

Factors Influencing ESL Learners' Behavioural Intention in Using Edmodo: An SEM Approach

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ABSTRACT

This study examines factors influencing ESL learners' behavioural intention in using Edmodo, a social learning network, as a virtual learning community platform under the Unified Theory of Acceptance and Use Technology (UTAUT) model with gender as the moderator variable. A total of 200 English language learners from one of the public universities completed a five-point Likert questionnaire based on the UTAUT constructs: performance expectancy, effort expectancy, social influence, and facilitating conditions. The collected data were analysed using the structural equation modelling (SEM), and the results showed that facilitating conditions were the major predictor of learners' behavioural intention. Besides, the learners' gender had a significant moderation effect on social

influence and behavioural intention. The findings of this study have the potential to enable English language educators to take into account the importance of the UTAUT factors and gender differences while developing an engaging and active virtual learning community.

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INTRODUCTION

The novel coronavirus (COVID-19) has significantly affected the education sector, and educators and learners were placed in a position where they had to adapt to remote learning. Online education has been imposed from preschool to higher education in many countries. However, it should be highlighted that not everyone has the privilege of joining live-streaming classes. As such, web 2.0 tools, also known as 'read/write' web (Holmes, 2007), have become prominent in giving room for synchronous and asynchronous learning because it is accessible and compatible with many devices (Ashari et al., 2018).

Nevertheless, bringing learners together in building a thriving virtual learning community has always been a major challenge among educators, especially in the ESL classroom. In this study, Edmodo, a social learning network site (SLNS), was used as the major platform to bring the learners together virtually. The major reason for this choice is that Edmodo was created from the amalgamation of social network sites (SNS) and learning management systems (LMS), and it has been a meaningful innovation in the field of education (Ashari et al., 2018). Besides, earlier studies have shown that Edmodo eases discussion and enhances learners' academic performance (Alqahtani, 2019; Ngo & Ngadiman, 2019). Purnawarman et al. (2016) indicate Edmodo as an assistant for language teachers because the platform's features bring a significant number of advantages to educators during the teaching

and learning process. Ekici (2017) states that Edmodo helps in discussion and knowledge sharing.

Nevertheless, the potential of Edmodo in building a successful virtual learning community among ESL learners is still unknown. Some studies have pointed out its drawbacks in terms of accessibility and interaction (Mokhtar, 2016; Simon, 2016). According to Mokhtar (2016), ESL learners believe that they could learn better in a physical classroom rather than in a virtual environment. Mokhtar explains that becoming an autonomous learner is incredibly challenging in the virtual environment because learners are easily distracted when using other internet websites simultaneously. Amid the pandemic, face-to-face classroom interaction has become too risky. Nevertheless, it is crucial to gather all learners to learn virtually to meet the learning outcome.

The lack of comprehensive studies regarding ESL learners' behavioural intention towards Edmodo has resulted in a negligible understanding of learners' behavioural intention of this technology, particularly as a platform for a virtual learning community. The investigation of the factors that influence ESL learners' behavioural intention in using Edmodo has become necessary since the success of Edmodo as a platform for a virtual learning community is greatly dependent upon learners' intention to adopt this educational tool. Although the use of Edmodo is common in developed countries, there is a need to investigate the acceptance of Edmodo in developing

countries like Malaysia (Annamalai et al., 2018; Mokhtar, 2016). Besides, using Edmodo as a platform for a virtual learning community is a new learning opportunity in the ESL context, particularly during the COVID-19 pandemic. Therefore, it is essential to identify the factors determining learners' behavioural intention in using Edmodo to create highly qualified education and better learning performances.

In addition, the investigation on the relationship between ESL learners' behavioural intention in using Edmodo and gender differences becomes necessary since the literature suggests that male and female learners acquire language and use technology differently (Islam et al., 2011; Reid, 1995; Tatarinceva, 2009). Although Venkatesh et al. (2003) indicate the importance of including individual differences such as gender while investigating one's behavioural intention in using technology as it could give robust results, many related studies have neglected this claim, and it remains a gap in the literature (Williams et al., 2015). Hence, using the unified theory of acceptance and the use of technology (UTAUT) framework, this study aims to:

- i. investigate the factors that determine ESL learners' behavioural intention in using Edmodo as a platform for a virtual learning community.
- ii. examine the impact of gender on the relationship between the influential factors and ESL learners' behavioural intention to use Edmodo as a virtual learning community platform.

LITERATURE REVIEW

Edmodo is a social learning network developed by deriving strength from social network sites and learning management systems (Ashari et al., 2018). The canon of the literature suggests that the application of Edmodo in the language learning classes promotes academic performance (Andrienko, 2017; Ngo & Ngadiman, 2019), interaction (Abidin et al., 2018), and enhances language skills (Nguyen & Nguyen, 2019; Warawudhi, 2017). However, factors that influence ESL learners' behavioural intention in using Edmodo as a platform for a virtual learning community are still uncertain.

According to Brahmaasrene and Lee (2012), the success of educational technology is determined by learners' behavioural intention towards the use of technology in the learning environment. Ajzen (1991) defines behavioural intention as a direct predictor of an individual's attitude regarding performing or not performing the desired behaviour. Many behavioural intention theories and models have been developed over the last few decades in line with the burgeoning of technology and information system at an unprecedentedly fast rate.

Theoretical Background and Hypotheses Development

The UTAUT was used as the fundamental framework in this study because of its high validity and reliability values in the academic setting in determining learners' behavioural intention in using an educational technology

tool (Abu Bakar et al., 2013; Asare et al., 2016). The UTAUT determinants such as performance expectancy, effort expectancy, social influence, and facilitating conditions were developed based on a systematic review of the constructs of eight prominent theories and models (Venkatesh et al., 2003). Some studies have investigated the acceptance of Edmodo through the UTAUT framework (Ashari et al., 2018; Taqwatika et al., 2019) but not specifically from the perspective of English language learners.

Performance Expectancy. Venkatesh et al. (2003) define performance expectancy as the degree to which an individual believes that using the system can increase his or her job performance. In this study, performance expectancy refers to the degree to which an ESL learner believes that the use of Edmodo will increase his or her academic performance and develop language skills. Several scholars have indicated that performance expectancy is an important determinant of users' acceptance of online learning platforms. Ashari et al. (2018), who conducted a study on the use of Edmodo in learning biology, found a positive correlation between performance expectancy and behavioural intention. A similar result was also found in studies conducted in Indonesian universities (Kurniabudi & Assegaff, 2016; Taqwatika et al., 2019). However, other studies indicate that performance expectancy is not an important predictor for learners to adopt a particular educational technology tool (Abu Bakar et al., 2013; Anggoro & Arisantoso, 2018).

Literature suggests that the application of Edmodo in language classes improves learners' language skills such as writing skills (Nguyen & Nguyen, 2019), speaking skills (Sofia & Phil, 2018), and reading skills (Warawudhi, 2017), and learners' overall academic performance (Ngo & Ngadiman, 2019). Besides, Williams et al. (2015), who reviewed 174 articles on the UTAUT framework, state that performance expectancy is the most important predictor in determining users' behavioural intention and followed by social influence in the acceptance of certain technologies or systems. Therefore, the researchers hypothesised:

H₁= Performance expectancy significantly impacts ESL learners' behavioural intention towards using Edmodo.

Effort Expectancy. Effort expectancy refers to the degree of ease in using a system (Venkatesh et al., 2003). In this study, effort expectancy refers to the degree to which an ESL learner uses Edmodo effortlessly in the virtual class. According to Ashari et al. (2018), effort expectancy has a high potential in influencing university students' behavioural intention towards using Edmodo. A similar result has also been reported by Thongmak (2013) in his study: the ease of use contributes significantly towards the behavioural intention to use Edmodo. Although some researchers have found that effort expectancy does not influence learners' behavioural intention in using Edmodo (Anggoro & Arisantoso,

2018; Kurniabudi & Assegaff, 2016), many scholars suggest that Edmodo is a user-friendly platform and it eases learners-educators, learners-learners, and learners-content interactions (Abidin et al., 2018; Ekici, 2017; Khoo et al., 2018). Therefore, the researchers hypothesised:

H₂= Efforts expectancy significantly impacts learners' behavioural intention towards using Edmodo.

Social Influence. Social influence refers to the extent to which an individual believes that people who are important to him or her influence the individual's intention to use a particular technology or a system (Venkatesh et al., 2003). In this study, social influence refers to the degree to which an ESL learner believes that his or her intention to use Edmodo is influenced by people who are important to him or her (e.g., family, friends, and peers). According to Tan (2013), learners usually have a high intention of using an online learning platform when they are influenced to a great extent by important people such as teachers and peers. However, studies have shown that social influence has a nonsignificant relationship with learners' behavioural intention to use Edmodo (Ashari et al., 2018; Kurniabudi & Assegaff, 2016; Nuari et al., 2019; Taqwatika et al., 2019). According to Taqwatika et al. (2019), learners are not easily influenced by their peers in determining whether to accept or reject Edmodo because they listen more to their intuition. However, Williams et al. (2015)

describe social influence as an important determinant in influencing an individual's behavioural intention in using technology. In addition, North-Samardzic and Jiang (2015) state that learners' behavioural intention to use an educational technology tool increases when educators prioritise the tool in online learning. Therefore, the researchers hypothesised:

H₃= Social influence significantly impacts ESL learners' behavioural intention towards using Edmodo.

Facilitating Conditions. According to Venkatesh et al. (2003), facilitating conditions refer to the extent to which an individual believes that he or she has organisational and technical infrastructure support to assist in the use of the system. In this current study, facilitating conditions refer to the degree to which an ESL learner believes that an educational institution and technical infrastructure support exist to help him or her use Edmodo. In the original UTAUT model, facilitating conditions affect the actual user behaviour directly. According to Venkatesh et al. (2003), facilitating conditions have become a nonsignificant determinant in predicting behavioural intention in the presence of performance expectancy and effort expectancy. However, many recent studies suggest that facilitating conditions impact learners' behavioural intention significantly in using an online learning platform (Abu Bakar et al., 2013; Asare et al., 2016).

In terms of the adoption of Edmodo, many studies show a positive and significant relationship between facilitating conditions and behavioural intention. The high compatibility and accessibility of Edmodo from learners' devices facilitate the learners in utilising the tool during the teaching and learning process (Anggoro & Arisantoso; 2018; Kapti, 2017; Nuari et al., 2019; Taqwatika et al., 2019). In other studies, facilitating conditions appeared to be nonsignificant predictors because learners receive limited assistance from the institution on the use of Edmodo. One main reason for this nonsignificant relationship is due to the fact that since most of the educators from the higher education institutions used Edmodo according to their preference (Ashari et al., 2018), the learners had to depend on the educators, in the main if they encountered any difficulties in using Edmodo (Ashari et al., 2018; Kurniabudi & Assegaff, 2016). The researchers hypothesised:

H₄= Facilitating conditions significantly impact ESL learners' behavioural intention towards using Edmodo.

Gender Differences. Venkatesh et al. (2003) have highlighted that the inclusion of moderator variables that consist of individual differences such as gender, age, and experience in the UTAUT model is important to get better results. However, it is essential to highlight that most related studies pay less attention to the impact of learners' differences towards technology

acceptance in education. It has become a major gap in the literature. According to Venkatesh et al. (2003), the relationship between performance expectancy and behavioural intention is stronger for male users than female users. The team also indicates that the relationship between effort expectancy, social influence, and behavioural intention is more salient towards female users than the male users towards using a system. In this study, the researchers include ESL learners' gender differences as the moderating effect to obtain a better result for the entire research. A summary of the studies on learners' behavioural intention towards using Edmodo is presented in Table 1.

According to Oxford (as cited in Viriya & Sapsirin, 2014), gender plays an important role in language learning. Literature shows that social factors highly influence the participation of male learners in the English language classroom in comparison to female learners (Tatarinceva, 2009). In another study, Cyfeku (2013) states that female learners outperform their counterparts in the English classroom. In online learning, male learners prolifically utilise the online learning tool compared to female learners (Islam et al., 2011; Liaw & Huang, 2011). Therefore, the researchers hypothesised:

H_{1a}= Gender moderates the relationship between performance expectancy and ESL learners' behavioural intention towards using Edmodo, such that the effect is stronger for male learners than female learners.

H_{2a} = Gender moderates the relationship between effort expectancy and behavioural intention towards using Edmodo, such that the effect is stronger for male learners than female learners.

H_{4a} = Gender moderates the relationship between facilitating conditions and behavioural intention towards using Edmodo, such that the effect is stronger for female learners than male learners.

H_{3a} = Gender moderates the relationship between social influence and behavioural intention towards using Edmodo, such that the effect is stronger for female learners than male learners.

Table 1

Past studies on the acceptance of Edmodo under the measurement of the UTAUT framework

Author(s)	Objective	Sample's Institution(s)	Sample	variables	Result
Ashari et al. (2018)	To determine students' interaction behaviour towards Edmodo	Universiti Teknologi MARA, Malaysia	74 Biology students	Utaut factors No moderator	PE+BI EE+BI SI-BI FC-BI
Nuari et al. (2019)	To determine factors that influence the utilisation of Edmodo	SMK Negeri 2 Semarang, Indonesia	178 school students	Utaut factors No moderator	PE+BI EE-BI SI-BI FC+BI
Kapti (2017)	To evaluate the utilisation of Edmodo as an e-learning platform	STMIK Bina Patria, Indonesia	200 school students	Utaut factors & Hedonic Motivation (HM) No moderator	PE+BI EE+BI FC+BI HM+BI SI-BI
Anggoro and Arisantoso (2018)	To analyse students' behavioural intention towards Edmodo as a supplementary tool	Universitas Islam Attahiriyah (UNIAT), Indonesia	UNIAT undergraduates	Utaut 2 factors No moderator	PE-BI EE-BI SI-BI FC+BI HM-BI PV-BI H-BI

Table 1 (Continue)

Author(s)	Objective	Sample's Institution(s)	Sample	variables	Result
Taqwatika et al. (2019)	To analyse learners' acceptance towards Edmodo as an online learning system	SMP Negeri 1, Singaraja, Indonesia	72 school students	Utaut factors No moderator	PE+BI EE-BI SI-BI FC+UB

Note. PE = performance expectancy, EE = effort expectancy, SI = social influence, FC = facilitating conditions, BI = behavioural intention, PV = price value, H = Habit, UB = use behaviour

The conceptual framework of this study is presented in Figure 1.

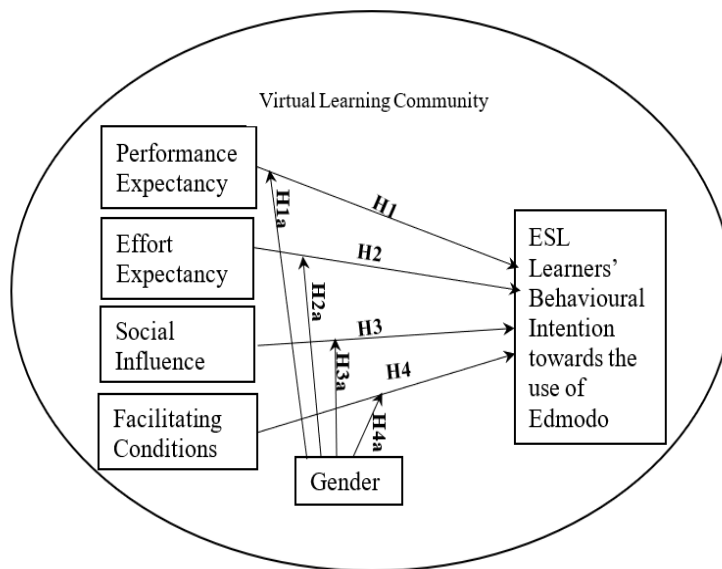


Figure 1. Conceptual framework (Adapted from Venkatesh et al., 2003)

METHODOLOGY

The present study is a cross-sectional study in which the researchers examine the exposure and outcome simultaneously, according to Bhattacharjee (2012). He explains further that a cross-sectional study is the most appropriate if the researcher

intends to test or integrate certain theories. Hence, the researchers of this study employed the descriptive cross-sectional design to examine factors influencing ESL learners' behavioural intention in using Edmodo as a platform for a virtual learning community with the moderating

effect of gender. Besides, the selection of cross-sectional design in this study allows data collection from a massive pool of respondents, increases the generalisability of the findings to large populations, and enables the researchers to look into a phenomenon of interest from multiple perspectives (Bhattacharjee, 2012).

Sampling

The participants of the current study were undergraduates taking English for Specific Purposes courses at Universiti Sains Malaysia in one academic semester. The participants were selected through a stratified random sampling based on the learners' gender differences. The sample size was determined according to Krejcie and Morgan's sample size table. The link for the questionnaire was shared among 210 learners. However, only 200 respondents submitted the questionnaire. Nevertheless, the sample size is deemed sufficient for data analysis, according to Krejcie and Morgan (1970) and Wolf et al. (2013). The study's population comprised 93 male and 107 female respondents, and they came from various faculties at the university.

Research Procedure

The data collection of this current study was approved by Universiti Sains Malaysia's Human Research Ethics Committee. An approval from ESL educators was obtained to recruit their students for this study. Detailed information of this study in terms of content and procedure was explained to both ESL educators and learners. The ESL

educators from the recruited classes are well versed in the use of Edmodo. In fact, they have been using Edmodo as a preferred tool in their English classes. Edmodo was mainly used for the following activities:

- i. Ongoing discussion on certain topics such as presentation skills, vocabulary skills, reading texts, and others either in the main Edmodo class or small groups.
- ii. Development and sharing of own individual oral presentation slides and video on Edmodo. Learners were encouraged to ask questions and give feedback based on the topics of the presentation.
- iii. Collaboration with other learners for writing activities such as opinion-based essays and response writing.
- iv. Sharing content materials in the form of websites, video, audio, images, and other types of files on Edmodo.

On the 10th week, the questionnaire developed based on a google form was shared with the learners. The estimated time for the respondents to complete the Likert-scale questionnaire was within 15 minutes. Since the current study employed an online survey, the learners were given five days to complete the questionnaire at their convenience. On the fifth day, the questionnaire link was locked to allow for the analysis of the collected data to begin.

Research Instrument

The UTAUT questionnaire items with a five-point Likert scale were adapted to suit the current research context. For example,

the original questionnaire items were intended to use an information system in a corporate organisation (Venkatesh et al., 2003). Since the present research focused on using Edmodo among ESL learners, the term ‘information system’ was replaced with ‘Edmodo’ in the questionnaire items. All items in the UTAUT questionnaire had shown high reliability and validity values (Abu Bakar et al., 2013; Kurniabudi & Assegaff, 2016).

The questionnaire’s introduction, which consisted of the purpose of the current research, participants’ criteria, risks, possible benefits, the confidentiality of the respondents’ information, researcher’s contact information, and instruction to fill up the questionnaire, were explained in detail. The respondents were also assured that their participation in the survey was completely voluntary, which they could refuse to participate in the research or withdraw from answering the questionnaire.

Data Analysis

In this study, the data were analysed in two stages: preliminary analysis and hypothesis testing. In the first stage, the data were

assessed for normality test. Hence, the values of both skewness and kurtosis were examined. According to Field (2009), the data are normally distributed if the value of skewness and kurtosis fall in the range of -1 to +1. Next, the Cronbach coefficient alpha was used to examine the internal consistency of each item in the questionnaire. According to Hinton (as cited in Taherdoost, 2016), the reliability of the questionnaire items is met when Cronbach’s alpha value exceeds 0.7.

Next, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett’s test of sphericity were performed to examine the suitability of the current questionnaire. The KMO value that exceeds 0.5 indicates that the data can be analysed for factor analysis (Field, 2009). The exploratory factor analysis (EFA) was used to examine the construct validity. Factor loadings that have a value of above 0.5 are known to be significant (Bhattacharjee, 2012). The confirmatory factor analysis (CFA) was performed to examine the adequacy of the measurement model (Hair et al., 2006). The requirements to examine the goodness-of-fit (GoF) model is presented in Table 2 (Hair et al., 2006; Kline, 2013).

Table 2
Requirements of a good fit model

Measure	Requirement
Normed Chi-square (χ^2/df)	< 3
Goodness-of-fit Index (GFI)	> 0.9
Comparative Fit Index (CFI)	> 0.9
Tucker-Lewis Index (TLI)	> 0.9
Root Mean Square Error of Approximation (RMSEA)	< 0.08

The invariance test was conducted during the CFA since the present study also investigates the moderating effect of gender on learners' behavioural intention in using Edmodo. Therefore, it is necessary to examine if the factor structure is equivalent for male and female learners. Then, the convergent and discriminant validity were tested for construct validity through average variance extraction (AVE) and composite reliability (CR).

In the second stage, structural equation modelling (SEM) was performed to analyse the hypotheses in this study. The p-value, coefficient value, and r squared value were determined and explained through AMOS regression weight. A path-analysis was created to show the influence of the key constructs towards ESL learners' behavioural intention in using Edmodo. For the moderating effect hypotheses, a multi-group moderation effect analysis in AMOS was carried out to identify the impact of the moderator variable (i.e., gender) towards the relationship between the predictors and behavioural intention. The significant differences were determined through critical ratio and p-values.

FINDINGS

In the preliminary analysis, it was found that the data of the current study were normally distributed with both skewness and kurtosis values in the acceptable range, as suggested by Field (2009). The internal consistency of each questionnaire item was above 0.8 Cronbach's alpha value. According to Hinton (as cited in Taherdoost, 2016), it

shows the instrument has high reliability. The KMO value of this study is 0.899, and Bartlett's test of sphericity is significant at $\alpha=0.000$ with a chi-square of 3375.344, indicating the suitability of the data for factor analysis. The construct validity was performed through EFA, and it was found that the correlation coefficient values for each item were greater than 0.3, and the factor loadings for each indicator were determined. According to Hair et al. (2006), factor loadings that exceed a value of 0.5 is considered significant. In this analysis, all the indicators showed a significant value.

The CFA was performed to measure the GoF of the current research model. Based on the requirements described by the statisticians, the model fit indices of the current study are a good fit. Although the GFI and TLI values do not exceed the value of 0.9 (Table 3), they are still deemed acceptable if the value is above 0.8, as proposed by Baumgartner and Homburg (1996). Besides, most of the fit indices fulfil the fundamental requirements in the GoF test. Figure 2 shows the model measurement that was performed through CFA. All the items show significant factor loadings. Modification indices were performed to improve the model fit. As such, error terms between e4 and e5 were covaried.

In terms of the invariance test, the unconstrained model for gender had a good fit ($X^2/df=1.965$; GFI=0.862; TLI=0.9; CFI=0.91; RMSEA=0.07), indicating the configural invariance is supported. The value of the chi-square difference between the unconstrained and the fully constrained

Table 3
Measures of a good fit model

Measure	Requirement	Result	Explanation
χ^2/df	< 3	2.147	Good
GFI	> 0.9	0.845	Acceptable
CFI	> 0.9	0.908	Good
TLI	> 0.9	0.893	Acceptable
RMSEA	< 0.08	0.070	Good

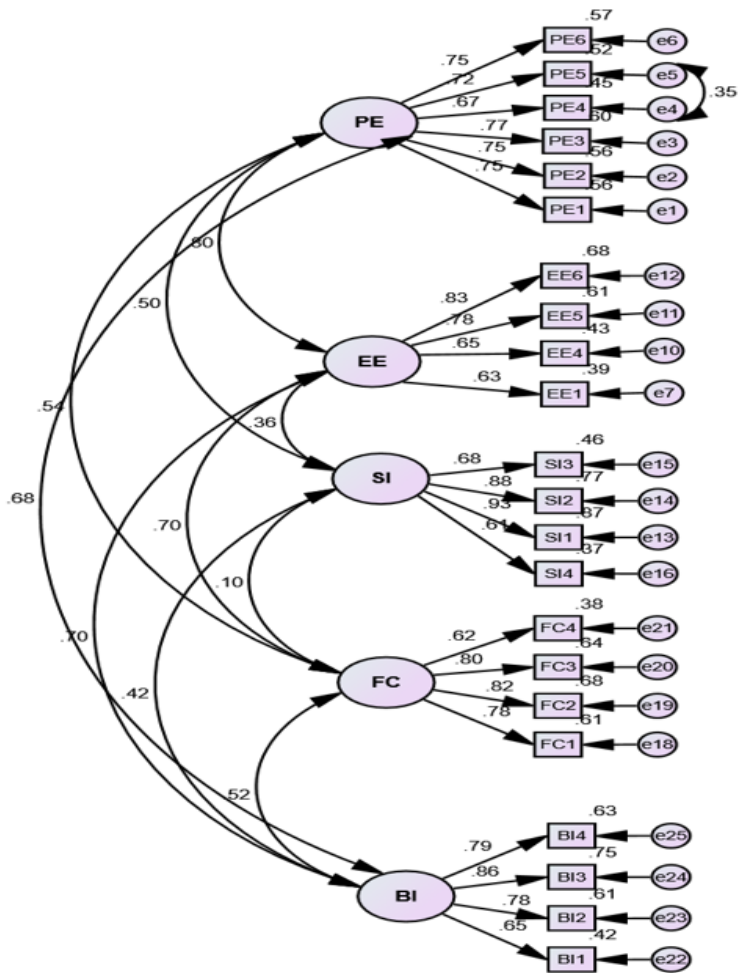


Figure 2. Measurement model

model ($\chi^2 = 4.688$; $p > .05$) indicates that both groups (male and female) are equivalent across the factor structures, according to Hair et al. (2006). The convergent validity was determined based on the AVE and CR

values. According to Straub et al. (2004), the greater the value of AVE (>0.5) and CR (>0.7), the higher the validity and reliability of the construct. Table 4 shows that the construct validity is at a satisfactory level.

Table 4

Construct validity

Construct	AVE	CR
Performance Expectancy	0.55	0.88
Effort Expectancy	0.51	0.86
Social Influence	0.56	0.86
Facilitating Conditions	0.51	0.84
Behavioural Intention	0.60	0.86

According to Neuman (2014), discriminant validity is measured to determine if the items of different constructs diverge and whether the items of one construct have a low correlation with another

construct. Table 5 shows that the squared correlation of each construct is lower than the square root of AVE. It indicates that the discriminant validity is supported, according to Hair et al. (2006).

Table 5

Discriminant validity

construct	PE	EE	SI	FC	BI
PE	0.74				
EE	0.45	0.7			
SI	0.25	0.28	0.75		
FC	0.27	0.26	0.01	0.76	
BI	0.44	0.33	0.19	0.26	0.77

Note. Diagonal elements (in bold) are square roots of average variance extracted (AVE)

Hypotheses Testing (H₁, H₂, H₃, and H₄)

The hypotheses of the current study were tested through SEM analysis by controlling the learners' age and academic specialisation that may affect the relationship between performance expectancy, effort expectancy, social influence, facilitating conditions, and behavioural intention. Controlling these variables is necessary to increase the validity of the result.

Our structural model in Figure 3 demonstrates a good fit ($X^2/df = 1.915$, TLI = 0.954, CFI = 0.983, RMSEA = 0.068). It explains the 50% variance of learners' behavioural intention to use Edmodo as a virtual learning community platform. In addition, the controlled variables do not give any significant effect to learners' behavioural intention in using Edmodo, except the academic specialisation has a slightly negative effect on behavioural intention. Table 6 clearly indicates that the path coefficients are statistically significant as their value of the critical ratio is above 1.96. The table shows that the relationship between performance expectancy and behavioural intention of the ESL learners is significant ($\beta = 0.227$; $p = .000$). The coefficient value indicates that performance expectancy has a direct, positive, and moderate influence on the ESL learners' behavioural intention in using Edmodo. The ESL learners' behavioural intention to use Edmodo as a virtual learning community platform changes in direct proportion to performance expectancy with a coefficient of 0.227. In the performance expectancy, ESL learners mainly use Edmodo because

they perceive Edmodo as a useful tool in learning ESL to enhance their knowledge and skills.

The relationship between effort expectancy and behavioural intention also appears to be significant ($\beta = 0.228$, $p = .002$). The coefficient value shows that effort expectancy directly, positively, and moderately influence ESL learners' behavioural intention. The ESL learners' behavioural intention towards using Edmodo as a platform for a virtual learning community change in direct proportion to effort expectancy with a coefficient of 0.228. It indicates that the influence of effort expectancy towards ESL learners' behavioural intention in using Edmodo is stronger than the performance expectancy. The findings indicate that ESL learners prefer to use Edmodo because it eases their learning process, and its features are user-friendly.

Similarly, the relationship between social influence and behavioural intention is significant with $\beta = 0.201$ and $p = .000$. It shows that social influence has a direct, positive, and moderate influence on learners' behavioural intention. ESL learners' intention to use Edmodo is mainly determined by the influence of their peers and friends. The relationship between facilitating conditions and behavioural intention is also significant ($\beta = 0.229$, $p = .004$). It suggests facilitating conditions have a direct, positive, and moderate influence on ESL learners' behavioural intention to use Edmodo as a virtual learning community platform. The coefficient value

shows that facilitating conditions are the strongest predictor of ESL learners' behavioural intention to use Edmodo as a virtual learning community platform. It is also identified that the amount of assistance determines the ESL learners' intention to use

Edmodo that they receive from teachers or peers in using Edmodo and the availability of internet networks. In short, hypotheses H₁, H₂, H₃, and H₄ are supported as presented in Table 6.

Table 6
Path coefficients

Hypothesis	β	S.E.	C.R.	P	Result
BI <--- PE	0.227	.079	3.474	***	Supported
BI <--- EE	0.228	.072	3.120	.002	Supported
BI <--- SI	0.201	.044	3.369	***	Supported
BI <--- FC	0.229	.081	2.915	.004	Supported
BI <--- Age (control variable)	0.003	.105	0.059	.953	
BI <--- Academic (control variable)	-0.137	.068	-2.629	.009	

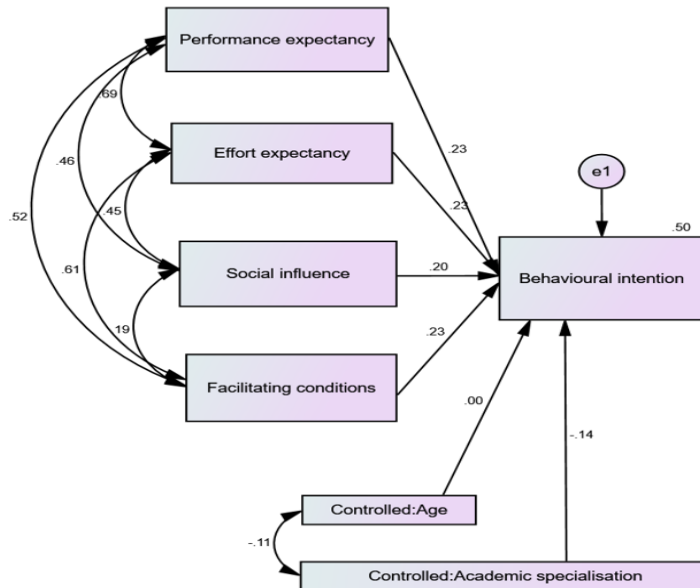


Figure 3. Path analysis H1 - H4

Multi-group Moderation

In order to conduct a categorical moderation hypothesis, the values of critical ratios were determined to examine the differences between male and female learners in using Edmodo. P-values were calculated from these critical ratios. Table 7 indicates that gender moderates the relationship between social influence and behavioural intention significantly. The relationship is stronger for female learners ($\beta = 0.270$) than the male learners ($\beta = 0.062$). In addition, it was identified that peers' influence is stronger

for female learners than male learners. Therefore, hypothesis H_{3a} is supported. It is important to indicate that hypotheses H_{1a}, H_{2a}, and H_{4a} are rejected because gender does not have any significant moderation effect towards the relationship between performance expectancy, effort expectancy, facilitating conditions, and behavioural intention. The relationships between the UTAUT factors, learners' behavioural intention, and gender are presented in Figure 4.

Table 7
Moderating effect of gender

Multi-group moderation analysis				
BI	<---	PE	Male = 0.287 Female = 0.228 ΔZ score = -0.425	Not supported
BI	<---	EE	Male = 0.285 Female = 0.243 ΔZ score = -0.280	Not supported
BI	<---	SI	Male = 0.062 Female = 0.270 ΔZ score = 2.608**	Supported Stronger for female learners
BI	<---	FC	Male = 0.211 Female = 0.272 ΔZ score = 0.393	Not supported

Notes. *** p-value < .01; ** p-value < .05; * p-value < .10

DISCUSSION

This study found that facilitating conditions, effort expectancy, performance expectancy, and social influence determine ESL learners' behavioural intention significantly in using Edmodo as a platform for a virtual learning

community, with coefficient values 0.229, 0.228, 0.227, and 0.201, respectively.

Based on the literature and the current findings, performance expectancy constantly showed a significant and direct effect on learners' behavioural intention. The

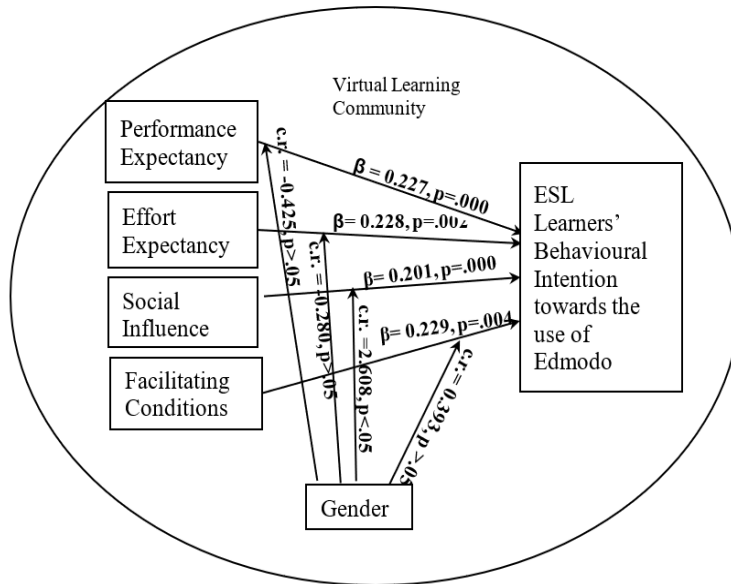


Figure 4. Structural model test results

researchers concurred with Ashari et al. (2018) that learners participate actively in Edmodo to increase academic performance. Similarly, in this study, ESL learners mainly used Edmodo to enhance knowledge, improve language skills, and perform better in academics. It is worth highlighting that in this study, Edmodo, which was utilised for ongoing discussion, oral presentation, and collaborative writing provided ample space for learners to engage in the learning community to enhance their expertise.

In addition, effort expectancy and facilitating conditions showed slightly higher predictive power in determining ESL learners' behavioural intention to use Edmodo as a virtual learning community platform. The findings of this study aligned with previous studies that indicate Edmodo is a user-friendly

platform, which eases the learning process (Ashari et al., 2018; Thongmak, 2013). Thus, the relationship between effort expectancy and behavioural intention in using Edmodo appeared significant. In terms of facilitating conditions, the researchers agreed with Yunkul and Cankaya (2017) that Edmodo is not a university's official e-learning portal in many higher education institutions. Therefore, educators who choose Edmodo as their preferred tool have a high responsibility in guiding and assisting learners to use it. In this study, facilitating conditions were regarded as important predictors because the assistance from the educators and the availability of internet resources significantly influenced learners' intention to use Edmodo.

The strong relationship between facilitating conditions, effort expectancy,

performance expectancy, and behavioural intention implies that the availability of assistance from educators would enhance the efficiency of using Edmodo as a virtual learning community platform among ESL learners. It eventually eases their learning process and improves their learning quality. In other words, the more learners receive technical support, the better is their learning process and learning performance. Hence, facilitating conditions, effort expectancy, and performance expectancy play equal roles in determining ESL learners' behavioural intention to use Edmodo as a virtual learning community platform.

Past studies have shown that social influence does not have any significant effect on learners' behavioural intention to use Edmodo (Anggoro & Arisantoso, 2018; Ashari et al., 2018; Kapti, 2017; Nuari et al., 2019; Taqwatika et al., 2019). On the contrary, this research was premised on the grounds that social influence appeared to be a significant predictor in determining ESL learners' behavioural intention to use Edmodo as a virtual learning community platform. It suggests that the influence from friends and peers plays a fundamental role in determining learners' behavioural intention in using Edmodo. The researchers were in tandem with Fisher et al. (2014) that the involvement of both educators and learners in the community through technology eventually encourages one another to build a successful virtual learning community.

With regards to gender, the multi-group moderation analysis shows that social influence was more salient for female

learners, as regards their intention in using Edmodo in comparison to male learners. Thus, the researchers believed and agreed with Venkatesh et al. (2003) that female learners' behavioural intention towards technology is strongly affected by social influence, regardless of the purpose of using technology.

Mokhtar (2016) establishes that most auditory learners have difficulty learning through Edmodo because it does not offer a video conferencing feature, and so they prefer to learn in a physical classroom. Some scholars state that most female learners are auditory learners (Reid, 1995; Viriya & Sapsirin, 2014). According to Reid (1995), auditory learners learn better from oral explanations or hearing words. Hence, this could be why most female learners, auditory learners, need some motivation from both peers and teachers to participate in Edmodo. Since the reviewed literature suggests that both male and female learners learn language differently (Oxford, as cited in Viriya & Sapsirin, 2014; Reid, 1995), it is crucial for language educators to pay attention to learners' differing learning styles when utilising certain online learning platforms for English language learners.

However, it is crucial to highlight that gender is not a significant moderator towards the relationship between performance expectancy, effort expectancy, and facilitating conditions. The findings of the current study contradicted past studies that indicated male learners use online learning platforms better than female learners (Islam et al., 2011; Liaw & Huang, 2011). The

results of this study showed that there were no significant differences between gender and the utilisation of an online learning platform. In addition, the researchers had a different opinion from Cyfeku (2013), who states that female learners outperform male learners in both reading and writing skills in the ESL classroom. In this study, the results showed that the role of gender differences in their academic performance could not be discerned when the learning takes place in the virtual environment.

CONCLUSION

This study explores the factors influencing ESL learners' behavioural intention to use Edmodo as a virtual learning community platform. The findings show a significant association between performance expectancy, effort expectancy, social influence, facilitating conditions, and behavioural intention. It implies that the ESL learners' intention to use Edmodo is greatly determined by the factors mentioned above.

The present study suggests that an effective virtual ESL classroom is not determined by the sophistication and the infusion of technology in the course. However, the value in utilising appropriate technology as a supplementary tool has the potential to bring learners together in the learning process. As such, ESL educators who attempt to build a virtual learning community should consider the UTAUT factors that can influence ESL learners' behavioural intention in using an online learning platform.

Implications

This study shows a significant relationship between the influential factors such as performance expectancy, effort expectancy, social influence, and facilitating conditions on ESL learners' behavioural intention in using Edmodo as a platform for a virtual learning community. Therefore, it is of paramount importance for ESL educators and course designers to embed the concept of a virtual learning community as part of the ESL syllabus.

Besides, the results showed that the application of the virtual learning community through Edmodo did improve not only learners' learning performances but also boosted their confidence and autonomous skills. For this reason, education institutions should run workshops, seminars, and intervention programmes to enhance ESL learners' participation and engagement in a virtual learning community through Edmodo.

Recommendations

It is identified that facilitating conditions, effort expectancy, performance expectancy, and social influence play an essential role in determining ESL learners' behavioural intention in using Edmodo as a platform for a virtual learning community. Therefore, it is recommended that ESL educators ensure that learners receive sufficient assistance, use Edmodo effortlessly, and acquire adequate knowledge and skills in using Edmodo. In addition, it is also important for educators and peers to motivate and assist learners to be involved actively in online

discussions to build a successful virtual learning community.

Some of the findings of the current study contradict previous studies' results, especially on the impact of social influence towards ESL learners' behavioural intention in using Edmodo. It was also identified that facilitating conditions, effort expectancy, and performance expectancy have an equal influence on ESL learners' behavioural intention in using Edmodo. It shows a novelty in the current study. However, further investigation on the acceptance of Edmodo as a platform for a virtual learning community is required, especially from the perspectives of ESL learners.

The current study has disclosed a new finding in which ESL learners' distinctive learning styles in relation to their gender differences can determine their behavioural intention in using Edmodo as a platform for a virtual learning community. Therefore, it is suggested that future research should expand on the UTAUT framework by integrating ESL learners' learning styles with the aim to investigate their behavioural intentions towards using Edmodo as a platform for a virtual learning community.

Since the proposed research model was validated and tested, it can act as a reference for researchers, educators, and policymakers who aim to use Edmodo or other suitable educational tools in the ESL educational context as a platform for a virtual learning community.

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