to the rules and regulations in determining their roles and places as top QSR brands in Malaysia. By doing so, they demonstrated their brand's recognition and willingness to move along with the enforcement order implemented by the government. These ideas can be supported by a study by Burhan et al. (2021) that interviewed 16 owner-managers in the Pakistani hospitality industry. It was suggested that customers needed to be informed that the restaurant was following all government-mandated SOPs, which was an essential strategy to promote the products and services (Burhan et al., 2021). Besides, in the same study, all interviewees were aware that the permanence of their

Table 1
Table of comparison

| | Replication of hashtag signs | Choice of image and graphics patterns | Language patterns |
|-------------------|--|--|--|
| McDonald's | #KitaBoleh kongsi rezeki (We can share sustenance) | McDonald's captions needed to be read with the accompanying images (Figure 1) | Employment of code-mixing. |
| | #KitaBoleh memikul cabaran in bersama-sama (We can take this challenge together) | '#Kita boleh happy dengan famili' caption was posted alongside the image of a Happy Meal set to suggest <i>We can be happy eating McDonald's Happy Family set</i> (Figure 1) | Happy is used to replace 'gembira' in 'Kita boleh happy dengan family' (Figure 1). |
| | #KitaBoleh video call je (We can just video call) | '#Kita boleh video call je' or <i>We can video call</i> was below the image of McDonald's food on a tiled video conference screen which can be interpreted as the possibility of virtual dinners with family and friends (Figure 1). | Using 'gembira' is too formal in social media texts. In "Kita boleh video call je", the <i>video call</i> replaces the lengthy and mouthful 'membuat panggilan video', simplifying the production of words (Figure 1). |
| | #KitaBoleh berjuang bersama (if we cannot be near, we still can fight together) | | |
| KFC | #StaySafe | Vector images of ten standard operating procedures (Figure 4) | KFC use dual languages, English and Malay. |
| | | The image of the KFC abang rider (Figure 5). | The English posts were placed on top with wordings in the brand's iconic bright red. Below the English caption is the equivalent meaning in Malay written in black and in a smaller size (Figure 4). |
| | | | Advertising in dual languages was made to accommodate a diverse range of consumers in Malaysia, both international and local. |
| | | | KFC's global slogan <i>Finger Lickin' Good</i> was not used in any posts. It is because it may be seen as unsanitary, especially during the COVID-19 pandemic situation. |
| | | | However, KFC chose to honour its trademark of 'G-dropping' (pronunciation of the weak ending -ing as /ɪn/ rather than /ɪŋ/) in 'STILL FRVIN ' (Figure 6). |

Table 1 (continue)

| | Replication of hashtag signs | Choice of image and graphics patterns | Language patterns |
|-----------|------------------------------|--|---|
| Pizza Hut | #HappyKatRumah | Images of real employees of Pizza Hut and delivery riders at work abiding by the COVID-19 Preventive Measures (Figure 3) The split pizza image together with the caption <i>Coming Together by Staying Apart</i> (Figure 3) | Code-mixing of English and Malay ' Senyum itu sedekah but my face mask is wajib for your safety' means a smile is an act of charity, but wearing a facemask is obligatory or 'wajib' in Islamic Fiqh (jurisprudence) (Figure 3) Fatin, the rider uses Malay except for the pronoun reference, 'I' to address herself in, ' I jauh lm dari mata anda, sebab keselamatan anda selalu dekat di hati saya' (I stay lm away from you for safety purposes, but you are close to my heart) (Figure 3). Muad says, ' I selalu bersihkan permukaan kerap disentuh di kedai, sebagai sambutan special untuk you ' (I always clean frequently touched surfaces at the store to welcome you) (Figure 3). |

business depended on customers who would be convinced of the hygienic procedures in preparing and serving food (Burhan et al., 2021).

Notwithstanding the sizeable magnitude of the pandemic, no record of COVID-19 has been transmitted by food intake to date (Nakat & Bou-Mitri, 2021). This claim is probably true but obtaining customers' trust is of extreme importance, particularly when they have been bombarded with various information about the spread of COVID-19. At such a challenging time, maintaining employees' health and safety while assuring a high level of food safety and customers' confidence is critical (Nakat & Bou-Mitri, 2021). We can also conclude that following the SOPs could act as a marketing strategy to gain trust from the customers of the three fast-food restaurants studied and continue to position themselves positively, despite struggling with the COVID-19 outbreak. This result is reinforced by Burhan et al. (2021), which indicated that adherence to the SOPs was the cornerstone among several owner-managers to maintain effective marketing and promotional efforts during the COVID-19 crisis. As for the present study, the images also developed a dynamic engagement with the consumers by emphasising the first-person point of view in most captions. It strengthened the consumers' position in upholding their business journey to maintain a win-win partnership.

The employment of code-mixing (English and Malay) is present in all three brands' posts. Generally, the brands intertwined the languages (written in

formal and informal contexts) to signify the multicultural society in Malaysia. This strategy enhanced the consumers' sense of belonging and signifies how these international brands have been making efforts to localise their names and positions in the country. Furthermore, MCO 1.0 also coincided with the Muslim's fasting month, Ramadan, and this explains why some posts contained ideas related to Islam and its practices. Furthermore, because the consumers were not allowed to leave the house, the brands proved their sensitivity by uploading posts related to humorous ideas and providing delivery services to create a less stressful environment among the locked-down people, which can also be considered a wise strategy in manifesting the act of cooperation between the brands and the consumers. To conclude, the graphic and linguistic features included in the three QSR brands' Instagram advertisements prove that advertising is not static but evolves with changing environments, needs and policies.

CONCLUSION

The current research has explored the qualitative aspect, i.e., semiotic analysis (language and visual elements) of fast-food restaurant chain Instagram posts during the COVID-19 pandemic. Future studies can involve analysis of product positioning, corporate image, user-generated responses and user-to-user relationships of the advertisements. Other qualitative methodologies employed are thematic analysis, content analysis and sampling methods.

Instagram features (technological affordances) can also be analysed using quantitative data modelling and regression analysis. This type of analysis necessitates significant mathematical skills and a large amount of data. Analysis involving questionnaire methods can find out the relationship between the advertised product and the followers' personality traits and purchasing powers. Furthermore, future studies can also examine how Instagram users react to those advertisements, especially the fans of these fast-food outlets. In that way, the analysis is more impactful (and reciprocal) as it considers the customers' views of their favourite brands in terms of language use and hospitality that can contribute to the respective establishments, particularly the hospitality industry during the pandemic.

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Innovative Pedagogy and Improvement of Students' Knowledge Retention in Science Education: Learning Activity Package Instructional Approach

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ABSTRACT

Knowledge retention can be described as the ability of the students to assimilate available information during the learning process and recall/apply such knowledge obtained over time. Previously, students' active involvement in the teaching and learning processes through innovative pedagogies has enhanced their capacity for knowledge retention. This study, therefore, evaluated the potency of innovative pedagogy, the learning activity package (LAP), in fostering students' knowledge retention in science subjects in secondary schools, using gender as a moderating variable. The design was quasi-experimental. The sample was 208 class two students grouped into experimental and control groups exposed to LAP

and lecture methods, respectively. Data were obtained using the Chemistry Achievement and Retention Test and analyzed with mean, standard deviation, standard error, and the analysis of covariance, computed with SPSS. The findings revealed that the innovative pedagogy improved the students' knowledge retention in science more than the lecture method at $F_{(1,202)} = 45.72, p = .00, p < .05$. Besides, there was no interaction effect of method and gender on the students' retention of knowledge in science at $F_{(1,203)} = 2.47, p = .12, p > .05$. The implication is the avalanche of innovative science teachers

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who blend their instructional strategies to provide for the student's active participation in the teaching-learning processes for enhanced students' knowledge retention in science subjects. This research is novel because science teachers can easily adopt the LAP approach for effective lesson delivery, culminating in enhanced students' knowledge retention in secondary schools in developing nations.

Keywords: Active learning, developing nations, gender influence, innovative pedagogy, interactive learning, knowledge retention, learning activity package, science education students

INTRODUCTION

Science education entails teaching science concepts, teaching methods, and the various ways of addressing scientific misconceptions held by learners (Lee-Roy, 2012). Continuing, Lee-Roy emphasized the importance of science education in any nation's social and economic development. Chemistry education is a branch of science education concerned with the systematic processes of acquiring the fundamental knowledge of the universe to shape and reshape the world for the benefit of man (Emendu, 2014). Contributing to the definition of chemistry education, Stephen and Berhanu (2011) viewed education chemistry as a systematic inculcation of important cognition, skills, and disposition in the students that are required for the efficient and purposeful interplay in the surroundings for fixing existential issues within the society. Stephen and Berhanu reiterated further that the usefulness of education

chemistry in the socio-economic growth of nations cannot be over-emphasized.

Accordingly, chemistry education as part of science education is vital for national development. However, researchers have observed that students' knowledge retention in the subject is unimpressive in Nigeria (Ajayi & Ogbeba, 2017). The evidence is the poor academic performance in external examinations. Buttressing this, the West African Examination Council (WAEC, 2018) revealed that the standardized tests and evaluations conducted by the Council in the past decade have shown that students' performance in chemistry in the West African countries, including Nigeria, has been below the expected level. Therefore, several studies have been conducted to unravel the mysteries of the persistent students' poor academic performance in chemistry, specifically in Nigeria.

In one of the studies, Ajayi (2017) revealed that the students' low knowledge retention contributes to the persistently low levels of student academic performance in chemistry in senior secondary schools at the various public examinations in Nigeria. Ajayi based his conclusion on the fact that despite all the considerable efforts made by stakeholders at various levels in terms of engagement and motivating the teachers and provision of other facilities for learning, there was no appreciable improvement in the student's academic performance in chemistry over the years. Data in the West African Examination Council (WAEC) appraisal reports that the average percentage performance of the students in chemistry

was 44.44% between 2011 to 2017 (WAEC, 2018). These students' results were below the government's expected average performance of above 60% in science-related subjects (Federal Government of Nigeria [FGN], 2004). This current research focuses on fostering students' academic retention of knowledge in science subjects by utilizing innovative pedagogies which are student-centered. From the above submissions of previous research studies, it can be deduced that some of the efforts geared towards the improvement of student's academic performance in science subjects have been on the welfare of the teachers without incorporating the corresponding well-being of the students in the areas of the teachers utilizing innovative teaching strategies that can help to boost the students' retentive abilities and address their scientific misconceptions.

This current research expects that when the teachers and students are actively involved in proffering solutions to the problems of poor academic achievement, they might remarkably improve students' academic performance in science subjects in secondary schools in developing nations.

This study was structured according to the PJSSH format with the running title, title, abstract, and keywords. It was followed by the introduction in which previous research studies on the impact of active learning and innovative pedagogies on students' academic achievement and knowledge retention in science subjects were examined. The major variable in the study was knowledge retention, which is

the ability of students to retain learned concepts over time. Students' gender was a moderating variable. The interaction effect of method and gender on students' knowledge retention in chemistry was also examined. These were modeled into the research questions and corresponding null hypotheses that guided the study. The method and materials for the study were determined, and the results were collated. The study was concluded by discussing the findings and implications of the study. Finally, acknowledgments and references were listed.

Students' Academic Performance and Teaching of Science Subjects

A plethora of research studies showed persistent students' poor performance in external examinations in science subjects, specifically chemistry. For instance, Kurumeh et al. (2012) noted that the lingering poor performance of students in chemistry is attributable to the students' poor retention of knowledge of the learned concepts. Similarly, Ajayi and Ogbeba (2017) attributed the poor performance partly to the teachers' choice of instructional strategies that do not keep the students actively involved through hands-on and minds-on activities during lesson deliveries. Specifically, Udoh (2008) concluded that most teachers in developing nations use the conventional lecture method as their preferred instructional strategy. However, Wilson and Varma-Nelson (2016) disapproved of the utilization of the lecture method in science instructions and

opined that the lecture method, which is characterized by “talk-chalk mannerism,” is denoted as a teacher-centered approach, which might not be effective in the teaching of science subjects. Therefore, it is expected that any instructional strategy that provides for students’ activities in the learning processes will help the students to retain more knowledge of the concepts learned (Ajayi & Ogbeba, 2017; Udu, 2018a; Wilson & Varma-Nelson, 2016). These previous studies concluded that science subjects should be taught to students using active learning instructional strategies, which may help enhance their knowledge retention.

Meanwhile, Adegoke (2010) has identified the lecture method as economical in time and syllabus coverage. Furthermore, Adegoke deduced that the lecture method allows teaching large classes in African countries, including Nigeria, where large classes are a regular occurrence. However, Henderson et al. (2000) countered the claims of Adegoke. They emphasized that among the effective strategies for achieving better retention of knowledge by the students was the provision of student-centered and activity-oriented learning environments. These learning environments encourage students to participate actively in the class during the teaching-learning processes. In addition, research studies have shown that three levels of chemical representation—the macro, sub-micro and symbolic, are needed for students to understand chemical concepts (Gilbert & Treagust, 2009; Tan et al., 2009). These studies referred to the three levels of chemical representations as a triplet relationship, a key model for

chemical education. Illustrating further, Tan et al. (2019) noted that the macro-level seeks to represent phenomena/concepts as experienced with the senses, the sub-micro level seeks to support a qualitative explanation of those phenomena/concepts, and the symbolic level seeks to support a quantitative explanation of those phenomena/concepts. Therefore, it is expected that any innovative instructional strategy that exposes the students to link these three levels of chemical representation will enhance students’ understanding of chemical concepts that may help improve their academic performance in science subjects.

Previous research studies isolated and utilized several innovative instructional strategies centered on the students and were activity-oriented. They include cooperative learning, concept mapping, learning activity package, and many others (Udu, 2018a; Wilson & Varma-Nelson, 2016). These innovative pedagogies were found to promote active engagement of learners in hands-on and minds-on activities in the learning processes, which may culminate in improved students’ retention of knowledge in the subjects. Furthermore, some of these innovative strategies have the potential to aid the students in linking the three levels of chemical representation. This study, therefore, evaluated the effectiveness of the LAP instructional approach in assisting the students to link the three levels of chemical representation to improve their understanding of chemical concepts, thereby improving their knowledge retention in science subjects.

Concept of Learning Activity Package

Learning Activity Package (LAP), according to Duke (1975), is an innovative pedagogy that centers on the student's active engagement in learning activities in the classroom. In the LAP, the teacher serves as a facilitator of learning by guiding the students through a series of problem-solving activities. Duke maintained that in the LAP pedagogy, the students are expected to adhere to a logically sequenced pattern of problem-solving activities, which may assist them in accomplishing the goals of the learning experiences. Udu (2018a) emphasized that the learning activity package (LAP) pedagogy helps to foster the students' retention of knowledge in science subjects through active participation in the learning process.

Meanwhile, Arseneau et al. (1994) viewed the objectives of the learning activity package as achievable when the active learning materials are sequentially arranged, from the known to the unknown and in ascending levels of difficulty. Arseneau et al. note further that the LAP pedagogy is structured to enhance students' individualization of learning and help them master specific objectives from the general ones. Duke (1975) identified the characteristics of the Learning Activity Package as follows: LAP is a program of study in printed package form that covers a particular aspect of a subject; it follows a logical sequence of instructional objectives and activities for implementing the objectives; it gives the students freedom to proceed through the objectives and activities

at their own pace; learning materials are broken into small steps that are arranged sequentially from known to unknown and in increasing order of difficulty; it is structured for individualizing instruction that leads the students from the general idea to mastery of designated goals; it is designed to be used by a class as a whole, yet still provide for individual differences.

In addition, Ward and Williams (1976) highlighted the features of the Learning Activity Package to include: LAP has a general idea stating what is to be studied; specific skills to be achieved; a multimedia approach to practice and learn the skills; enrichment activities; series of three tests - test of prior knowledge, self-test, and a mastery test to determine the student's level of competence after completion of the package. Relating these features of LAP to the three levels of chemical representation in chemical education follows that the general idea, specific skills, and multimedia approach to practice and learn the skills help the students to understand the macroscopic level, while the enrichment activities and series of three tests help them to understand the submicroscopic and symbolic levels. The sub-micro and symbolic levels give a detailed premise to understanding the macroscopic level.

From the above submissions, the researchers assert that the learning activity package (LAP or package) is a good illustration of an active learning strategy rooted in the constructivists' learning approach. Zubeyde and Muhammed (2014) recognized LAP as a constructivists

instructional approach because of the active learning environment it provides, which may encourage students' active participation in learning activities. It helps enhance the student's knowledge retention abilities in the teaching-learning process. Zubeyde and Muhammed observed that a significant positive relationship exists between constructivist approaches to learning and students' academic retention. In constructivists' instruction, learners are trained to build mental images of what they learn rather than mere recipients of facts from their teachers.

Besides, Kirbulut and Gokalp (2014) opined that the learning principles of the learning activity package are deductions of the constructivists' instructional approaches, which are dependent on the assumption that the more opportunities for active learning for the students, the more the retention of knowledge. Ugur et al. (2017) underscore the constructivists' learning approaches to encourage students' active engagement in exploring knowledge by thinking, explaining the observed concepts, and extending their findings to real-world applications. These processes culminate in the acquisition of knowledge retention abilities by the students when motivated, guided, and evaluated by their teachers. In conclusion, Zubeyde and Muhammed (2014) accentuated that the learning activity package pedagogy, like other constructivists' instructional approaches, is self-instructional, student-paced, and student-directed, providing accountable learning and may ultimately improve the

students' retention of knowledge in the subject areas. It is on this backdrop that this present study is necessitated to apply the learning activity package pedagogy to a case study evaluation in a developing nation. Hopefully, the use of the learning activity package pedagogy, if effectively and consequentially applied in the learners' education, may assist in the educational development of the region.

Theoretical Foundation of LAP

The learning activity package innovative pedagogy is underpinned theoretically by the constructivist learning theory, specifically Dewey's theory of progressive learning and Kolb's experiential learning theory.

John Dewey propounded the theory of progressive learning in 1977. In theory, Dewey suggested the problem-solving approach to learning. He believed that for a child to learn, he should be subjected to a problem-situation, provided with necessary materials, and left alone to find the solution. In this type of learning, all the sense organs of the learner are involved in active interaction with the concept under study. The involvement of several sense organs in learning ensures meaningful and more permanent learning. Teaching science and chemistry, in particular using LAP, allows learners to interact with objects and phenomena for a better understanding, using the sense organs during the teaching-learning processes. Thus, the use of LAP in teaching science in secondary schools draws inspiration from Dewey's theory of progressive learning.

According to Dario et al. (2006), the experiential learning theory was propounded by Psychologist David Kolb. The theory emphasizes that students can create knowledge through the processes of an experience transformation. The learning theory describes the effects of experience, cognitive abilities, and learning environment on students' emotions in the learning processes. Accordingly, Kolb's model of experiential learning highlights that learners gain experience by forming concrete and conceptual ideas from reflective observations and active experimentation (Dario et al., 2006). The experiential learning model fits into the learning activity package pedagogical approach to science instructions. The LAP pedagogy helps students to build the capacity to acquire concrete experiences through active interaction with materials. Besides, these concrete experiences gained by the students are transformable through observation and active experimentation. Therefore, the learning activity package is modeled according to the experiential learning theory. In the process, the teachers are to facilitate the students' learning by steering them through actions that will enhance their abilities to gain concrete learning experiences.

Empirical Studies of LAP

Previous research studies have found the learning activity package effective in improving students' knowledge retention in science subjects. Specifically, Neboh (2012) conducted a study on the effect of

learning activity package (LAP) on male and female students' achievement in secondary school biology and found, among other things, that students exposed to the learning activity package pedagogy recorded higher retention of knowledge in biology than their counterparts taught with the lecture method.

Similarly, Abu (2001) conducted a study on the effectiveness of individualized and lecture instructional methods of teaching biology at the senior secondary level of education in Nigeria and concluded that the student's knowledge retention in biology was enhanced more with the learning activity package pedagogy than with the conventional (lecture) method. Furthermore, a study conducted by Udu (2018b) on the efficacies of cooperative learning instructional approach, learning activity package, and lecture method in enhancing students' academic retention in chemistry, found that students who were taught chemistry concepts with the learning activity package pedagogy had better retention of knowledge of the concepts learned more than their counterparts who were taught the same concepts in chemistry with the conventional (lecture) method.

Besides, the LAP pedagogy gives students freedom of choice and motivates them to operate within an organized framework (Arseneau et al., 1994). Arseneau et al. added that the learning activity package furnishes structures for the student's learning while providing for the differences in their learning rates. This case study research assessed the potency of the innovative learning activity package

pedagogy in fostering students' knowledge retention in science subjects in a developing nation, Nigeria.

Concept of Knowledge Retention

Ajit (2019) describes students' knowledge retention as assimilating available information during the learning processes and the ability to recall and apply the knowledge obtained from the learning process over time. Emphasizing further, Ajit noted the ease at which individuals tend to forget what they had learned and narrated that "after an hour, people hold only half of the information presented to them; after one day, people forget more than 70% of everything they have learned; and after a week, people forget 90% of the information on their learning session". Ajit, therefore, advises teachers to utilize innovative instructional strategies to stimulate multiple senses in the students, which may help them improve their knowledge retention abilities.

Besides, Kundu and Tutoo (2002) defined knowledge retention as a preservative factor of the mind that acquires materials of knowledge through sensation and perception. Kundu and Tutoo emphasized that the acquired materials in mind must be preserved in images to develop and retain knowledge. Paden and Dereskiwsky (2007) revealed that the low retention abilities of students could be a result of instructional strategies adopted by teachers. They maintained that the use of less effective instructional approaches in teaching science subjects could invariably translate to students' inability to retain the

knowledge acquired, which they could not put into practical reality. The inability to retain the concepts learned could prevent the students from solving real-life problems.

Therefore, to curb the low retention abilities of the students, there is a need to explore innovative approaches to instruction for effective teaching and easy assimilation of facts by students in the science subjects. These innovative pedagogies have been found to encourage the students to be fully involved in the teaching-learning processes through active participation in the learning activities and enhance the students' linking of the three levels of chemical representation for easy assimilation of chemical concepts. Moreover, active engagement in teaching/learning activities triggers students' abilities to remember learned concepts. It may enhance their capacity for knowledge retention and improve their academic performance in external examinations in the long run. Besides, the learning activity package pedagogy is an innovative instructional strategy that stimulates multiple senses in the students by helping them to link the triplet relationship of chemical representations.

Gender Influence and Students' Academic Retention in Science Subjects

Gender influence on students' knowledge retention has been a topical issue in education. However, there are conflicting research findings on this issue. For example, Bosede (2010) and Ezeudu (2013) found that gender significantly influences students' knowledge retention in science subjects.

Specifically, Ezeudu (2013) and Lawal (2009) found that female students performed better than their male counterparts when taught some concepts in physics and chemistry, respectively. Also, Agomuoh (2010) reported male students' higher knowledge retention in science subjects than their female counterparts. In contrast, Nzewi (2010) reported a non-significant influence of gender on students' knowledge retention in science subjects. These contradictory findings on gender influence on students' knowledge retention in science subjects also necessitated this study.

This study, therefore, evaluated the potency of LAP pedagogy in fostering students' retention of knowledge in science subjects using the lecture method as control and gender as a moderating variable.

RESEARCH QUESTIONS AND CORRESPONDING HYPOTHESES

Based on the outcomes of previous studies. The following research questions with corresponding hypotheses were formulated to guide the study:

R1. What is the effect of learning activity package pedagogy on students' knowledge retention in science subjects?

H₀1. There is no statistically significant effect of learning activity package pedagogy on students' knowledge retention in science subjects.

R2. Is there any difference in the male and female students' mean retention scores in science subjects taught with learning activity package pedagogy and the lecture method?

H₀2. There is no statistically significant difference in the male and female students' mean retention scores in science subjects taught with learning activity package pedagogy and the lecture method.

R3. Did the interaction of teaching method and students' gender affect the students' knowledge retention in science subjects?

H₀3. The interaction of teaching method and students' gender does not have any statistically significant effect on the student's knowledge retention in science subjects.

METHOD AND MATERIALS

Research Design and Population of the Study

This study adopted a pretest-posttest, non-randomized, control group, quasi-experimental design. The population for the study comprised 3,965 senior secondary school class two (SSS2) chemistry students in coeducational schools in the 2019/2020 academic session in a developing nation, Nigeria.

Sample and Sampling Techniques

A sample of 208 chemistry students, made up of 99 males (47%) and 109 females (53%), were selected from intact classes of six (6) secondary schools through convenience sampling and purposive sampling techniques (Creswell, 2009). The parameters adopted in selecting the sample schools used for the study were the availability of experienced chemistry

teachers who have taught chemistry for up to a decade and the schools that have participated in external examinations conducted by the West African Examination Council for at least a decade. Also, each class size was not more than 40 students, and allocation into class streams was gender-sensitive, representing a fair, reasonable, and equitable mixture of both gender in each class. The average age of the participants was 15 years. The schools were randomly assigned to experimental and control groups with three schools each. The experimental group consisted of 120 students (53 males and 67 females), and the control group contained 88 students (46 males and 42 females). The two groups were taught topics in chemistry using the learning activity package pedagogy and lecture method. The teaching was done by the regular chemistry teachers at the schools.

Instruments for Data Collection

The study used three instruments: the learning activity package manual (LAPM),

the chemistry achievement and retention test (CART), and the lecture lesson manual (LLM) for the control group. The LAPM instrument was an adaptation from the works of Ward and Williams (1976). It had the following seven components: the pre-testing, specific performance objectives, conception stage, performance activities, personal evaluation/testing self, mastering stage/post-testing stage, and opportunity for enrichment (Figure 1). The contents of the LAPM were from the senior secondary school chemistry curriculum for Nigerian students (FGN, 2004). The experimental and control groups were taught “carbon and its compounds” in organic chemistry. The essence of the learning activity package is to help students learn organic chemistry concepts by facilitating their understanding of the sub-microscopic and symbolic level explanations of the macroscopic level experiences of the procedures for determining the organic compounds. Students experience a certain chemical phenomenon at the macroscopic level and

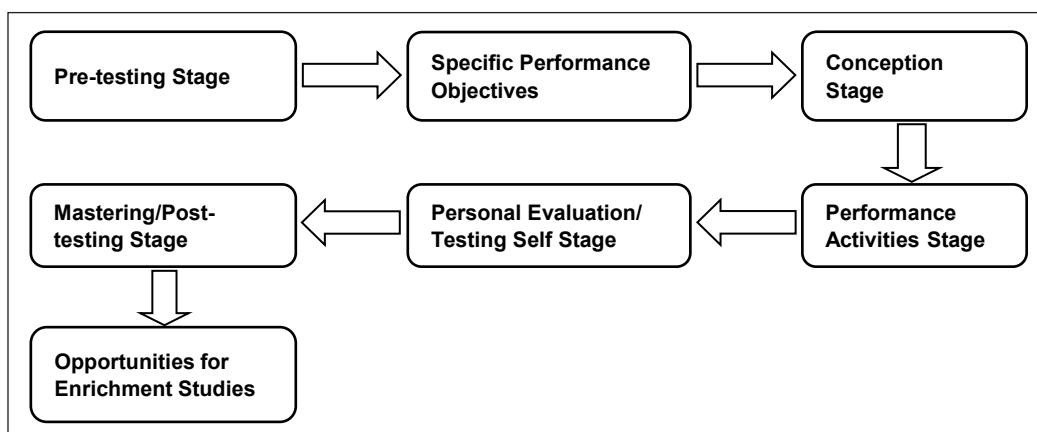


Figure 1. Flowchart of the learning activity package components pathway
Source: Udu (2018a)

learn the theory and reactions at the sub-microscopic and symbolic levels.

For example, in the teaching of the “structure and valency of carbon” using the LAP approach, the “pre-test,” “performance objectives,” “conception,” and the “enrichment opportunities” are the theoretical components that will expose the students to the macroscopic understanding of the “structure and valency of carbon.” In contrast, the “performance activities,” “self-test,” and “mastery test” are the components that will expose the students to the sub-microscopic and symbolic understanding of the “structure and valency of carbon.” The learning activities will help the students to gain a detailed understanding of the bonds, electron transfer, the distance and orientation between the carbon atoms, thereby enhancing their understanding of the structure and valency of carbon at the sub-micro and symbolic levels, which will subsequently enhance their understanding at the macroscopic level.

These may generally enhance the students' knowledge retention in organic chemistry. Meanwhile, the learning activity package was chosen for this study among other innovative pedagogies because of its proven potency and ease of application by not necessarily requiring electronic media. The implication is that the LAP utilization by teachers in rural areas with no or irregular supply of electricity is possible. Therefore, the teachers can utilize the LAP in the classrooms with ease. Also, with moderate training, the teachers can conveniently prepare and use the LAP.

The researchers developed the CART. It contained 20 multiple-choice questions. The content validity determination was through a table of specifications. The test construction was under three cognitive objectives of knowledge, recall, and application levels. (Knowledge 9 questions; Recall 6 questions; Application 5 questions). Each question had options A to D. One option was the correct answer, while the other three served as distracters. Item analysis was conducted on the CART's initial draft containing 25 questions. However, after the item analysis, 20 questions were valid and were used for the study. The test-item selection was on the recommendations of Bruce and Edward (2003) that “for any question to be selected, it should have a difficulty index of between .40 and .60, possess a positive item discrimination index of +.30 and above, and have a positive distracter index”. All the questions selected and used in this study met these criteria. Meanwhile, any correct answer was awarded two marks; hence, the minimum score was 0 while the maximum score was 40.

Validation and Reliability of the Instruments

Three test development experts from the department of science education of the researchers' institution validated the instruments. The experts validated the CART in language, wordings of the items, and others. Moreover, the experts vetted the specifications table to ensure the CART's content validation. Establishing the reliability of the CART was through

a pilot study conducted on 30 equivalent students in a different location twice. The initial test result was analyzed using Kuder-Richardson's formula-20 (KR_{20}), and an internal consistency reliability index of .90 was obtained. The test-retest method was adopted to determine the stability of the CART. The results were analyzed using Pearson's product-moment correlation, and a stability reliability index of .91 was obtained. These results indicated that the CART was internally consistent and stable for the study.

Experimental Procedure

The regular chemistry teachers of the sampled schools participated in the study. To maintain uniformity of teaching and minimize teacher differences, the researchers organized a training session for the teachers five days before the commencement of the experiment. The training was on the teachers' proper usage of the learning activity package in lesson delivery. The teachers were drilled by using the LAPM to teach students. These helped to identify lapses that might have arisen through improper use of the materials and were addressed immediately. However, the teachers of the control groups used the lecture method in their lesson deliveries.

The experiment commenced with a pre-testing of the two groups using the "pre-CART" for 50 minutes. Moreover, the results were collated. Then, the two groups taught "carbon and its compounds" with LAP and the lecture method. The entire experiments were completed in four (4) weeks. At the end of the four (4) weeks, the

students were subjected to another round of tests using the "post-CART." The students were given the post-post-CART (retention test) two weeks after the post-CART. The pre-CART and post-post-CART were the same sets of questions. However, the post-CART questions were different at face value because they were obtained by reshuffling/re-numbering the pre-CART. The results of the three (3) tests were collated and used for the data analyses.

Method of Data Analyses

Data collected were analyzed with the mean, standard deviation, standard error, and analysis of covariance (ANCOVA). The mean and standard deviation established the initial differences in the students' knowledge retention in the experimental and control groups. The one-way ANCOVA was used to establish the effect of the innovative pedagogy in improving the students' knowledge retention in the topics taught. The effect size of the treatment on knowledge retention was reported with the partial Eta squared. The calculations were done with the statistical package for social sciences (SPSS) software version 23. The alpha level for testing the hypotheses was .05.

Control of Extraneous Variables

The researchers tried to minimize the effects of extraneous variables, which would have affected the study's findings. For instance, the experimental and control groups were in different schools. These helped to eliminate subject interaction. Also, the initial training of the regular teachers may have assisted in

reducing the effect of teacher differences. Furthermore, the use of regular chemistry teachers minimized the Hawthorne effect. Finally, intact classes were used for the study to reduce the effect due to bias in the sample selection. The summary of the research method employed in this study is in Figure 2.

RESULTS AND DISCUSSIONS

The results were organized, presented, and discussed under the following sub-headings.

Effect of Learning Activity Package Pedagogy on Students' Retention of Knowledge

Tables 1 and 2 show the results of the descriptive statistics and analysis of

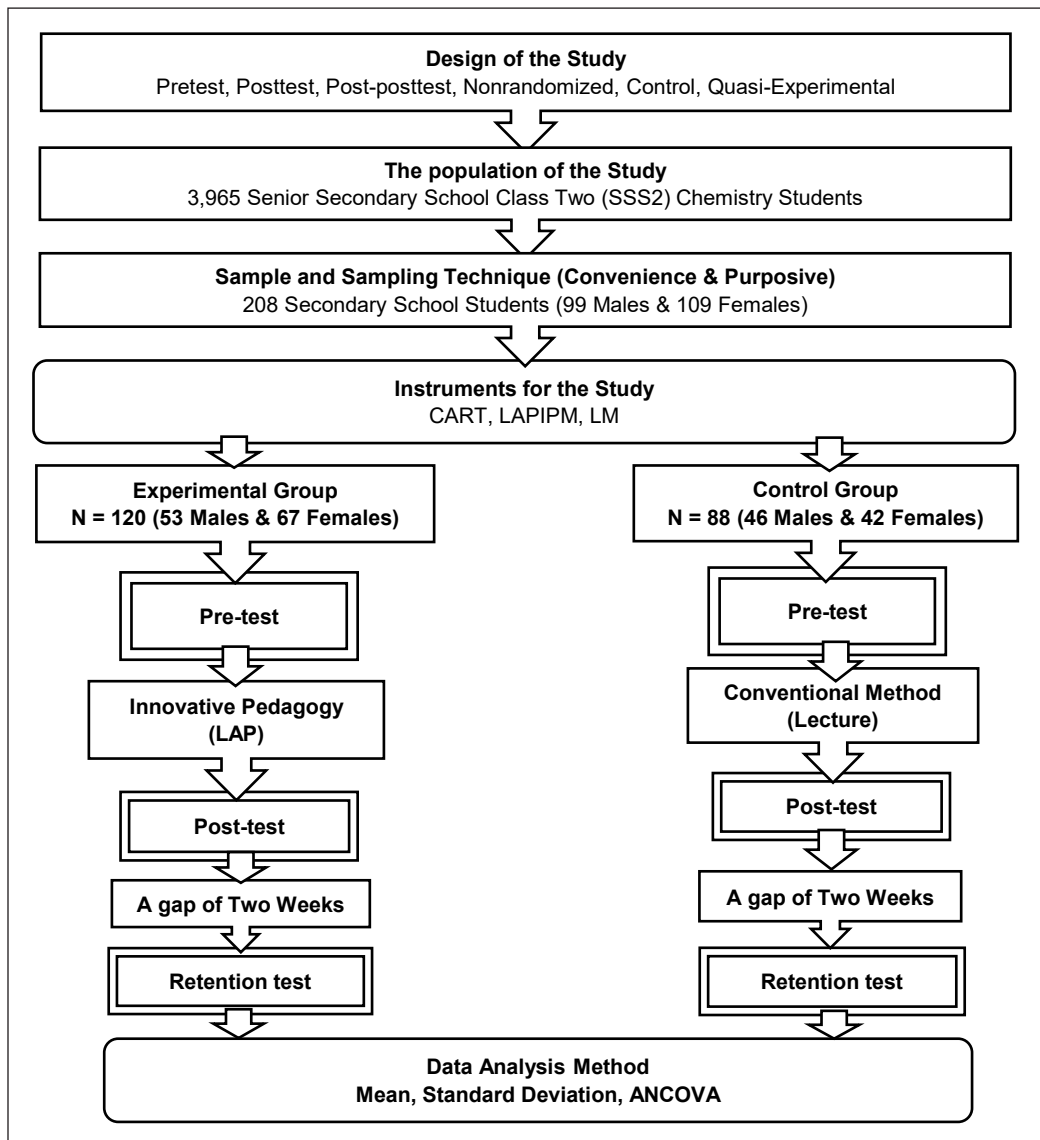


Figure 2. Flowchart presentation of the research method

Table 1
Unadjusted and covariate-adjusted descriptive statistics for students' knowledge retention

| Teaching methods (Treatment) | Pre-test | | | Post-test | | | | Retention test | | | |
|---------------------------------|----------|------|------|------------|------|----------|-----|----------------|------|----------|-----|
| | N | Mean | SD | Unadjusted | | Adjusted | | Unadjusted | | Adjusted | |
| | | | | Mean | SD | Mean | SE | Mean | SD | Mean | SE |
| Experimental (LAP) | 120 | 8.49 | 2.35 | 30.77 | 5.15 | 30.49 | .34 | 29.82 | 5.03 | 25.66 | .18 |
| Control (Lecture) | 88 | 7.86 | 2.22 | 20.05 | 2.97 | 20.42 | .39 | 17.61 | 2.97 | 23.28 | .22 |

Table 2
Summary of one-way analysis of covariance of the groups to determine the effect of the methods effects of tests of between-subjects

| Dependent Variable: Retention-test | | | | | | |
|------------------------------------|-------------------------|-----|-------------|--------|------|---------------------|
| Source | Type III Sum of Squares | Df | Mean Square | F | Sig. | Partial Eta Squared |
| Corrected Model | 10865.39 ^a | 5 | 2173.08 | 918.94 | .00 | .96 |
| Intercept | .23 | 1 | .23 | .10 | .76 | .00 |
| Posttest | 2212.59 | 1 | 2212.59 | 935.65 | .00 | .82 |
| Group | 108.11 | 1 | 108.11 | 45.72 | .00 | .19 |
| Error | 477.68 | 202 | 2.37 | | | |
| Total | 137768.00 | 208 | | | | |
| Corrected Total | 11343.08 | 207 | | | | |

Note: a. R Squared = .958 (Adjusted R Squared = .957)

covariance (ANCOVA) conducted on the chemistry achievement and retention test scores of the experimental and control groups. The results show that there was a significant difference ($F(1,202) = 45.72$, $p = .00 < .05$) between the unadjusted retention mean scores of the experimental group ($M = 29.82$, $SD = 5.03$) and the control group ($M = 17.61$, $SD 2.97$) with a mean difference of 12.21. The partial Eta Squared value of .19 indicates that the magnitude of the difference in the means (effect size) was small when compared with Cohen's guidelines (.2 – small effect, .5 – moderate effect, .8 – large effect). The results show that the experimental group taught with the Learning Activity Package had higher chemistry retention mean score

than the control group taught with the lecture method. Therefore, null hypothesis 1, which states that there is no statistically significant effect of learning activity package pedagogy on students' knowledge retention in science subjects, was rejected at a .05 alpha level. That means the main effect of the teaching method was statistically significant. The implication is that the innovative pedagogy (LAP) may have effectively improved the students' knowledge retention in science subjects (chemistry) more than the lecture method. This study has, therefore, found the learning activity package pedagogy to have effectively enhanced the students' retention of knowledge in science subjects (chemistry) within the given experimental conditions of this study. This finding gives

credence to previous research studies such as Abu (2001) and Neboh (2012). They found that the learning activity package enhances students' knowledge retention in biology more than the conventional (lecture) method. Supporting the finding further, Anderson et al. (2005) stated that innovative pedagogies involving active learning strategies foster the students' positive attitude toward learning by increasing their knowledge-based and exposing them to critical thinking and problem-solving abilities. Similarly, Paden and Dereskiwsky (2007) found that students' active involvement in the teaching and learning processes enhances their capacity for knowledge retention and improves their academic performance generally in science subjects.

Meanwhile, previous research studies have shown that teachers' engagement in constructivists' instructional approaches in their classrooms creates conducive learning environments for students' active participation in the teaching-learning processes. Hake (2002) observed that conducive learning environments encourage students to voluntarily engage in hands-on and mind-on activities that help to improve their academic achievement and retention of knowledge. In this study, the learning activity package pedagogy provided opportunities for the students to participate actively in the learning processes and link the triple relationship of macro, sub-micro, and symbolic levels of chemical representation, unlike the lecture approach. These might have contributed to the success of the LAP recorded over the conventional

(lecture) approach. Butressing the points further, Ugur et al. (2017) emphasized that constructivists' learning approaches encourage students' active engagement by exploring knowledge through thinking, explaining the observed concepts, and extending their findings to the real world under the guidance and evaluation of their teachers. These innovative instructional approaches enhance the overall students' academic achievement and retention of knowledge.

Students' Retention of Knowledge in Science Subjects by Group and Gender

Tables 3 and 4 show the descriptive statistics and analysis of covariance (ANCOVA) conducted on the chemistry achievement and retention test scores of the male and female students in the experimental and control groups. The results show that there is no statistically significant difference ($F(1,203) = .49, p = .49 > .05$) between the unadjusted retention mean scores of the experimental group, male ($M = 29.77, SD = 4.99$), and female ($M = 29.85, SD = 5.11$) and the control group, male ($M = 18.22, SD = 2.87$), and female ($M = 16.95, SD = 2.97$) with mean difference of $-.08$, and 1.27 respectively. Since the innovative pedagogy was more effective in enhancing students' knowledge retention, it can be deduced from the result that the student's knowledge retention in chemistry could be enhanced regardless of gender difference when taught with innovative pedagogy. The implication is that the effectiveness of the instructional strategy in improving

Table 3
Unadjusted and covariate-adjusted descriptive statistics for students' knowledge retention by group and gender

| Teaching methods (Treatment) | Gender | Pre-test | | | Post-test | | | | Retention test | | | |
|------------------------------|--------|----------|------|------|------------|------|----------|-----|----------------|------|----------|-----|
| | | N | Mean | SD | Unadjusted | | Adjusted | | Unadjusted | | Adjusted | |
| | | | | | Mean | SD | Mean | SE | Mean | SD | Mean | SE |
| Exptal (LAP) | Male | 53 | 8.91 | 2.53 | 30.60 | 5.34 | 29.88 | .51 | 29.77 | 4.99 | 25.74 | .24 |
| | Female | 67 | 8.16 | 2.16 | 30.90 | 5.03 | 30.96 | .45 | 29.85 | 5.11 | 25.55 | .22 |
| Control (Lecture) | Male | 46 | 8.78 | 1.81 | 20.96 | 2.66 | 20.37 | .54 | 18.22 | 2.87 | 23.08 | .26 |
| | Female | 42 | 6.86 | 2.22 | 19.05 | 3.00 | 20.50 | .59 | 16.95 | 2.97 | 23.58 | .30 |

Table 4
Summary of one-way analysis of covariance on the influence of gender and interaction effect of method and gender on students' retention of knowledge in science subjects

| Tests of Between-Subjects Effects | | | | | | | |
|------------------------------------|-------------------------|-----|-------------|---------|------|---------------------|--|
| Dependent Variable: Retention-test | | | | | | | |
| Source | Type III Sum of Squares | Df | Mean Square | F | Sig. | Partial Eta Squared | |
| Corrected Model | 10861.39 ^a | 4 | 2715.35 | 1144.34 | .00 | .96 | |
| Intercept | .50 | 1 | .50 | .21 | .65 | .00 | |
| Post-test | 3265.83 | 1 | 3265.83 | 1376.34 | .00 | .87 | |
| Group | 107.26 | 1 | 107.26 | 45.20 | .00 | .18 | |
| Gender | 1.15 | 1 | 1.15 | .49 | .49 | .00 | |
| Group * Gender | 5.87 | 1 | 5.87 | 2.47 | .12 | .01 | |
| Error | 481.69 | 203 | 2.37 | | | | |
| Total | 137768.00 | 208 | | | | | |
| Corrected Total | 11343.08 | 207 | | | | | |

Note: a. R Squared = 0.958 (Adjusted R Squared = 0.957)

the students' knowledge retention in the subject matter was not affected by gender. The finding of this study is in harmony with Neboh (2012), Nzewi (2010), and Oludipe (2012), who found separately that the male and female students' mean academic retention scores do not significantly differ when taught with innovative pedagogies.

On the contrary, Agomuoh (2010), Ajayi and Ogbeba (2017), Bosede (2010), Gipps (2004), and Lawal (2009), in their separate studies, established that a significant difference exists between the male and

female students' mean academic retention scores in science subjects. However, these contradictory findings for and against the influence of gender on students' retention of knowledge in science subjects have shown no consensus yet on the influence of gender on students' retention of knowledge in science subjects. Nevertheless, this present study has found no statistically significant gender influence on the students' knowledge retention in chemistry. Buttressing the finding further, Adegoke (2012) emphasized that active learning strategies such as the

learning activity package reduce gender disparity to the barest minimum in the students' knowledge retention. Adegoke added further that male and female students retain learned concepts more when exposed to the same learning environments that promote their active participation in learning.

Furthermore, Alam et al. (2021) reiterated that the teacher plays a significant role in encouraging female students to pursue STEM education using innovative instructional strategies that provide equal opportunities for male and female students to participate in the learning processes actively. Moreover, Swarat et al. (2012) maintained that knowledge retention is a function of students' interest in a subject matter, mostly derived from the effectiveness of the instructional strategies utilized in the lesson delivery. Therefore, this study has provided the basis for science teachers to embrace innovative pedagogies and be discouraged from using conventional teaching methods. It will help address any gender disparity that may arise in the student's academic achievement and knowledge retention in science subjects.

Effect of Method and Gender Interaction on the Students' Retention of Knowledge in Science Subjects

The results in Table 4 show that the effect of the teaching method and gender interaction was not statistically significant. It means that the interaction effect of method and gender on the students' knowledge retention was not statistically significant. This finding agrees with Adekoya and Olatoye (2011),

Ajayi and Ogbeba (2017), and Udu (2018b) that interaction of method and gender has no significant effect on the student's retention of knowledge in science subjects. It implies that there was no observed interaction effect of gender and treatment on students' mean retention scores taught using LAP and Lecture methods. Any interaction effect was not significant and may be due to error. It implies that the instructional strategies enhanced male and female students' knowledge retention in the subject matter. Furthermore, the study has shown that the instructional strategies utilized could enhance male and female students' knowledge retention abilities without recourse to their gender. Teachers should, therefore, be encouraged to utilize innovative instructional pedagogies such as the learning activity package in teaching-learning processes, as this study has established its effectiveness in enhancing students' knowledge retention abilities in science subjects in secondary schools.

CONCLUSION

Research studies have widely reported that students' poor knowledge retention could result in poor academic performance. Teachers' instructional strategies during lesson deliveries are partly responsible for the poor performance. This study has established that the student's knowledge retention in science subjects can be improved significantly when the teachers embrace innovative pedagogies such as the learning activity package in their lesson deliveries. This current research has provided evidence

to support that these innovative pedagogies can enhance students' learning abilities which could help to improve the retention of knowledge in the subjects. Therefore, the researchers implore the teachers to adjust their instructional strategies to accommodate regular use of innovative pedagogies that encourage active participation of the students in learning activities and help them link the triple relationship of macro, sub-micro, and symbolic representations of chemical concepts during the teaching-learning processes. It is because innovative pedagogies are student-centered and enable the teachers to create educational environments that encourage active learning and reduce gender disparity in the students' knowledge retention.

The implication is the avalanche of innovative science teachers who blend their instructional strategies to provide for the student's active participation in the teaching-learning processes and de-emphasize the use of conventional teaching approaches. Furthermore, the teachers need to restructure the lecture method to accommodate the learners' active engagement by providing learning activities that motivate them in the lessons. With this approach, the learning environment would shift from the current teacher-centered approach to the recommended student-centered approach. These will result in the improvement in the students' retentive abilities in the science subjects.

This research work is novel because science teachers have been exposed to a flexible, innovative approach to instructions (LAP) that can easily be adapted for effective

lesson delivery, culminating in enhanced students' knowledge retention in secondary schools in developing nations.

RECOMMENDATIONS

The researchers, therefore, recommend that the in-service science teachers should be encouraged by the school authorities and other stakeholders in education to regularly attend conferences, seminars, and workshops to enable them to learn different innovative instructional strategies and how to apply them in their lesson deliveries which will help to improve their effectiveness and culminate in improved students' knowledge retention in science subjects. Furthermore, the students should be encouraged to participate actively and engage in hands-on, active learning activities as part of the innovative instructional strategies that will help enhance their knowledge retention abilities in science subjects. Science teachers should also embrace student-centered and active learning pedagogies in their classroom teaching-learning processes since they effectively enhance students' knowledge retention abilities in science subjects. The science teachers should also restructure the popular lecture approach by making it activity-oriented to engage the students actively in the teaching-learning processes to enhance their academic achievement and knowledge retention in science subjects.

Further studies on this innovative pedagogy, with students' attitudes and interest in any other science subject, could be compared with the conventional lecture method.

LIMITATIONS OF THE STUDY

The instructional manuals and the achievement tests used in data collection in this study were not standardized, although they were valid and reliable. It could have affected the results of the study. Secondly, the students were not fully committed to the experiment because it was their first time engaging in such activities. Many distractions might have affected the outcome of the study. Furthermore, the use of regular chemistry teachers in the schools might have introduced teacher differences, and some of the teachers could have deviated from the stipulated guidelines, which might have affected the results of this study. Finally, the findings of this study could not be generalized because the number of sample schools used was limited.

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Assessing Lower Secondary School Students' Common Errors in Statistics

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ABSTRACT

Statistical literacy has been emphasised in the school mathematics curriculum, with the growing concern about students' ability to think critically in solving statistical problem-solving tasks. However, the current studies revealed that secondary school students' errors mainly involve the problem of basic concepts in statistics, data interpretation, and the selection of an appropriate representation of data. Therefore, this study aimed to analyse the common errors made by students in solving statistics tasks with multi-level complexity. A survey method was applied in this study. The sample of this study consisted of 356 Form One (Grade 7) students from eight secondary schools. The instrument of this study consisted of five superitem tasks, which represented the five content domains: line graph, bar graph, pie chart, dot plot, and histogram. There are four levels of items in each superitem task. Thus, the total number of items is 20. The format of all the 20 items in the five superitem tasks is open-ended. The common errors were then analysed based on all the participants' solutions shown in their answer script. The findings found that most students could not achieve the highest level of statistical competency. They failed to think qualitatively while justifying data. This study provides a meaningful analysis that assists the teaching and learning of statistics to better link numeracy and literacy. The application of the superitem tasks provides valuable information that enables the teachers to understand their students' statistical processes better.

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INTRODUCTION

Statistics involves collecting, interpreting, analysing, and making inferences about the data (Idehen, 2020). Many daily life activities require understanding statistical

data to make decisions related to health, such as the COVID-19 pandemic statistical data, finance, employment, sport, and advertisement. Hence, the need to develop statistical literacy has been emphasised in the school mathematics curriculum, with the growing concern about the student's ability to think critically and creatively in solving statistical problem-solving tasks (Thongoon et al., 2021). The National Council of Teachers of Mathematics (NCTM, 2020) draws attention to the increasing importance of middle school students' statistical literacy. NCTM (2020) suggested that the students are expected to formulate research questions, design a study, collect the data, use appropriate graphical representation, understand and discuss the data sets, and develop inferences and predictions based on the data.

Similarly, the Malaysian lower secondary school, namely Form One (grade seventh) students (13 years old), are also expected to learn data representation and interpretation in the context of complex routine problem-solving. Meanwhile, in Form Two, they learn and apply the concept of central tendency in the context of non-routine problem-solving (Kementerian Pendidikan Malaysia, 2015, 2016). The non-routine problem solving requires some creativity and does not have a definite answer or solution. It can be solved with multiple strategies.

Even though the ability to solve statistical problem-solving tasks is important, literature findings show that the solution of statistical tasks has not been as

expected. It was raised by Idehen (2020) and Saidi and Siew (2019) that errors faced mainly by secondary school students involve the problem of basic concepts in statistics, data interpretation, and the selection of appropriate representation. Chan et al. (2016), Foo (2017), as well as Saidi and Siew (2019) found that the learning of statistical concepts among Malaysian students is unlikely to be achieved. Most of them harbour misconceptions and difficulties in learning various topics in statistics (Ibnatul et al., 2021). Saidi and Siew (2019) revealed that most Malaysian secondary school students have a low understanding of measures of central tendency properties and a very low understanding of the problem and data representation. The finding indicates that the students did not understand the mode concept and were confused with mean, mode, and median. As a result, they made various errors and faced problems in (i) applying the measures of central tendency when the data was in quantitative or qualitative form and (ii) choosing which type of measure of central tendency was the best representative for the given data.

Similar errors have also been documented in elementary and undergraduate school students (Ibnatul et al., 2021; Lynch et al., 2000). Angateeah (2017) and Reaburn (2011) claimed that students' errors in solving mathematics tasks are caused by many reasons, namely misunderstanding of concepts, carelessness of calculation, and wrong application of operation or formula. As a result, mathematical error problems have become a great concern to teachers,

students, parents, and policymakers. However, most of the previous studies focused more on the student's achievement and failure in certain statistical topics alone without informing the reasons for failure in answering the tasks. Even though there are a few studies (Fitriyah et al., 2020; Idehen, 2020; Sari & Bernard, 2020) that focused on the investigation of students' common errors in statistics, the errors were analysed based on the solutions shown by students in solving a particular problem-solving task, either through paper-and-pencil tests or interviews.

Some limitations have been identified in these existing studies. First, the application of the interview method only involved a small sample, and it was very time-consuming to analyse the errors. Second, none of the previous studies provided detailed information about the errors made by the students while solving multi-level complexity tasks. A mathematical problem-solving task normally requires multiple solutions steps to achieve the answer. It challenges the students' conceptual understanding and procedural skills. Thus, detailed information is needed to inform the teachers and students about the various errors in solving the task from the basic level to the highest level. The students who can easily detect their weaknesses at the basic level will increase the possibility of responding correctly at a higher task level. Based on these limitations, this study aimed to analyse the common errors made by students in solving statistical tasks with a multi-level of complexity.

Objectives

The objectives of the study were as follows:

1. To develop the statistical tasks with a multi-level of complexity based on the cognitive development model, namely the SOLO model.
2. To analyse the common errors in solving the statistical tasks based on Newman's Error Analysis.

LITERATURE REVIEW

One of the common models used to analyse mathematical errors is Newman's Error Analysis (Newman, 1983). Newman's error analysis provides five stages of analysis of the mathematical mistakes made by students. According to Newman, when students solve a standard mathematical word problem, they must pass through five stages of consecutive hurdles, namely reading, comprehension, transformation, process skill, and encoding. Newman believed that failure at any stage would prevent the students from getting accurate solutions.

Students often cannot read the mathematical task correctly or the important information incorrectly at the reading stage. At the comprehension stage, students show that they do not understand the task or may not understand the specific terms in the task. Students cannot transfer the task to the appropriate mathematical strategy or model at the transformation stage. They fail to select the appropriate mathematical operation or model to represent the data, such as a graph or chart. Although the correct mathematical strategy and data representation have been appropriately selected at the process skill

stage, the calculation and the solution steps are inaccurate or missing. Students often cannot write acceptable and complete responses at the encoding stage. As a result, they cannot write and express ideas logically and critically. This study applied this model to identify the students' common errors in solving statistical tasks with multi-level items.

Newman's Error Analysis was used to identify and analyse the students' mathematical word problems. For instance, Chin and Lim (2018) and Fitriani et al. (2018) described the students' errors in solving algebraic tasks. Furthermore, Fitriani et al. (2018) analysed the students' errors while solving the derivative of function problem. Data were collected through problem-solving tests and interviews of senior high school students (Grade 11) in Bandung. The results showed that students made five types of errors in solving the problem of derivatives of algebraic functions which were comprehension error, transformation error, process skill error, an encoding error, and careless error.

Haryanti et al. (2019) identified the students' errors in solving the word problems with plane geometry. 23 grade 7 students from a Junior High School in Subang, Indonesia, were interviewed. The results showed that most students made mistakes in transforming the word problem related to plane geometry into a mathematical model—formulas and illustrations with pictures. The ability to calculate operations was the most common error in the student's answers. Meanwhile, Khalo and Bayaga

(2015) identified the errors committed by learners in financial mathematics and why the learners continued to make such errors. There were 105 Grade 10 mathematical literacy learners involved. The structured interview questionnaire was used for collecting the data. The content and correlation analysis revealed that learners tend to forget to read the instructions and round off incorrectly. However, to date, no research on providing detailed information about the errors made by students while solving multi-level complexity tasks has been reported in the literature.

In the process of developing the assessment framework and instrument, the information processing theory developed by Craik and Lockhart (1972) was implemented. This theory emphasises the importance of deep processing information, which leads to a greater understanding of the concept learned. It believes that deep information processing contributes to a better understanding of the concept and academic achievement. The learners need to have the ability to solve the surface-level items before progressing to the deep-level items (Smith & Colby, 2007). Hence, the assessment should include a balance of surface and deep-level items. The SOLO (Structure of the Observed Learning Outcome) model is the established and famous model ensuring the assessment covers surface and deep level items. It plays an important role as an assessment model that values the balance of surface and deep processing (Hattie & Brown, 2004; Huan & Melissa, 2018). The development

of the assessment tasks in this study was based on the SOLO model and the idea of a superitem format. The SOLO model was developed by Biggs and Collis (1982). This model emphasises the concept of cumulative cognitive dimension and latent hierarchy. The rationale for using this combination is to produce more user-friendly and practicable tasks that can easily diagnose and identify student errors at each level. The format of the superitem task consists of two components. The stem is the first component. It represents the scenario or problem in paragraph form. The second component consists of the four-level items representing the SOLO model's four main levels.

The assessment framework's content domains and statistical processes, the lower secondary school (grade seven) mathematics curriculum were referred to. The five content domains involved were line graph, bar graph, pie chart, dot plot, and histogram. In addition, four statistical processes were identified, representing the main cognitive processes when engaging the data handling: understanding the data provided, calculating and comparing the value of data, representing the data into various types, and making inferences and predictions. The middle school curriculum covers these statistical processes in most countries (Thong-oon et al., 2021; Van de Walle et al., 2014). These four statistical processes were assessed across four levels of cognitive development based on the SOLO model: uni-structural, multi-structural, relational, and extended abstract. It means that four levels of items had been developed

in each task to assess the statistical processes hierarchically. For example, the item can be easily responded to at the uni-structural level by identifying single information provided in the task's stem.

For instance, the pie chart states the number of students who go to school by car. The item can be responded to at the multi-structural level by referring to more or all the information in the stem. It may even involve some basic mathematical skills to respond. For instance, the student compares the values supplied in the pie chart to identify the highest number. The item can be responded to at the relational level by relating all the relevant aspects of data and converting or representing the data in the appropriate graphical form. For instance, the students construct the pie chart based on the information in the table. At the highest level, the students must infer and predict through analytic and logical thinking based on their existing knowledge.

In short, students' ability to respond correctly at a certain item level indicated their statistical ability. Therefore, the errors were analysed based on Newman's Error Analysis when the students were stuck at a certain level and unable to achieve the higher levels.

METHODOLOGY

A survey method was applied in this study. The sample of this study consisted of 356 Form One (Grade 7) students from eight secondary schools in Penang State, Malaysia. The sample was selected from the high, middle, and low-performance

classes to ensure that the findings represent the population's standard performance. In addition, their latest school-based mathematics test results were used to determine the student's performance levels. The instrument of this study consisted of five superitem tasks, which represented the five content domains: line graph, bar graph, pie chart, dot plot, and histogram. The content domains were based on the main learning standard of the data handling topic in the Malaysian Secondary School Form One Mathematics KSSM Standard-Based Curriculum, namely, constructing the data representation, including bar charts, pie charts, line graphs, dot plots, stem and leaf plot and histogram (Kementerian Pendidikan Malaysia, 2015).

There were four level of items in each superitem task. Thus, the total number of items is 20. The format of all the 20 items in the five superitem tasks is open-ended. The development of the superitem tasks involved three main phases:

(i) develop the assessment framework. The Malaysian Secondary School Form One Mathematics KSSM Standard-Based Curriculum (Kementerian Pendidikan Malaysia, 2015) and the features of SOLO levels were the main sources for identifying the statistical processes across the topic's content. Four statistical processes had been determined: understanding the data provided, calculating and comparing the value of data, representing the data into various types, and making inferences and predictions;

(ii) developing five superitem tasks based on the assessment framework. Based on the example of the superitem task (Appendix 1), only a value in the diagram needs to be referred to respond at the first level of the item. For instance, identify the number of students enrolled in the year 2016 to give the correct response. At the second level of the item, two or more values in the diagram need to be referred to identify the range. For instance, identify the number of students enrolled in 2015 and 2019, then calculate the difference between them. At the third level of the item, all the values shown in the diagram need to be analysed and converted into a new graphical form. Finally, prediction and logical reasoning are required based on the new data representation at the last level of the item. Table 1 shows the content domain of five superitem tasks based on the SOLO model.

(iii) the content-based validity evidence had been determined by five experts in their area of specialisation, namely the experienced Form One mathematics teachers and mathematics education lecturers. The Item-CVI (I-CVI) and Scale-level CVI (S-CVI) were determined to quantify the judgment data. The result of I-CVI was between 0.8 to 1.0, indicating that all the items were within the acceptable range (Polit et al., 2007). The S-CVI was 0.93, indicating that the superitem tasks were also within the acceptable range of S-CVI. The construct-based validity

Table 1

The content domain of five superitem tasks based on the SOLO model

| Superitem | Unistructural (reading the data) | Multistructural (reading between the data) | Relational (representing data) | Extended abstract (reading beyond the data) |
|-----------|--|--|--|---|
| 1 | Refer to a single value of the diagram to give a response | find the difference between the two values. | Represent the information into a line graph | Make a prediction and provide a logical reason based on the existing knowledge and the information in the stem |
| 2 | | find the value in percentage | Represent the information in a bar chart | |
| 3 | | find the highest value | Represent the information into a pie chart | |
| 4 | | find the total value. | Represent the information into a dot plot | |
| 5 | | find the value in percentage. | Represent the information in a histogram | |

evidence was also determined based on the Principles of Rasch Model, namely the unidimensionality, item fit, item polarity, and reliability separation indices. Based on the findings, the newly developed assessment tool had fulfilled the four main components stated in the Rasch Model analysis.

Appendix 1 shows an example of a line graph superitem task developed in this study. The students were given one hour and thirty minutes to answer the five superitem tasks. The students were required to show all their solutions in the space provided. The collected data were analysed using both quantitative and qualitative approaches. The quantitative data were analysed for the instrument's descriptive analysis, reliability, and validity. The focus of this paper was to discuss the common errors in solving statistical problem-solving tasks in depth. Therefore, more emphasis was placed on the qualitative data analysis. The common errors were then analysed based on all the participants' solutions shown in their answer

script. First, the student's responses were evaluated using the scoring scheme.

All the possible responses were determined, and the scores were allocated for each item level in all the tasks based on rationality. For instance, 0 and 1 scores were allocated for the simplest level of the item, namely the uni-structural level, because the correct response only requires the identification of a value from the data provided. Therefore, no score was given for the incorrect response, and 1 score was given for a correct response. In addition, there were 0, 1, and 2 scores were allocated for the second level of the item (multi-structural), and 0, 1, 2, and 3 scores were allocated for the third and highest level of an item, which involved the data representation and development of inference and prediction.

Two mathematics experts validated the scoring procedure to ensure the appropriateness of the score assigned to each level of items. The experts were asked to rate the appropriateness of the scores on a 5-point scale (1 = Not appropriate, 2

= Less appropriate, 3 = Appropriate, 4 = Quite appropriate, 5 = Very appropriate). A simple per cent agreement approach was used to capture the consensus of the experts. The consensus between the two raters is considered as reached if the two raters come to an exact agreement by giving the same rate during the validation process. For each pair of experts, the simple per cent agreement was calculated by dividing the total number of exact agreements among each pair of experts by the total number of items rated by the experts (Stemler & Tsai, 2008). The simple per cent agreement among each pair of experts was 100 per cent (>70 %) and was accepted for this study (Graham et al., 2012).

FINDINGS

This study identified four stages of errors: comprehension, transformation, process skill, and encoding errors. Since the items were developed in the same hierarchical manner for each superitem task, the errors

were analysed and interpreted according to the levels: uni-structural, multi-structural, relational, and extended abstracts.

Table 2 shows the common error analysis for uni-structural level items. The uni-structural level items were the easiest. The students only need to read and refer to relevant information from the diagram to give their responses. Almost all the students could respond correctly to the items except for superitem 3 (35% of students answered incorrectly) and superitem 4 (10% of students answered incorrectly). For superitem 3, the error was identified at the process skill stage. For example, some students could state 55, but the unit of thousand was missing. For superitem 4, errors were detected at the comprehension stage. For example, students did not understand the stem-and-leaf plot. They counted the number of digits at the leaf for the stem '4' and answered '6' or chose the last digit of the leaf and gave the answer '9'.

Table 2
Common error analysis for uni-structural level items

| No | Content of item | Types of error | | Total number of students who answered incorrectly (n=256) | Percentage (%) |
|--------------|--|--|--|---|----------------|
| | | Comprehension | Process skill | | |
| Superitem 3a | How many Myvi cars were sold in 2017? | | Ignored the unit of thousand. Respondents stated 55. | 124 | 35 |
| Superitem 4a | How many athletes weighed 46 kilograms (kg)? | Did not understand the stem-and-leaf plot. Examples: Counted the frequency of the leaf. Chose the last digit, namely 9 | | 34 | 10 |

Table 3 shows the common error analysis for multi-structural level items. For the multi-structural level, the students need to refer to more or all information in the stem, then: (i) apply the mathematical concept and skills to calculate the total value, differences, or percentage; or (ii) compare the values given.

Errors were detected at the process skill stage for Superitem 1 (7% of students provided partially correct and incorrect answers). The students could apply the operation appropriately to find the difference in the number of students enrolled, but they erroneously read the figures from the bar graph. For Superitem 2 and Superitem 5, errors were identified at the transformation and process skill stages. In other words, 22% of students gave partially correct and incorrect answers in Superitem 2, and 42% of students answered partially correct and incorrect in Superitem 5. Figure 1 shows that the students used addition operation instead of multiplication to calculate the percentage in Superitem 5. They merely totalled up the frequency of students to make up a percentage value.

The students could not apply the appropriate mathematical strategy for calculating percentages at the transformation stage. Similarly, Figure 2 shows that the students calculated the mean by summing up the number of students who used different types of transport to school and applied an inappropriate strategy to find the percentage value in Superitem 2. Meanwhile, at the process skill stage, although the students could correctly represent the mathematical

strategy, they made mistakes in calculating the percentage or reading the figures from the pie chart or table. Figure 3 shows that the students could apply the appropriate formula to calculate the percentage for Superitem 2 but made a mistake in the solution steps. For Superitem 3 (3% of the students who provided partially correct and incorrect answers), the student failed to understand or misunderstand the term 'the highest number' of cars sold. As a result, they computed the total number of cars sold.

Superitem 4, errors could be detected at the comprehension stage (14% of the students offered partially correct and incorrect answers). The students did not understand the stem-and-leaf plot. The item requires the total number of athletes, but the students calculated and totalled up the weight of each athlete (refer to Figure 4). Some of them totalled up the weight and multiplied it by 2.

Table 4 shows the analysis of common errors for the relational level items. Students represented the data inappropriately at the transformation stage for the relational level. They failed to master the concept of various forms of data representation. For instance, for Superitem 1, they did not understand the concept of the line graph. Hence, they converted the graph into various forms, especially bar graphs (refer to Figure 5) (41% of the students answered partially correct and incorrect). For Superitem 2, the students did not understand the concept of a bar graph. Therefore, they converted it into different forms of data representation, especially line graphs, bar

Table 3
Common error analysis for multi-structural level items

| No | Content of item | Types of error | | | Total number of students who answered partially correct (n=256) | Total number of students who answered incorrectly (n=256) | Percentage (%) |
|--------------|---|---|--|---|---|---|----------------|
| | | Comprehension | Transformation | Process skill | | | |
| Superitem 1b | Find the difference in the number of students enrolled in 2015 and 2019 | | | The operation applied was appropriate, but the students erroneously read the figure from the bar graph. | 21 | 5 | 7 |
| Superitem 2b | Find the percentage of the students who cycle to school | | Unable to transform the problem to the correct mathematics strategy, namely unable to select the appropriate mathematical operation to find the percentage. For example: i. $100-10=90\%$ ii. $3/100 \times 360= 120\%$ iii. $30/100 \times 3=0.9\%$ iv. $3/3 \times 10=10\%$ v. $30/100 \times 7=2.1\%$ vi. $30-10=20\%$ vii. $3/30=10\%$ viii. $7/30 \times 360=84\%$ ix. $3+8+10+7+2=30\%$ x. $3/100 \times 80=2.4\%$ xi. $3/30 \times 360=36\%$ xii. $3/24 \times 100=12.5\%$ xiii. $3/130 \times 100=10\%$ xiv. $3/30-3/30=27/30\%$ xv. $100/30 \times 2=6\%$ | Made a mistake in calculating the percentage or mistake in reading the figure from the pie chart, for example: i. $3/30 \times 100 =3\%$ ii. $3/30 \times 100=0.3\%$ iii. $3/30 \times 100=0.1\%$ iv. $3/30 \times 100=30\%$ v. $8/30 \times 100=10\%$ vi. $7/30 \times 100=23.3\%$ | 16 | 63 | 22 |
| Superitem 3b | Which type of car shows the highest number of cars sold in 2017? | Computed the total number of cars sold. | | | 3 | 8 | 3 |

Table 3 (continue)

| No | Content of item | Types of error | | | Total number of students who answered partially correct (n=256) | Total number of students who answered incorrectly (n=256) | Percentage (%) |
|--------------|---|--|---|--|---|---|----------------|
| | | Comprehension | Transformation | Process skill | | | |
| Superitem 4b | What is the total number of athletes in the school? | Did not understand the stem-and-leaf plot. Examples: i. Total the weight of each athlete. ii. $46 + 46 + 48 + \dots = 494$ iii. Total the weight times 2. $494 \times 2 = 988$ | | | 2 | 45 | 14 |
| Superitem 5b | Calculate the percentage of students who spent less than 30 hours for their individual study. | | Unable to transform the problem into the correct mathematics strategy. For example: i. $31/100 \times 35 = 10.85\%$ ii. $31 \times 35/100 = 10.85\%$ iii. $3 + 8 + 12 + 7 + 4 = 34\%$ iv. $31/34 = 91\%$ v. $31/100 \times 360 = 111\%$ vi. $35/360 \times 100 = 9\%$ | Made a mistake in calculating the percentage or mistake in reading the figure from the table. For example: $31/35 \times 100 = 25.6\%$ $21/35 \times 100 = 60\%$ $30/35 \times 100 = 85.7\%$ $31/35 \times 100 = 23\%$ $23/35 \times 100 = 65.71\%$ $8/35 \times 100 = 2.28\%$ | 63 | 86 | 42 |

$$4 + 7 + 12 + 8 = 31 \%$$

Figure 1. Example of solution for 5b

$$7 + 2 + 3 + 8 + 10 = 30$$

$$\frac{30}{100} \times 7 = 2.1 \%$$

Figure 2. Example of solution 2b

$$\frac{3}{100} = 3 \%$$

Figure 3. Example of solution 2b

What is the total number of athletes in the school?

$$46 + 46 + 48 + 48 + 48 + 49 = 285$$

$$50 + 52 + 52 + 52 + 54 + 54 + 56 + 56 + 58 + 58 = 542$$

$$60 + 62 = 122$$

$$285 + 542 + 122 = 949$$

Figure 4. Example of solution 4b

graphs, histograms, and tables (46% of the students answered partially correct and incorrect). Figure 6 shows that the students converted the pie chart into a table instead of a vertical bar chart.

For Superitem 4, the students did not understand the concept of the dot plot. They converted it into a line graph or created their forms of data representation (refer to Figure 7) (85% of the students answered partially correct and incorrect). For Superitem 5, the students did not understand the concept of a histogram (71% of the students answered partially correct and incorrect). They converted it into different forms of data representation, such as a bar graph, line graph, and table (refer to Figures 8, 9, and 10). Besides, the students also made errors at the process skill stage. Although they could represent the data appropriately, the axis was labelled incorrectly, the x-axis and y-axis were not labelled, the scale was incorrect, there was no line for the axis, and they failed to label the values on the axis. These similar errors appeared in Superitems 1, 2, 4, and

5. For Superitem 3, although the students could construct the pie chart, they did not label the values. Apart from that, the value of angles and the calculation of angles were also inaccurate.

Table 5 analyses common errors for the extended abstract level items. For this highest level of the item, most students could not give a complete answer. They

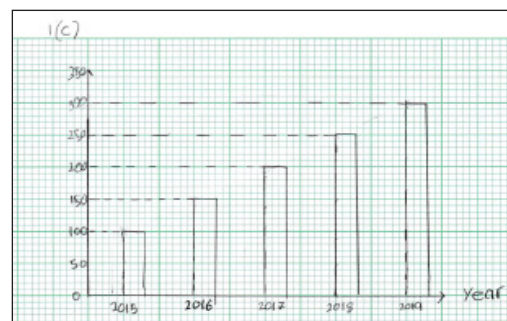


Figure 5. Example of solution for 1c

2.

| Transportation | Car | School Bus | Bicycle | Motor cycle | walk |
|-------------------|-----|------------|---------|-------------|------|
| Number of student | 8 | 10 | 3 | 7 | 2 |

Figure 6. Example of solution 2c

Table 4
Common error analysis for relational level items

| No | Content | Transformation | Process skill | Total number of students who answered partially correctly (n=256) | Total number of students who answered incorrectly (n=256) | Percentage (%) |
|--------------|--|--|---|---|---|----------------|
| Superitem 1c | Convert the bar chart into a line graph | Did not understand the concept of a line graph. They have converted it into various forms of graphs. For example: i. horizontal bar graph ii. vertical bar graph iii. join graph (bar + line) iv. other forms of data representation | Able to construct the line graph but: i. did not label the axis ii. the x-axis was not labelled correctly iii. the x-axis was not labelled iv. the scale was not correct v. no line for the axis vi. did not label the values on the axis | 38 | 107 | 41 |
| Superitem 2c | Convert the pie chart into a vertical bar chart. | Did not understand the concept of a bar chart. They represented the data inappropriately; converted it into various forms of graphs and charts. For example: i. line graph ii. horizontal bar graph iii. histogram iv. table | Able to construct the bar graph but: i. no label for the axis ii. the scale of the y-axis was incorrect iii. labelled the values incorrectly on the axis. iv. no axis. | 114 | 51 | 46 |
| Superitem 3c | Construct a pie chart to represent the data given. | | Able to construct the pie chart but: i. did not label the value ii. the value of angles was inaccurate. iii. the calculation of angle was inaccurate. | 197 | 125 | 90 |
| Superitem 4c | Convert the stem-and-leaf plot into a dot plot | Did not understand the concept of a dot plot. i. They converted it to a line graph. ii. created their forms of data representation | Able to construct the dot plot but: i. did not label for the axis. ii. scale was incorrect iii. x-axis was incorrect | 193 | 109 | 85 |

Table 4 (continue)

| No | Content | Transformation | Process skill | Total number of students who answered partially correctly (n=256) | Total number of students who answered incorrectly (n=256) | Percentage (%) |
|--------------|---|--|---|---|---|----------------|
| Superitem 5c | Construct a histogram to represent the data given in the table. | Did not represent the data appropriately. They converted it to various forms of graphs and charts. For example: i. bar graph ii. line graph iii. table iv. joint graph (line + bar) | Able to construct the histogram but: i. no label for the x-axis and y-axis ii. no space from the beginning iii. the x-axis and y-axis were mixed up iv. placed the time on the y-axis and frequency on the x-axis | 107 | 146 | 71 |

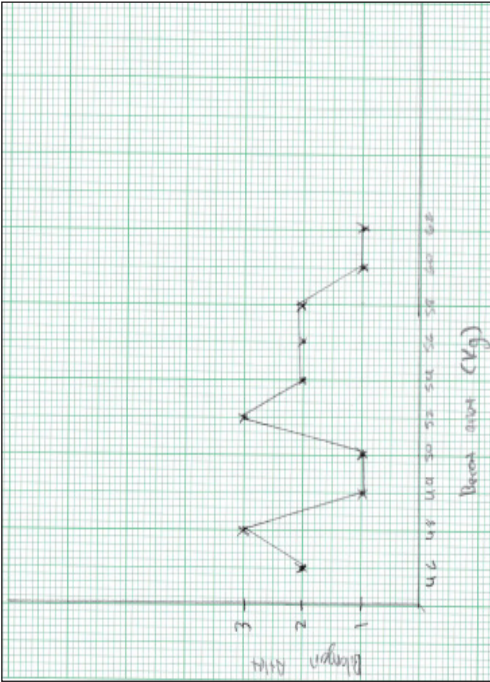


Figure 7. Example of solution 4c

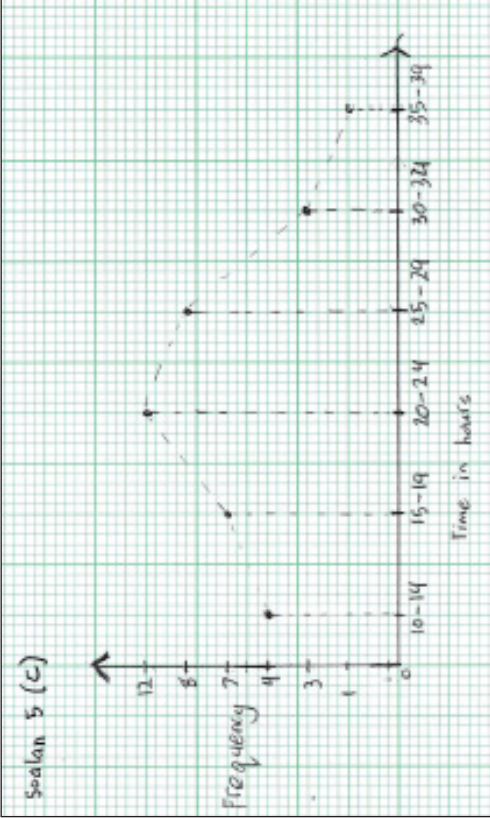


Figure 8. Example of solution 5c

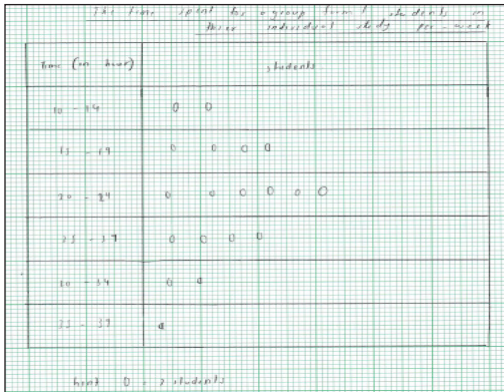


Figure 9. Example of solution 5c

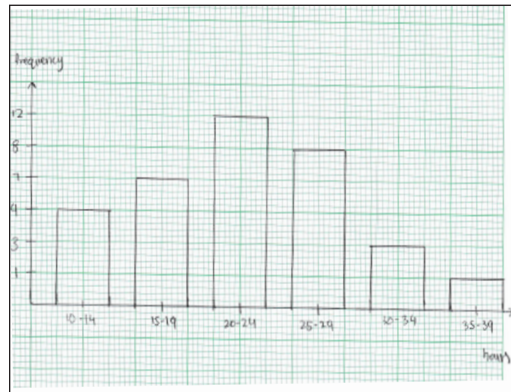


Figure 10. Example of solution 5c

failed to provide a reason or solid reason for their suggestions and opinions. The reasons provided were superficial and incomplete. They did not show their critical analysis and logical thinking of the contexts. Some students even gave responses based on their imagination without reflecting on the contexts. Figures 11 and 12 show the general reasons given by the students for Superitem 1. The students were expected to state the

constant of linear patterns identified from their line graph. Figures 13 and 14 show that the students could not apply logical thinking to express their justification based on the contexts. Figure 15 shows the students only stated the types of sports without providing their reasons. Meanwhile, Figure 16 shows the students' failure to provide logical reasons by relating them to the context.

Can you extend your line of graph to predict the enrolment for year 2020? Give a reason.

Yes, because the students every year increase.

Figure 11. Example of solution for 1d

Can you extend your line of graph to predict the enrolment for year 2020? Give a reason.

Yes, it is because the enrolment for year 2020 will be more than 2019.

Figure 12. Example of solution 1d

There is different quantity of cars sold for the four Perodua models. Give your reason.

Yes, because the data show the different thousands of cars sold in 2017.

Figure 13. Example of solution 3d

Time spent in the individual study is the main factor for success in academic achievement. Do you agree? Explain your answer.

Yes, this is because studying makes you clever and understand the.

Figure 14. Example of solution 4d

What type of sport are normally involved by athletes whose weight more than 54 kg? Give your reason.

Weight lifting.

Figure 15. Example of solution 5d

Some people concluded that the school must be located in town. Do you agree with this opinion? Give a reason.

Yes I agree. It is because there has a bus school.

Figure 16. Example of solution 2d

Table 5
Common error analysis for extended abstract level items

| No | Content | Process skill | Encoding | Total number of students who answered partially correctly (n=256) | Total number of students who answered incorrectly (n=256) | Percentage (%) |
|--------------|---|---|--|---|---|----------------|
| Superitem 1d | Predict the enrolment for the year 2020. Give a reason. | Did not extend the line graph to show the prediction. | Did not show the statistical reasoning by applying the mathematics concept to support the explanation. Did not make the connection between the prediction and the line graph. The reasons were inaccurate and incomplete. For example: i. add 50 ii. it is linear iii. it is a straight line iv. increasing v. more students will enrol in the year vi. they are more people vii. the number of registered students will be the same every year. viii. because it is the same | 233 | 83 | 89 |
| | Give an opinion of the trend and justify it. | | The reason did not show their critical analysis and logical thinking. Give reason based on their imagination without reflecting on the contexts. The reason was superficial and incomplete. For example: i. it is good ii. more people live in town iii. a lot of rich men iv. town is modern v. has many people vi. school in a town with traffic jam vii. the village has no school viii. prefer using public transport in town ix. most of them use the bus x. because most of them use cars, buses, and motorcycles to school xi. because 83% of students use the vehicle to school xii. because 83% of students use the vehicle to school | 252 | 95 | 97 |
| Superitem 2d | | | | | | |

Table 5 (continue)

| No | Content | Process skill | Encoding | Total number of students who answered partially correctly (n=256) | Total number of students who answered incorrectly (n=256) | Percentage (%) |
|---------------|---|---------------|---|---|---|----------------|
| Supertitem 3d | There is a different quantity of cars sold for the four Perodua models. Give your reason | | xiii. majority going to school by bus xiv. has school bus xv. there are many facilities xvi. more people take buses and cars compared with others xvii. students use many kinds of transport | 70 | 267 | 94 |
| | | | The reason did not show their logical thinking. The reason given was not linked to the context shown. Give a brief reason for the best-selling car whereas the question required the reason about the different quantity of car sold. The reason was superficial and incomplete. For example: i. Axia is the cheapest ii. Axia is cheap iii. The best car iv. Different taste v. The price of the car is different vi. Each model has different features vii. Axia saves petrol viii. The demand for different brands was different | | | |
| Supertitem 4d | What type of sport normally involves athletes whose weight is more than 54kg? Give your reason. | | Did not provide the reason. The reason given was not linked to the context shown. The reason was superficial and incomplete. For example: i. Wrestling because they are strong ii. Shot put because more stamina needed iii. Weightlifting because need more energy | 167 | 77 | 69 |
| Supertitem 5d | Time spent in individual study is the main factor for success in academic achievement. Do you agree? Explain your answer. | | Failure to provide reasons. The reason given was not linked to the context shown. The reason was superficial and incomplete. For example: i. More knowledge you know ii. The grade is important to us iii. We can succeed in academic iv. We need to do a revision v. Study can make you clever vi. Study can get you to discipline | 255 | 47 | 85 |

DISCUSSION

This study analysed the students' errors in solving statistical superitem tasks. As stated in Newman's error analysis, the result showed four stages of common errors: comprehension, transformation, process skill, and encoding. The students achieved the reading stage successfully. This stage only involved basic statistical skills as the students were expected to read the data and information provided. The results of this study were consistent with previous studies conducted by Erna and Budi (2016) and Fitriani et al. (2018). They argued that the other four stages of errors are students' most common errors in solving mathematical tasks.

The students made the least errors in solving uni-structural level items except for Superitems 3 and 4. The lack of understanding of the data representation form was an error made by the students. Even though they showed their ability to read the problem, they failed to understand the data highlighted in the task. In Superitem 4, although the item is very simple, namely identifying the number of athletes who weigh 46 kilograms (kg) by referring directly to the stem-and-leaf plot shown, some students showed their inability to identify what was required by the task. They had difficulty referring to the correct information from the stem-and-leaf plot to respond correctly (Fitriani et al., 2018; Wijaya et al., 2014).

Almost all the students responded correctly to the multi-structural level items in Superitems 1 and 3. They were

required to find the difference between two values and identify the highest number, respectively. However, the students had difficulties calculating the mean values in Superitems 2 and 5. As a result, they made obvious errors in the transformation and process skills stages. The students generally made mistakes in carrying out the operations. For instance, while calculating the mean value, they failed to select the appropriate mathematical operation to get the mean value. Furthermore, they tended to use addition, subtraction, and division rather than multiplication. As a result, they made transformation errors in these items. Although some students could select the appropriate operation in calculating the mean value, the process skill errors hindered them from arriving at the correct responses. This problem is similar to previous studies, which revealed that the students had difficulties interpreting the data, especially in carrying out the appropriate operation to determine the mean value (Ozmen et al., 2020; Yun et al., 2016). This finding was also supported by Idehen (2020) and Ishaku and Idris (2017). They noticed that the main factor influencing this problem was the lack of understanding of the basic concept of statistics, namely central tendency. It was also categorised as a mechanical error whereby the students were always trained to follow the formula without understanding the underlying principle.

Most of the students showed their inability to represent the data in a histogram, dot plot, and pie chart, namely 71%, 85%, and 90%, respectively of the students failed to gain a full score for the relational level

items. In addition, they made transformation and process skill errors when they failed to represent the data with histograms, dot plots, and pie charts. Meanwhile, 41% and 46% of students failed to accurately represent the data with line and bar graphs, respectively. Ozmen et al. (2020) and Yayla and Ozsevgec (2015) claimed that the students normally have lower success in constructing graphs than in reading and interpreting the graphs. It might be because the students were not given enough time to practise in the classroom.

Although all forms of data representation were highlighted in the mathematics curriculum, the students performed more successfully constructing bar and line graphs. Watson (2006) stated that the students frequently encountered both types of graphs in their books and mass media. Thus, they were more familiar with the graphs and managed to display them correctly. Similarly, Capraro et al. (2005) and García-García and Dolores-Flores (2021) also found that most students constructed the graph they were familiar with or were their favourite. Yun et al. (2016) found that the students' successes depended on the different representation forms. They might perform better in constructing the bar and line graphs but were unsuccessful in the histogram and dot plot. This result might stem from the confusion about the various forms of data representation. The histogram and bar graphs were the most prominent confusion in this study.

On the other hand, some students could construct the graph correctly, but they made process skills errors. For instance, they did

not label the axis and its scales correctly. Yun et al. (2016) revealed that the students saw the construction of the graph as the final product of learning the topic with little idea of its interpretability. As a result, they always faced problems interpreting and analysing their graphs. Friel et al. (2001) and Idehen (2020) drew attention to these types of errors in their study. They stated that the main factor causing these errors was insufficient statistical knowledge related to naming the scale and axis. Scaling was found as the most serious problem faced by the students.

More than 80% of students could not provide complete responses for all the extended abstract level items except for Superitem 4 (69%). The encoding errors were made due to their inability to justify and make conclusions about their responses. The most influential factor is their low level of reasoning and creativity ability. The level of 'read beyond the data' is the most challenging item as they were asked to make predictions, inferences, and justify the situation. Students depended on their thought to make the justification without focusing on the context of the task. Watson (2006) claimed that the students preferred to give brief and general reasons based on the informal criteria. According to Fitriani et al. (2018), this problem occurred due to the students' thinking that the most important thing they need to show their mathematical competencies is correctly getting the answer in value. They were unfamiliar with writing and expressing their justifications and logical ideas based on the data.

Meanwhile, Ozmen et al. (2020) stated that the statistical learning environment less encourages the students to develop this high level of statistical skills. Similarly, Bragdon et al. (2019) also highlighted these issues. They claimed that this failure resulted from insufficient activities encouraging students to think critically and creatively about statistics in real-life contexts.

CONCLUSION

Based on the findings of this study, it is obvious that the students made statistical errors, including misunderstandings, misconceptions, and carelessness. This problem could lead to more complex difficulties when they learn advanced levels of mathematics. Therefore, teachers must address and highlight the errors during the teaching and learning of statistics to prevent them from becoming more critical and complicated.

Newman's error analysis has helped the teachers and students with detailed information about the common statistical errors. As a result, teachers can develop a more effective teaching approach focusing on a more profound understanding of the statistics concepts. Without the proper understanding of the concepts, it is difficult for the students to generalise, predict and make inferences to solve the statistics problem (Sari & Bernard, 2020). Moreover, this study provides a meaningful analysis that assists the teaching and learning of statistics to create a better link between numeracy and literacy.

The application of multi-level tasks provides valuable information that enables

the teachers to understand better their students' statistical processes in terms of understanding the data provided, calculating and comparing the value of data, representing the data in various forms, and making inferences and predictions. More importantly, it also allows the teachers to easily detect the students' common errors at various complexity of the items in a hierarchical manner (Nasser & Lian, 2021). This information is very useful for the teachers in providing informative and specific feedback to improve students' learning process. In addition, this information will also provide opportunities for the students to reflect on their progress and identify errors and weaknesses that need to be improved. Newman's analysis provides various errors that can lead them to achieve the highest statistical and cognitive processes required.

The SOLO model has the advantage of having a hierarchical cognitive development. Therefore, it is appropriate to be applied in developing a variety of valid and reliable diagnostics assessment frameworks and instruments, not only for mathematics but also for other areas of education. Besides, the result of this study demonstrates that this model can systematically distinguish errors based on the surface or deep level of understanding. Therefore, it is especially beneficial for teachers and students to acquire early information on what needs to be addressed and improved to grasp a particular topic. Furthermore, since this study demonstrated the effectiveness of using the SOLO model to predict common error patterns, the use of this model in error

analysis can be replicated in other fields of study.

Although the findings of this study could not be applied to generalise the students' common errors in statistics, it serves as an important reference in planning and setting the teaching and learning strategies that would minimise the students' errors in statistics. For the instruction of these topics to reach their full potential, there is a pressing need to develop teaching and learning strategies that focus on the four statistical processes highlighted in the framework and build the connection between all these content domains.

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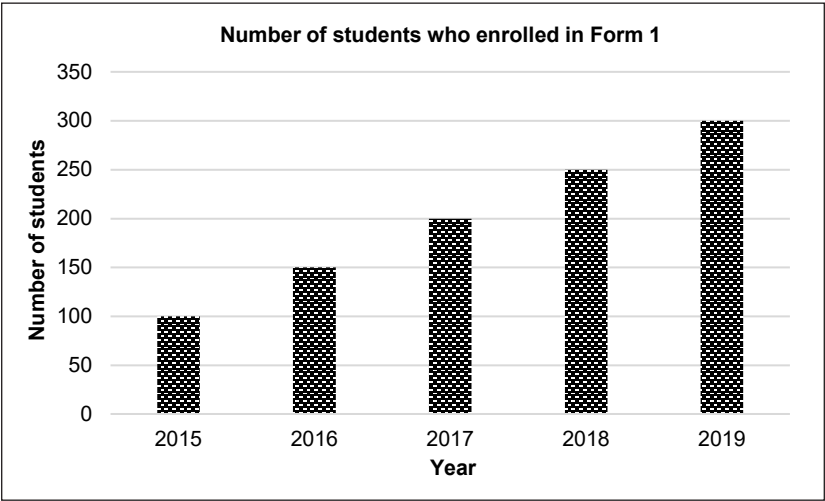
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APPENDIX

Appendix 1

The following bar chart shows the number of students who enrolled in Form One in SMK Sungai Pasir within five years.



- (a) How many students enrolled in the year 2016?
- (b) Find the difference in the number of students enrolled in 2015 and 2019.
- (c) Convert the bar chart into a line graph.
- (d) Can you extend your line graph to predict the enrolment for the year 2020? Give a reason.

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| LMU | – Landmark University |
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| NIH | – National Institutes of Health Malaysia |
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| Riphah | – Riphah International University |
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| SNU | – Shiv Nadar University |
| State Museum | – The State Museum of Fine Arts of the Republic of Tatarstan |
| SU | – Sohar University |
| TNI | – Thai-Nichi Institute of Technology |
| UGA | – University of Georgia |
| UIN Surabaya | – Universitas Islam Negeri Sunan Ampel Surabaya |
| UIS | – University of Stavanger |
| UiTM | – Universiti Teknologi MARA |
| UKM | – Universiti Kebangsaan Malaysia |
| UM | – Universiti Malaya |
| UMK | – Universiti Malaysia Kelantan |

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INSTRUCTIONS TO AUTHORS

(REGULAR ISSUE)

(Manuscript Preparation & Submission Guide)

Revised: December 2020

Please read the *Pertanika* guidelines and follow these instructions carefully. The Chief Executive Editor reserves the right to return manuscripts that are not prepared in accordance with these guidelines.

MANUSCRIPT PREPARATION Manuscript Types

Pertanika accepts submission of mainly 4 types of manuscripts

- that have not been published elsewhere (including proceedings)
- that are not currently being submitted to other journals

1. Regular article

Regular article is a full-length original empirical investigation, consisting of introduction, methods, results, and discussion. Original research work should present new and significant findings that contribute to the advancement of the research area. *Analysis and Discussion* must be supported with relevant references.

Size: Generally, each manuscript is **not to exceed 6000 words** (excluding the abstract, references, tables, and/or figures), a maximum of **80 references**, and **an abstract of less than 250 words**.

2. Review article

A review article reports a critical evaluation of materials about current research that has already been published by organising, integrating, and evaluating previously published materials. It summarises the status of knowledge and outlines future directions of research within the journal scope. A review article should aim to provide systemic overviews, evaluations, and interpretations of research in a given field. Re-analyses as meta-analysis and systemic reviews are encouraged.

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Each article should be timely and brief. It is suitable for the publication of significant technical advances and maybe used to:

- (a) reports new developments, significant advances and novel aspects of experimental and theoretical methods and techniques which are relevant for scientific investigations within the journal scope;
- (b) reports/discuss on significant matters of policy and perspective related to the science of the journal, including 'personal' commentary;
- (c) disseminates information and data on topical events of significant scientific and/or social interest within the scope of the journal.

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Pertanika emphasises on the linguistic accuracy of every manuscript published. Articles can be written in **English** or **Bahasa Malaysia** and they must be competently written and presented in clear and concise grammatical English/Bahasa Malaysia. Contributors are strongly advised to have the manuscript checked by a colleague with ample experience in writing English manuscripts or a competent English language editor. For articles in Bahasa Malaysia, **the title, abstract, and keywords should be written in both English and Bahasa Malaysia**.

Author(s) **may be required to provide a certificate** confirming that their manuscripts have been adequately edited. **All editing costs must be borne by the authors.**

Linguistically hopeless manuscripts will be rejected straightaway (e.g., when the language is so poor that one cannot be sure of what the authors are really trying to say). This process, taken by authors before submission, will greatly facilitate reviewing, and thus, publication.

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Example (page 2):

The Mediating Role of Cognitive Emotion Regulation Strategies in the Development of Social Behavior among Adolescents

Samsilah Roslan^{1*}, Noorhayati Zakaria², Siaw Yan-Li³ and Noorlila Ahmad¹

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Introduction

Methods

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And

Discussions

Conclusions

Acknowledgements

References

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