

SOCIAL SCIENCES & HUMANITIES

Journal homepage: http://www.pertanika.upm.edu.my/

Needs Analysis for The Development of Financial Literacy Model in Mathematics Education for B40 Malaysia Secondary School Students

Husaina Banu Kenayathulla^{1*}, Nor Huda Ahmad Puad¹ and Muhammad Faizal A. Ghani²

¹Department of Educational Management, Planning and Policy, Faculty of Education, Universiti Malaya, 50603, Kuala Lumpur, Malaysia

ABSTRACT

Financial literacy is a form of basic skills and understanding related to financial concepts. Individuals need to have a good foundation of financial literacy to face the increasingly complex and challenging global economic environment. Studies on the level of financial literacy of secondary school students, especially the B40 group, were not explored much. As a result, this research identified the need to develop a financial literacy model for Malaysian B40 secondary school students. The data were analyzed through descriptive statistics based on percentages, mean values, and standard deviations. The findings indicated that school leaders perceived that the financial literacy model is needed and important for B40 Malaysian secondary school students. A strong foundation of financial literacy will provide the students with the knowledge and skills to confidently make financial decisions and manage personal finances efficiently and wisely in choosing the best financial products and services.

Keywords: Financial literacy, B40, students, Malaysia, Mathematical education

ARTICLE INFO

Article history:

Received: 08 December 2022 Accepted: 28 February 2024 Published: 14 June 2024

DOI: https://doi.org/10.47836/pjssh.32.2.19

E-mail addresses:

husaina@um.edu.my (Husaina Banu Kenayathulla) hudapuad@gmail.com (Nor Huda Ahmad Puad) mdfaizal@um.edu.my (Muhammad Faizal A. Ghani)

*Corresponding author

INTRODUCTION

The state of the economic environment today is increasingly challenging, especially when the latest health crisis, namely the pandemic caused by the Coronavirus Disease (COVID-19), hit the world. There is uncertainty about when this pandemic will end despite the availability of vaccines developed to curb its spread (Jordà et al.,

¹Faculty of Education, Universiti Malaya, 50603, Kuala Lumpur, Malaysia

²Department of Educational Management, Planning and Policy, Faculty of Education, Universiti Malaya, 50603, Kuala Lumpur, Malaysia

2020). Many individuals were affected by this epidemic when the country had to implement the Movement Control Order (MCO), which greatly impacted the national economy and the people in particular. This pandemic is also seen to impact the worldwide economy more alarmingly (Usman et al., 2020).

Loss of employment and lack of financial resources to continue living are among the negative effects of implementing the MCO on many Malaysians, especially those with low household incomes. In Malaysia, household income is classified into three categories: top twenty percent (T20), middle forty percent (M40), and bottom forty percent (B40). The T20 group has a household income of about RM11,820 and above, while the M40 group has an income between RM5,250 and RM11,819. Meanwhile, households earning RM5,250 and below are those in the category of B40 group (Household Income and Expenditure Survey Report, 2022). Based on those numbers, there is a significant household income gap between T20, M40 and B40.

Many studies have proven a positive relationship between family income and individuals' financial literacy levels (Mokhtar et al., 2018; Radianto, 2019 & Yoshino et al., 2017). Low family income is more likely to indicate a low level of financial literacy (Atkinson & Messy, 2012; Lusardi & Mitchell, 2011). According to Friedline (2012), earlier research findings consistently show that children from low-income families are less exposed to various resources and financial opportunities than

children from high-income families. Thus, this difference in financial participation will create a gap in resources and financial management ability when these children grow up (Friedline, 2012).

The study's results by Nor'ain et al. (2019) also found that most students with financial problems come from low-income or B40 families. Individuals with a high level of financial literacy are able to manage their finances well (Susanti et al., 2019). However, failure to manage personal finances has resulted in bankruptcy at a young age (Aladdin & Ahmad, 2017; Othman et al., 2015). Based on statistics released by the National Insolvency Department, 299,186 individuals were declared bankrupt from 2015 to 2019 (National Insolvency Department, 2019). In terms of age range, those aged 35-44 recorded the highest bankruptcy percentage of 35.23%, followed by the age range of 25-34 years and under the age of 25, accounting for 25.18% and 0.57%, respectively.

Therefore, the high number of bankruptcies among young people should not be taken lightly by all parties. The debt problem among these young people also affects their ability to repay study loans from the National Higher Education Fund Corporation or Perbadanan Tabung Pendidikan Tinggi Nasional (PTPTN). The failure to repay the loans indicates that these young people have failed to plan and manage their finances well and further proves that their level of financial literacy is still low (Ghazali et al., 2017).

A financially literate person means the individual is capable of managing his finances well (Susanti et al., 2019). Nevertheless, according to the study of The Standard & Poor's Ratings Services Global Financial Literacy Survey (Klapper et al., 2014). only 33% of adults globally are financially literate, and the remaining 3.5 billion do not understand basic financial concepts. Malaysian studies focusing on high school students also show that these kids have a moderate level of financial knowledge (Ghazali et al., 2017; Ramasamy et al., 2018).

Exposure to basic financial knowledge and concepts at a younger age is important because an individual's habits and behaviors are shaped through learning and observation from parents and others around them during their childhood years (Whitebread & Bingham, 2013). Therefore, these youth should be equipped with adequate financial literacy starting at the school level so that they are more financially literate when continuing their studies at a higher level as well as in preparation for a career when they reach adulthood (Gomulia et al., 2020; Hussin & Rosli, 2019).

Thus, this article aims to explore the views of school leaders on the need and importance of having a financial literacy model in the context of B40 secondary school students in Malaysia. Specifically, this study was conducted to answer the following questions:

1) What are the perceptions of secondary school leaders in Malaysia on the need for the development of

- a financial literacy model for B40 Malaysian secondary school students?
- 2) What are the perceptions of secondary school leaders in Malaysia on the importance of developing a financial literacy model for Malaysian B40 secondary school students?

LITERATURE REVIEW

Financial Literacy

Studies related to financial literacy are increasingly gaining the attention of researchers worldwide. According to the Organization for Economic Cooperation and Development (OECD), financial literacy is a form of knowledge, skills, motivation, and the confidence to use one's knowledge and understanding of financial concepts and risks in making wise financial decisions that will improve one's and society's financial well-being (Lusardi & Mitchell, 2014). Financial literacy is generally divided into three main domains: financial knowledge, attitude toward money, and behavior toward money (Hung et al., 2009).

Financial knowledge refers to a basic understanding of financial concepts and procedures (Chowa et al., 2012; Huston, 2010). Based on previous studies, many researchers have found that college students show a low level of financial knowledge, which in turn directly affects their level of financial literacy and understanding of financial concepts and procedures (Danes & Hira, 1987; Hrbert & Beutler, 2001; Jorgensen, 2007). There is a consistent finding in Malaysia where a study involving

secondary school students in Raub, Pahang, found that their financial literacy is low because they do not have enough exposure to financial knowledge (Ghazali et al., 2017).

The second domain, which is the attitude towards money, can be defined as the ability of a person to foresee his finances in advance and feel positive about them (Albeerdy & Gharleghi, 2015; Atkinson & Messy, 2012; Lusardi & Mitchell, 2008 & Rai et al., 2019). Although an individual has enough financial knowledge to make financial-related decisions, the individual's attitude will influence financial decisions (OECD, 2016; 2020). Previous studies have shown a relationship between attitudes toward money and an individual's financial literacy (Chaulagain, 2015; Firli, 2017; Sohn et al., 2012; Thomas & Subhashree, 2020). Attitude toward money is seen to be able to shape and determine the level of financial literacy of students (Isomidinova et al., 2017; Sabri, 2015).

The third domain of financial behavior refers to behavior related to financial applications or, in other words, how a person acts on financial-related matters (Susilowati et al., 2020) that can affect the financial well-being of individuals (Dewi et al., 2020). These three domains are interconnected with each other. The degree to which an individual is financially literate can be predicted when an individual uses financial knowledge, has extensive financial experience, and shows a positive attitude and behavior toward money. Then, financial management will be more efficient and systematic (Moore,

2003). Although studies are conducted to measure an individual's level of financial literacy, not all components of financial literacy are considered in studies conducted in Malaysia. On the other hand, studies carried out abroad by Atkinson and Messy (2012), Firli (2017), and Santini et al. (2019) have considered all three components of financial literacy in their studies.

Meanwhile, Malaysia, through the National Literacy Strategy 2019-2023, has outlined five main strategies, one of which is to instill moral values early on. Young people need to be equipped with financial education that includes financial knowledge, skills, and values learned when making financial-related decisions (Financial Education Network, 2019). Based on this, a new topic, consumer mathematics, has been added to the Mathematics in the Kurikulum Standard Sekolah Menengah (KSSM) for Form 3, 4 and 5 students. Among the topics in consumer mathematics are those related to savings, investment, credit, debt, financial management, insurance and taxation (Said et al., 2022).

All these topics can help students manage their finances well when they become adults. For example, topics related to savings can increase students' awareness of the importance of saving money for their future. In addition, students are also given exposure to various forms of investment, such as stock investment, unit trust, and real estate, through investment topics. Meanwhile, knowledge of using credit cards and personal loans can prepare students for financial risk management starting at

a young age. Indirectly, this curriculum can increase students' knowledge and understanding of managing finances wisely (Ministry of Education Malaysia, 2018).

However, the topics added to the mathematics curriculum only touch on one domain within the scope of the definition of financial literacy, which is the domain of financial knowledge. Though KSSM Mathematics covered consumer mathematics, this is not sufficient. Additionally, the aim is not only for mathematical calculations. Instead, attitudes towards money and financial behavior should also be considered when assessing secondary school students' financial literacy level. Thus, there is a need to develop a financial literacy model that covers all three domains, namely financial knowledge, attitudes toward finance and financial behavior, considering these three domains are interrelated.

Needs Analysis

Hannafin and Peck (1988) stated that a researcher uses needs analysis to identify the design needs produced based on the program's users, the environment, and the existing constraints. The gap between the current situation and the target's progress is also identified using this needs analysis (Witkin, 1997). Thus, the meaning of needs analysis in this study refers to an effort to identify existing issues, gaps and problems and the need and importance of developing a financial literacy model for secondary school students. This model is seen to have the potential to be developed to help

improve the level of financial literacy of secondary school students in Malaysia in particular.

The Needs of B40 Secondary School Students Towards a Financial Literacy Model

The National Financial Literacy Strategy 2019-2023, which was launched on 23 July 2019, has outlined five key strategies (Financial Education Network, 2019). Among the values is to instill good values from a young age. Secondary school students need to be provided with the basics, concepts, knowledge, skills, values, and risks related to finance in school to make wise financial decisions and subsequently achieve a good level of financial literacy (Hussin & Rosli, 2019; OECD, 2017). Nevertheless, previous studies in several countries have proven that students still have low financial literacy (Cameron et al., 2013; Lusardi, 2015).

Next, although many studies are related to financial literacy in Malaysia and abroad, research topics directly referring to high school students are still less discussed. Furthermore, although numerous studies have been conducted on financial literacy in Malaysia and abroad, research that refers directly to secondary school students is still limited. Most studies use college and university students as research subjects because they believe they are mature and capable of making certain financial decisions (Ahmad et al., 2016; Hussin & Rosli, 2019). Therefore, this article aims to get the views of secondary school leaders

on the needs and importance of developing a financial literacy model for B40 Malaysian secondary school students.

METHODOLOGY

Research Design

This study, which focuses on the B40 group in Malaysia, is a descriptive study that aims to discover the views of national secondary school leaders on the need and importance of developing a financial literacy model for secondary school students. Therefore, a quantitative method using a survey study and a qualitative method through interviews were used to obtain relevant data to answer the research questions presented in this study. The use of survey research is appropriate for this study because it can reach a large number of respondents in a short time (Rowley, 2014).

Study Sample

This study involved 438 study respondents randomly selected using the cluster random sampling method. The cluster random sampling method is the most practical method for this study since the total area of this research involves a large national survey (Acharya et al., 2013; Etikan & Bala, 2017). The number of national secondary schools throughout Malaysia is 2,250. Four school leaders were selected as the sample for this study. Principals, Senior Assistant Teachers of Administration, Senior Assistant Teachers of Student Affairs, Senior Assistant Teachers of Curriculum and Heads of Departments. The total number is 9000 respondents. Therefore, the total number of respondents

for this needs analysis phase was made based on the sample size determination table by Krecjie and Morgan (1970), which the sample size used for this study was a total of 438 people.

The secondary school population is divided into five groups based on five main zones. The Central Zone consists of Perak, Selangor, the Federal Territory of Kuala Lumpur and the Federal Territory of Putrajaya. Perlis, Kedah and Penang represent the North Zone, while Johor, Melaka and Negeri Sembilan represent the South Zone. Next, the East Zone consists of Kelantan, Terengganu and Pahang, and finally, the East Malaysia Zone consists of Sabah, Sarawak and the Federal Territory of Labuan. Next, a state is randomly selected to represent each zone. Then, the subsample or sample size for each zone is determined using the proportional ratio method called probability proportional to size (PPS), where the sample size is determined based on the population of a sub-cluster (Neuman, 2011). According to Chua Yan Piaw (2013), the subsample size calculation is as follows:

Subsample size =
$$\frac{\text{Number of subpopulations}}{\text{Number of population}} X \text{ sample size}$$

An interview method was also carried out to strengthen the findings of this need analysis phase. Creswell (2005) stated that the number of participants between four and ten is appropriate to be used as participants for a qualitative study. Therefore, this study involves six experts from the Department of Education Policy Planning and Research, the Ministry of Education Malaysia, the Teachers Training Centre, public universities

and excellent schools (secondary) that were chosen through purposive sampling. This sampling method is also known as judgment sampling because it involves individual judgment to select a study sample based on the researcher's knowledge and experience as well as the needs of the study (Ramlan, 2017; Yaakub et al., 2020). Table 1 shows a summary of the profiles of the study participants, which include age, gender, race, position held, grade of position and length of service. In contrast, the school profile consists of the state and location of the school involved in this study.

Based on the information collected in Table 1, the number of male respondents was 151 (34.5%), while female respondents were 287 (65.5%). In terms of age, the findings of the study showed a total of 261 people aged 51 years and above, followed by 145 respondents aged 41 to 50 years (33.1%), while the rest of the total respondents of 32 people (7.3%) were less than 40 years old. Next, the Malay respondents were 320 people (73.1%), Chinese 65 people (14.8%), Indians 16 people (3.7%), and other races were 37 people (8.4%). In terms

of positions held, 57 Principals and Senior Administrative Assistant Teachers (13%) participated in this study. In contrast, 56 people (12.8%) consisted of Senior Assistant Teachers of Student Affairs, followed by 55 Senior Assistant Teachers of Co-curriculum (12.6%), while the most respondents were Heads of Departments, 213 people (48.6%).

Furthermore, the study's findings related to position grade showed that three people (0.7%) of the total respondents involved were DG 41. In comparison, 42 people (9.6%) were at DG 44, 178 people (40.6%) were at DG 48 posts, 176 people (40.2%) were at DG 52 grade posts, followed by respondents who were at DG 54 grade posts which were 39 people (3.9%). In terms of length of service, the findings show that four people (0.9%) have served between 1 to 10 years, a total of 105 people (24%) of the total respondents are serving between 11 to 20 years, while 325 people (74.2%) have served more than 20 years. Next, the number of respondents involved in this study according to the breakdown from each state and location, whether in urban, suburban or rural, as shown in Table 2.

Table 1

Profile of study participants and schools

Study Participant Profile		n	%
Gender	Male	151	34.5
	Female	287	65.5
Age	Less than 40 years old	32	7.3
	41-50 years old	145	33.1
	51 years old and above	261	59.6
Race	Malay	320	73.1
	Chinese	65	14.8
	Indian	16	3.7
	Others	37	8.4

Table 1 (Continue)

Study Participant Profile		n	%
Position Held	Principal	57	13.0
	Senior Assistant Teachers of	57	13.0
	Administration		
	Senior Assistant Teachers of Student	56	12.8
	Affairs Senior Assistant Teachers of	55	12.6
	Curriculum		
	Heads of Departments	213	48.6
Position Grade	DG 41	3	0.7
	DG 44	42	9.6
	DG 48	178	40.6
	DG 52	176	40.2
	DG54	39	8.9
Length of Service	Less than five years	4	0.9
	5 to 10 years	4	0.9
	11 to 20 years	105	24.0
Length of Service	Less than five years	4	0.9
	5 to 10 years	4	0.9
	11 to 20 years	105	24.0
	More than 20 years	325	74.2
State	Johor	30	8.9
	Kedah	24	5.5
	Kelantan	30	6.8
	Melaka	19	4.3
	Negeri Sembilan	16	3.7
	Pahang	54	12.3
	Perak	45	10.3
	Perlis	7	1.6
	Pulau Pinang	24	5.5
	Sabah	24	5.5
	Sarawak	40	9.1
	Selangor	27	6.2
	Terengganu	34	7.8
	Wilayah Persekutuan Kuala Lumpur	44	10.0 1.8
	Wilayah Persekutuan Labuan Wilayah Persekutuan Putrajaya	8	0.7
C 1 11			
School Location	Urban	254	58.0
	Suburban	49	11.2
	Rural	135	30.8

Table 2 *School profile*

School Profile		n	%
State	Johor	30	8.9
	Kedah	24	5.5
	Kelantan	30	6.8
	Melaka	19	4.3
	Negeri Sembilan	16	3.7
	Pahang	54	12.3
	Perak	45	10.3
	Perlis	7	1.6
State	Pulau Pinang	24	5.5
	Sabah	24	5.5
	Sarawak	40	9.1
	Selangor	27	6.2
	Terengganu	34	7.8
	Wilayah Persekutuan Kuala Lumpur	44	10.0
	Wilayah Persekutuan Labuan	8	1.8
	Wilayah Persekutuan Putrajaya	3	0.7
School Location	Urban	254	58.0
	Suburban	49	11.2
	Rural	135	30.8

Study Instrument

This study uses a questionnaire instrument that has been constructed based on a questionnaire that has been modified from the questionnaire of Ghani and Adnan (2017). This questionnaire contains three parts: Part A related to school profiles and respondents, which consists of 9 items and Parts B and C, which contain 24 items covering the analysis of the needs and importance of developing the financial literacy model for B40 Malaysian secondary school students. Next, the views of the respondents on the need for this financial literacy model were measured using a

5-point Likert scale as follows: (1) strongly disagree, (2) disagree, (3) disagree, (4) agree and (5) strongly agree. A pilot study was also conducted to test this questionnaire instrument's reliability.

Additionally, two experts in the field of financial literacy were consulted for instrument validity. The Cronbach's alpha values obtained for both constructs were 0.902 and 0.913. Cronbach's alpha values above 0.7 indicated a high-reliability value of the items (Taber, 2018). Thus, with a reliability value exceeding 0.7, it indicated that the level of reliability of this questionnaire instrument was high.

Study Analysis

Data from the survey was analyzed using Statistical Program for Social Science (SPSS) version 26.0 to obtain mean scores, percentages and standard deviations. Descriptive analysis is conducted to state and explain the variables in a phenomenon (Piaw, 2013, 2020) and to summarize a set of observations as well as to present a large amount of information in the simplest possible way, such as the mean and standard deviation (Sundaram et al., 2014; Bland, 2015). At the same time, the data from the interviews was analyzed based on the context of the questions asked to the participants involved in this study. Table 3 shows the interpretation of the mean scores of the needs analysis used and modified according to the suitability of the study.

RESULTS

Research Question 1: What are the views of secondary school leaders in Malaysia on the need to develop a financial literacy model for B40 Malaysian secondary school students?

Table 4 shows that the average overall score for the need for a financial literacy model for Malaysian B40 secondary school students to be developed is high and very necessary, with a mean score of 4.13 and a standard deviation SD of 0.235. These findings indicate a need to develop a financial literacy model for B40 secondary school students in Malaysia. The highest mean score is 4.42 (SD = 0.495), and this model is seen to improve students' basic knowledge related to financial aspects.

Table 3 *Interpretation of the mean score value*

Mean Score	Interpretation	
	(Level of agreement)	
3.33 to 5.00	High	
1.67 to 3.33	Medium	
0.00 to 1.66	Low	

Source: Pallant (2020)

In addition, this model is also seen to cultivate students' responsible nature towards personal financial management (mean score = 4.40, SD = 0.490) as well as help students control spending well (mean score = 4.39, SD = 0.497) and obtain new information related to financial products and services (mean score = 4.39, SD = 0.498). The lowest mean score compared to other items is 3.61 (SD = 0.541), which helps students control themselves and determine the priority of financial products that need to be subscribed to. Overall, the mean scores for the other items are also high, and this indicates that secondary school leaders agreed that the development of a financial literacy model for secondary school students was much needed at this time.

Research Question 2: What are the views of secondary school leaders in Malaysia on the importance of developing a financial literacy model for Malaysian B40 secondary school students?

Table 5 shows the average overall score for the importance of financial literacy model development of B40 Malaysian secondary school students with a mean value of 4.23 (SD = 0.351) on the interpretation of the high mean. These findings clearly indicate the importance of developing this financial

literacy model for the context of B40 secondary school students in Malaysia. The highest mean score recorded for item "this model can help improve students' basic knowledge of finance", with a mean score of 4.42 and a standard deviation of 0.493.

Next, the item with a mean score of 4.38 (SD = 505) is the item "this model can help students plan financially well", followed by the item "this model can help foster prudence towards financial spending" with a mean score of 4.37 with a standard deviation

Table 4
Needs analysis towards developing a financial literacy model for Malaysian B40 secondary school students

No	Item	Mean Score	Standard Deviation	Interpretation
1	This model is relevant to the needs of students as consumers of financial products and services.	3.97	0.414	High
2	This model enhances students 'basic knowledge of finance.	4.42	0.495	High
3	This model enhances students' knowledge and understanding of financial products and services.	4.00	0.394	High
4	This model helps students make financial decisions more accurately.	4.03	0.319	High
5	This model helps students plan savings well.	4.09	0.584	High
6	This model helps students use savings well.	4.33	0.517	High
7	This model helps students control spending well.	4.39	0.497	High
8	This model helps students control themselves to determine the priority of financial products to which they can subscribe.	3.61	0.541	High
9	This model enhances students 'understanding of financial risks such as debt and education loans.	3.89	0.343	High
10	This model fosters the responsible nature of students towards personal financial management.	4.40	0.490	High
11	This model helps students obtain new information related to financial products and services.	4.39	0.498	High

Table 4 (Continue)

No	Item	Mean Score	Standard Deviation	Interpretation
12	This model helps students manage investments well.	3.74	0.507	High
13	This model helps improve financial literacy among students.	4.38	0.487	High
	Overall average score	4.13	0.235	High

of 0.483. Furthermore, school leaders also think that this model can help students manage finances (mean score = 4.35, SD = 0.4789) as well as savings (mean score = 4.34, SD = 0.539).

Meanwhile, two items recorded the same mean score (4.32), and they are "this model is seen to help improve students' understanding of savings" (SD = 0.538) and "this model foster students' responsible attitudes towards personal finance" (SD = 0.469). In addition, secondary school leaders also agreed that this model could help foster a positive attitude towards financial management (mean score = 4.30, SD = 0.590), help improve students' knowledge and skills related to financial products and services (mean score = 3.96, SD = 0.612) as well as helping students manage investments well (mean score = 3.88, SD = 0.576). The lowest mean score compared to other items is 3.83 (SD = 0.504), which is "this model can help improve students' understanding of financial risks such as debt, education loans and investments". Based on the mean scores for all items, it can be concluded that all items state a high mean score, and this proves that secondary school

leaders in Malaysia agree that this financial literacy model is very important to develop, especially in the context of B40 secondary school students in Malaysia.

Analysis of Experts' Views on The Importance of Financial Literacy to B40 Secondary School Students in Malaysia

The analysis of the literature review found that financial literacy is important for all individuals, especially for secondary students in Malaysia from the B40 category. The researchers found that a consensus agreement among experts exists on this issue based on the respondents' statements:

Importance of Financial Literacy to B40 Secondary School Students in Malaysia.

"Financial literacy is very important. We want the B40 group to be financially literate. They know how to manage their financial situation so that they can bring their family out of poverty. To me, this is highly important" (P1).

"If asked whether it is important or not, it definitely is. This is because we must understand that when students are given

Table 5
The importance of the development of the Financial Literacy Model for B40 Malaysia Secondary School Students

No	Item	Mean Score	Standard Deviation	Interpretation
1	This model can help improve students' basic knowledge of finance.	4.42	0.493	High
2	This model can help improve students' knowledge and skills related to financial products and services.	3.96	0.612	High
3	This model can help improve students' understanding of savings.	4.32	0.538	High
4	This model can help increase students 'understanding of financial risks such as debt, education loans and investments.	3.83	0.504	High
5	This model can help students plan financially well.	4.38	0.505	High
6	This model can help foster a responsible attitude of students towards personal finance.	4.32	0.469	High
7	This model can help foster a positive attitude towards financial management.	4.30	0.590	High
8	This model can help foster a prudent attitude toward financial spending.	4.37	0.483	High
9	This model can help students manage their finances well.	4.35	0.478	High
10	This model can help students manage savings well.	4.34	0.539	High
11	This model can help students manage investments well.	3.88	0.576	High
	Overall average score	4.23	0.351	High

a certain amount of money, they do not know what to do with it because this is the norm since they were small. Thus, this is why they need to know how to manage money. Money needs to be saved, not to be spent for fun and buying motorbikes. It's really important" (P2). "Generally, financial literacy is a very important aspect. It is a basic that they need. After secondary school ends, they will enter a new world, thus they need to be independent and manage their money themselves. It comes first. It doesn't matter what you learn but the basic always comes to money in life. So,

financial literacy is important because in the end, those who lack financial literacy will end up with bankruptcy. It will cause a lot of problems. Basically for me, all students regardless of B40, M40, or T20 require financial literacy" (P3).

"From my observation, financial literacy is very important. Everyone needs to be smart in managing their personal financial situation. We do not want them to be involved in bankcruptcy or poverty after completing their studies" (P4).

"We worry that, if the children go out without financial literacy and are not able to manage their finances, it will cause them to be trapped. Maybe they are lacking in money, and seek financial help from illegal money lenders or be involved in scams, investments or other illegal activities. That's what might happen. But if they are aware of financial planning in their lives, it will be properly managed" (P5).

"So to me, it is more important for the B40 category to understand financial literacy because of their family's financial position. Which means they need to have a better understanding of money and how hard it is to earn money" (P6).

Respondent P1 believes that financial literacy is very important, especially for secondary school students who are part of

the B40 group, in managing their finances so that poverty is not inherited from their parents or families. Additionally, respondent P2 agrees that financial literacy is important so that students know how to handle money, as they find that most B40 students do not have experience in money management, especially in large amounts.

Respondent P3 believes that financial literacy is a basic knowledge needed in life, especially because money is necessary. Thus, with good financial literacy, students are able to be independent and manage their finances by themselves after completing high school. Furthermore, respondents P3 and P4 also agree that having good financial literacy will help them avoid poverty or bankruptcy after secondary school education.

Respondent P5 views financial literacy's importance from its impact and consequences after these students leave school. Students need to be given an adequate foundation of financial literacy to manage their finances well and have sufficient financial resources. Otherwise, they are likely to engage in illegal activities such as lending money from unlicensed moneylenders, online fraud, illegal investment activities and money laundering. Meanwhile, the respondent P6 thinks that the B40 students are a group that is in dire need of financial literacy due to their financial situation and the position of their families because when they understand the hardships and difficulties faced by their parents to earn money, they will be able to comprehend the importance of financial literacy in their daily lives.

DISCUSSION

Needs Analysis Towards the Development of a Financial Literacy Model for Malaysian B40 Secondary School Students

This study aims to obtain the views of secondary school leaders on the need and importance of developing a financial literacy model for national secondary school students in the context of B40 Malaysia. Overall, the mean score for both constructs, namely the need for the development of the B40 Malaysia Secondary School Students Financial Literacy Model and the importance of the development of the B40 Malaysia Secondary School Financial Literacy Model based on the level of acceptance of school leaders on the use of financial literacy model in the future was high. Therefore, the results of this study clearly illustrate that this financial literacy model is very important and necessary where school leaders are seen to be willing to use this literacy model to assess and improve the level of financial literacy of secondary school students in Malaysia in the future.

Referring to the study's findings that this model helps improve financial literacy among students, the mean score recorded was high. These findings clearly show a need to improve the financial literacy level of secondary school students from the B40 group in Malaysia, which is still seen at a low level. These findings are consistent with the findings of a study conducted in Malaysia, which compared the level of literacy of students in the United Kingdom with students in Malaysia by using survey

results from a questionnaire developed by the OECD. Overall, according to the study's findings, both countries still have low levels of financial literacy (Janor et al., 2017).

The same situation also occurred in Pahang and Negeri Sembilan, where a study involving secondary school students as respondents found that the financial literacy level of these students was still relatively low due to a lack of exposure related to financial knowledge (Ghazali et al., 2017; Ramasamy et al., 2018). This financial knowledge is one of the three main domains in financial literacy apart from behaviors and attitudes towards finance. Based on the study's results, the highest mean score recorded involved financial knowledge aspects. Thus, there is a need for the construction of this financial literacy model, where this model is seen to be able to improve students' basic knowledge related to financial aspects.

Meanwhile, the mean score for both items, namely, this model improves students' knowledge and understanding and helps students obtain new information related to financial products and services, was also high. This is in line with the current situation where there are many choices of financial products and services offered by banking and financial institutions in our country. Thus, financial literacy plays a very important role, especially for secondary school students who are still shallow in knowledge and understanding when choosing the best financial products and services when they grow up (Abdullah & Hussin, 2021).

Although most of these secondary school students are still entirely dependent on their parents in financial aspects, the exposure at an early stage seems to have the potential to form positive values, attitudes and behaviors towards financial management. It can indirectly increase their financial literacy to a better level. According to the study's findings, the high overall average score indicates the urgent need for a financial literacy model that focuses on B40 secondary school students in Malaysia.

The Importance of the Development of the Financial Literacy Model for B40 Malaysia Secondary School Students

Houston (2010) defines financial literacy as a measurement of a person's capacity to understand and apply knowledge related to their finances. Financial literacy also refers to the awareness, knowledge, skills, attitudes, and behaviors needed to make financial decisions that will have a longterm effect on one's financial well-being (Atkinson & Messy, 2012). Thus, adequate financial knowledge was able to help every individual, especially young people, solve finance-related problems (Durband et al., 2018). This statement was in line with the study's findings, where the mean score for the item that this model is very important in helping improve students' basic knowledge related to finance was the highest.

In addition, school leaders also agreed that this model is important to improve students' knowledge and skills related to financial products and services, savings as well as financial risks such as debt, education loans and investments. According to Dewi et al. (2020), people with better knowledge and understanding of financial concepts will be able to handle their finances better, considering their existing knowledge and experience of finance. The findings of this study were also in line with studies by the Central Bank of Brazil (2017) and OECD (2023) that basic knowledge of finance can also help consumers, especially young people, in choosing the best financial products and services that suit their needs in line with the rapid development of the current finance industry.

This financial literacy model is very important in improving the attitudes and behaviors of B40 secondary school students in Malaysia towards financial aspects. Students with a positive attitude toward money will also be more likely to display positive financial behaviors (Akben-Selcuk, 2015). The study's findings supported this statement, where the overall mean score for items related to students' attitudes towards finance was high. Findings showed that school leaders agreed that this model was important to foster students' responsible attitude towards personal finance, positive attitude towards financial management, prudent attitude towards financial spending, and help students plan financially well.

Apart from financial knowledge and attitudes towards finance, items for financial behavior also recorded a high mean score. Findings showed that school leaders agreed that this financial literacy model was important to help high school students manage their finances, savings and investments well. Financial literacy is also a basic knowledge in economics and finance that can assist an individual in making better decisions and subsequently achieving financial well-being in the future (Abdullah & Hussin, 2021).

Through the findings of this study, it can be seen that having even a little financial knowledge is useful for an individual to be financially resilient, especially in the face of difficult periods such as the COVID-19 pandemic that is plaguing the world today (Clark et al., 2020). Additionally, financially literate individuals are better prepared to handle financial difficulties because they can manage finances better before this pandemic. Thus, they are more likely to survive the shocks of this economic crisis (Van Dalen & Henkens, 2020). The aspect of financial literacy is seen to play a very important role in the daily life of an individual, not only during the COVID-19 pandemic but also at all times to ensure a positive impact on financial well-being in the future (Sabri & Zakaria, 2015; Yuesti et al., 2020; Zulfiqar & Bilal, 2016).

CONCLUSION

This study identified the need to develop a financial literacy model for Malaysian B40 secondary school students. The school leaders perceived that the financial literacy model is needed and important for B40 Malaysian secondary school students to build a strong foundation of financial literacy. A strong foundation of financial literacy can provide students with the

knowledge and skills to confidently make financial decisions and manage personal finances efficiently and wisely in choosing the best financial products and services. It can be concluded that this survey has provided a positive overview of the need and importance of developing a model of financial literacy for these secondary school students. This study shows that it is important to obtain feedback from various stakeholders to understand the importance and need for developing a financial literacy model for B40 secondary school students in Malaysia.

ACKNOWLEDGEMENT

This work was supported by the Fundamental Research Grant Scheme (FRGS/1/2019/SS109/UM/02/11, FP079-2019A, Kementerian Pendidikan Malaysia).

REFERENCES

Abdullah, M. A., & Hussin, M. F. (2021). Literasi kewangan Islam: Sorotan kajian lepas dan kaedah pengukuran [Islamic financial literacy: Highlights of past studies and measurement methods]. *Journal of Business Innovation*, 5(1), 43-45.

Acharya, A. S., Prakash, A., Saxena, P., & Nigam, A. (2013). Sampling: why and how of it? *Indian Journal of Medical Specialities*, 4(2). https://doi.org/10.7713/ijms.2013.0032

Ahmad, N. W., Ripain, N., Bahari, N. F., & Shahar, W. S. S. (2016). *The impact of financial literacy on financial behavior: A literature study* [Poster presentation]. 2nd International Conference on Economics & Banking 2016, Selangor, Malaysia. https://conference.uis.edu.my/iceb2016/eproceedings/EB029.pdf

- Akben-Selcuk, E. (2015). Factors influencing college students' financial behaviors in Turkey: Evidence from a national survey. *International Journal of Economics and Finance*, 7(6), 87-94. https://doi.org/10.5539/ijef.v7n6p87
- Aladdin, Y. H., & Ahmad, A. (2017). Tahap literasi kewangan di kalangan mahasiswa [The level of financial literacy among students][Poster Presentation]. International Conference on Global Education V, Padang, Indonesia. https://www.researchgate.net/publication/321049902_tahap_literasi_kewangan_di_kalangan_mahasiswa
- Albeerdy, M. I., & Gharleghi, B. (2015). Determinants of the financial literacy among college students in Malaysia. *International Journal of Business Administration*, 6(3), 15-24. https://doi.org/10.5430/ijba.v6n3p15
- Atkinson, A., & Messy, F. A. (2012). Results of the OECD/International Network on Financial Education (INFE) pilot study. https://doi.org/10.1787/5k9csfs90fr4-en
- Beutler, I. F., & Hibbert, J. R. (2001). The effects of financial behaviors on the quality of family life: Evidence from adolescent perceptions [Poster presentation]. 19th Annual Association for Financial Counseling and Planning Education Conference, Orlando, United States.
- Bland, M. (2015). *An Introduction to Medical Statistics* (4th ed.). Oxford University Press. https://doi.org/10.1007/s00362-017-0925-5
- Cameron, M. P., Calderwood, R., Cox, A., Lim, S., & Yamaoka, M. (2013). Personal financial literacy among high school students in New Zealand, Japan and the USA. *Citizenship, Social and Economics Education*, 12(3), 200-215. https://doi.org/10.2304/csee.2013.12.3.200
- Central Bank of Brazil (2017). *Financial stability* report March 2017. https://repositorio.banrep. gov.co/handle/20.500.12134/9785
- Chaulagain, R. P. (2015). Contribution of financial literacy to behavior. *Journal of Economics and Behavioral Studies*, 7(6(J)), 61-71. https://doi.org/10.22610/jebs.v7i6(j).618

- Chowa, G. A., Despard, M. R., & Osei-Akoto, I. (2012). Financial knowledge and attitudes of youth in Ghana. Washington University, Center for Social Development. https://www.researchgate.net/publication/309282235_Financial_knowledge_and_attitudes_of_youth_in_Ghana Creswell, J. W. (2005). Educational research: Planning, conducting, and evaluating quantitative and qualitative research. Pearson. https://www.researchgate.net/publication/324451568
- Danes, S. M., & Hira, T. K. (1987). Money management knowledge of college students. *Journal of Student Financial Aid*, 17(1), Article 1. https://doi.org/10.55504/0884-9153.1435
- Dewi, V., Febrian, E., Effendi, N., & Anwar, M. (2020). Financial literacy among the millennial generation: Relationships between knowledge, skills, attitude, and behavior. Australasian Accounting, Business and Finance Journal, 14(4), 24-37. https://doi.org/10.14453/aabfj. v14i4.3
- Durband, D. B., Law, R. H., & Mazzolini, A. K. (2018). *Financial counseling*. Springer. https://doi.org/10.1007/978-3-319-72586-4
- Dwivedi, SN., Sreenivas, V., & Sundaram, K. R. (2014). Medical statistics: Principles and methods (2nd ed). Lippincott Williams & Wilkins.
- Financial Education Network. (2019). *Malaysia* national strategy for financial literacy 2019 2023. https://www.fenetwork.my/
- Firli, A. (2017). Factors that influence financial literacy: A conceptual framework. *IOP Conference Series: Materials Science and Engineering, 180, Article 012254.* https://doi.org/10.1088/1757-899x/180/1/012254
- Friedline, T. (2012). Predicting children's savings: The role of parents' savings for transferring financial advantage and opportunities for financial inclusion. *Children and Youth Services Review,* 34(1), 144-154. https://doi.org/10.1016/j.childyouth.2011.09.010
- Ghazali, M. S., Azer, I., Mohamad, S. A., Muhamad, A. N. A., & Mat, A. (2017).

- Personal financial literacy among high school students in Raub Pahang, Malaysia. *Journal of Engineering and Applied Sciences, 12*(7), 1830-1834. https://www.researchgate.net/publication/318652423Gomulia, B., Barlian, I., & Dewi, V. I. (2020). Financial literacy for elementary school students in urban area. *Frontiers Journal of Accounting and Business Research*, 2(1), 1-9.
- Hannafin, M. J., & Peck, K. L. (1988) The design development and evaluation of instructional software. Macmillan Publishers. https://www. researchgate.net/publication/31736669
- Household Income and Expenditure Survey Report. (2022). Household Income & Expenditure. https://open.dosm.gov.my/dashboard/household-income-expenditure
- Hung, A., Parker, A. M., & Yoong, J. (2009). Defining and measuring financial literacy. RAND corporation.https://doi.org/10.2139/ ssrn.1498674Hussin, N. L., & Rosli, L. S. (2019). Financial literacy among students at KUIM. Journal of Business Innovation, 4(1), 102-110.
- Huston, S. J. (2010). Measuring financial literacy. *Journal of Consumer Affairs*, 44(2), 296-316. https://doi.org/10.1111/j.1745-6606.2010.01170.x
- Isomidinova, G., Singh, J. S. K., & Singh, K. (2017).
 Determinants of financial literacy: A quantitative study among young students in Tashkent, Uzbekistan. Electronic Journal of Business & Management, 2(1), 61-75.
- Janor, H., Yakob, R., Hashim, N. A., Zanariah, & Wei, C. A. C. (2016). Financial literacy and invesment decisions in Malaysia and United Kingdom: A comparative analysis. *Malaysian Journal of Society and Space*, 12(2), 106-118.
- Jordà, Ò., Singh, S. R., & Taylor, A. M. (2022). Longerrun economic consequences of pandemics. *Review of Economics and Statistics*, 104(1), 166-175. https://doi.org/10.1162/rest a 01042

- Jorgensen, B. L. (2007). Financial literacy of college students: Parental and peer influences [Doctoral dissertation, Virginia Polytechnic Institute and State University]. Virginia Tech. http://hdl. handle.net/10919/35407
- Lusardi, A. (2015). Financial literacy skills for the 21st century: Evidence from PISA. *Journal of Consumer Affairs*, 49(3), 639-659. https://doi.org/10.1111/joca.12099
- Lusardi, A., & Mitchell, O. S. (2008). Planning and financial literacy: How do women fare? American Economic Review, 98(2), 413-17. https://doi.org/10.1257/aer.98.2.413
- Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature*, *52*(1), 5-44. https://doi.org/10.1257/jel.52.1.5
- Mohd Tajudin, N., Othman, R., & Zamzamir, Z. (2019). A thinking-based learning module for enhancing 21st century skills. *International Journal of Innovative Technology and Exploring Engineering*, 8(6S4) 397-401. https://doi.org/10.35940/ijitee.f1080.0486s419.
- Mokhtar, N., Dass, T. M., Sabri, M. F., & Ho, C. S. (2018). A preliminary evaluation of financial literacy in Malaysia. *Journal of Wealth Management & Financial Planning*, 5(6), 3-16. http://dx.doi.org/10.5539/ass.v11n18p49
- Monticone, C. (2010). How much does wealth matter in the acquisition of financial literacy? *Journal of Consumer Affairs*, 44(2), 403-422. https://doi.org/10.1111/j.1745-6606.2010.01175.x
- Moore, D. (2003). Survey of financial literacy in Washington State: Knowledge, behavior, attitudes, and experiences, social and economic sciences research center, Washington State University. Washington State University, 10(2.1), 4729-4722. https://doi.org/10.13140/2.1.4729.4722
- National Insolvency Department. (2019). *Bankruptcy Statistic 2019*. https://www.mdi.gov.my/index.php/legislation/statistics/75-bankruptcy/1984-bankruptcy-statistic-2019

- Organisation for Economic Cooperation and Development, OECD. (2016). *PISA 2015 Results in Focus*. PISA in Focus. (Report No. 67). OECD Publishing, Paris.
- Organisation for Economic Cooperation and Development, OECD. (2023). *OECD/INFE* 2023 International Survey of Adult Financial Literacy. https://doi.org/10.1787/56003a32-en
- Othman, R., Aris, N. A., Mardziyah, A., Zainan, N., & Amin, N. M. (2015). Fraud detection and prevention methods in the Malaysian public sector: Accountants' and internal auditors' perceptions. *Procedia Economics and Finance*, 28, 59-67. https://doi.org/10.1016/s2212-5671(15)01082-5
- Pallant, J. (2020). SPSS survival manual: A step by step guide to data analysis using IBM SPSS. Routledge. https://doi.org/10.4324/9781003117452
- Piaw, C. Y. (2013, 2020). Mastering research statistics. Malaysia. McGraw Hill.
- Radianto, W. E. D., Efrata, T. C., & Dewi, L., (2019.) Impact of family's socio-economic context on financial literacy of young entrepreneurs. *Expert Journal of Business and Management*, 7(2), 230-235. https://www.researchgate.net/publication/342048934
- Rai, K., Dua, S., & Yadav, M. (2019). Association of financial attitude, financial behaviour and financial knowledge towards financial literacy: A structural equation modeling approach. *FIIB Business Review*, 8(1), 51-60.https://doi. org/10.1177/2319714519826651
- Ramasamy, M., Kenayathulla, H. B., & Ghani, M. F. A. (2018). Socioeconomic factors that affect the financial literacy skills of secondary school students in Negeri Sembilan. *JuPiDi: Jurnal Kepimpinan Pendidikan*, 5(3), 10-33.
- Ramlan, A. M. (2017). Improving the students' mathematics learning outcomes through quantum teaching method. *Journal of Mathematics Education*, 2(1), 24-30. https://doi.org/10.31327/jme.v2i1.258

- Rowley, J. (2014). Designing and using research questionnaires. *Management Research Review,* 37(3), 308-330. https://doi.org/10.1108/mrr-02-2013-0027
- Sabri, M. F., & Zakaria, N. F. (2015). The influence of financial literacy, money attitude, financial strain and financial capability on young employees' financial well-being. *Pertanika Journal of Social Sciences & Humanities*, 23(4).
- Said, N., Musa, M., Meng, C. C., & Yaakob, M. N. (2022). Development of a consumer mathematics (financial management) training module for secondary school mathematics teachers: Is there a need? *International Journal of Education, Islamic Studies and Social Sciences Research,* 7(2), 181-191.
- Santini, F. D. O., Ladeira, W. J., Mette, F. M. B., & Ponchio, M. C. (2019). The antecedents and consequences of financial literacy: A meta-analysis. *International Journal of Bank Marketing*, 37(6). 1462-1479. https://doi.org/10.1108/ijbm-10-2018-0281
- Sohn, S. H., Joo, S. H., Grable, J. E., Lee, S., & Kim, M. (2012). Adolescents' financial literacy: The role of financial socialization agents, financial experiences, and money attitudes in shaping financial literacy among South Korean youth. *Journal of Adolescence*, 35(4), 969-980. https://doi.org/10.1016/j.adolescence.2012.02.002
- Susanti, N., Rahmayanti, R., Padmakusumah, R. R., & Susanto, R. (2019). Factors affecting students' financial literation: A study on Widyatama University, Indonesia. *Universal Journal of Educational Research*, 7(5), 7-14. https://doi. org/10.13189/ujer.2019.071502
- Susilowati, N., Kardiyem, K., & Latifah, L. (2020). The mediating role of attitude toward money on students' financial literacy and financial behavior. *JABE (Journal of Accounting And Business Education)*, 4(2), 58-68. http://dx.doi.org/10.26675/jabe.v4i2.6622

- Thomas, B., & Subhashree, P. (2020). Factors that influence the financial literacy among engineering students. *Procedia Computer Science*, 172, 480-487. https://doi.org/10.1016/j. procs.2020.05.161
- Usman, M., Ali, Y., Riaz, A., Riaz, A., & Zubair, A. (2020). Economic perspective of coronavirus (COVID-19). *Journal of Public Affairs*, 20(4), Article e2252. https://doi.org/10.1002/pa.2252
- van Dalen, H. P., & Henkens, K. (2020). The COVID-19 pandemic: Lessons for financially fragile and aging societies. *Work, Aging and Retirement*, 6(4), 229-232. https://doi.org/10.1093/workar/waaa011
- Whitebread, D., & Bingham, S. (2013). Habit formation and learning in young children. London Money Advice Service. https://altorwealth.com/wp-content/uploads/2024/04/the-money-advice-service-habit-formation-and-learning-in-young-children-may2013.pdf