



Research Article

Are our children financially illiterate? The case in Kedah

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ABSTRACT

The main objective of this paper is to identify the level of children financial literacy in Kedah and analyze the significant factors that influenced their level of financial literacy. This study surveyed 320 primary school students in Kedah, aged from 7 to 12 years old using mixed method. Results shows that children in Kedah is financially literate. Besides that, there are significant different in children financial literacy according to their parent education level, parental income, student class group and school location. Based on regression results, showed that saving behavior, spending behavior, peer role, school involvement, parent role, and technology are significantly influence children financial literacy.

Keywords: *Financial Literacy; Bankruptcy; Saving and Spending Behavior; Financial Socialization Agents*

1. INTRODUCTION

Financial literacy is very important as it equips an individual with necessary knowledge, skills and tools for consumers to be confident in every financial decision made (Ali, 2013). It is essential and prerequisite for people to have broader literacy of finance as it would qualify us with the awareness and knowledge about how to manage our money thus prevents us from being trapped in bankruptcy status. However, according to S&P Global Financial Literacy (2014), financial literacy rate in Malaysia is only at 36 per cent in comparison to developed countries that in average are 59 per cent financially literate. In Malaysia, from 2014 to 2018, the number of bankruptcy cases reported by Department of Insolvency (2018) were 95,105. Could this issue be related to insufficiency of financial knowledge among Malaysians? Indeed, financial literacy plays a crucial role by equip people with correct knowledge and enough awareness in managing their finance effectively thus hinder themselves from falling into bankruptcy. According to Huhmann and McQuitty (2009), deficiency of financial literacy is directly related to individual bankruptcy cases. This is because they found that it was difficult for an illiterate individual to grasp the knowledge clearly on the costs and benefits of financial products offered to them, which unconsciously lead them to erroneous financial decisions. The Department of Insolvency Malaysia (2018) reported that there were 4,775 insolvency cases in Kedah from year 2014 to 2018. Fig. 1

reported that, from year 2014 to 2018, cumulative number of bankruptcy cases was continuously increased to 4,775 (343.77 per cent) number of cases from year 2014 to 2018.

Huhmann and McQuitty (2009) highlighted on positive relationship between financial literacy and financial capacity towards the bankruptcy where people failed to understand the cost and benefits of the financial products that lead them to make wrong financial decision. Murugiah (2016) addressed one of the major reasons that pointed by AKPK, on why many individuals are in indebtedness are due to lack of knowledge in financial literacy. Besides that, Murugiah (2016) also found that Malaysians consider themselves as financial literate but, they are not. She also pointed out that most of Malaysian citizens have slight awareness about time value of money, interest rate, financial products and risk of diversifications. Malaysians still do not have consciousness that any erroneous action taken could make them fall into wrong financial decisions. Most Malaysians might have insufficient financial literacy due to the reason that they were not getting enough exposure in formal financial educations from the early stages. It was supported by a Fabris and Luburic (2016), which concluded that there is lack in formal financial education systems provided to youth and children.

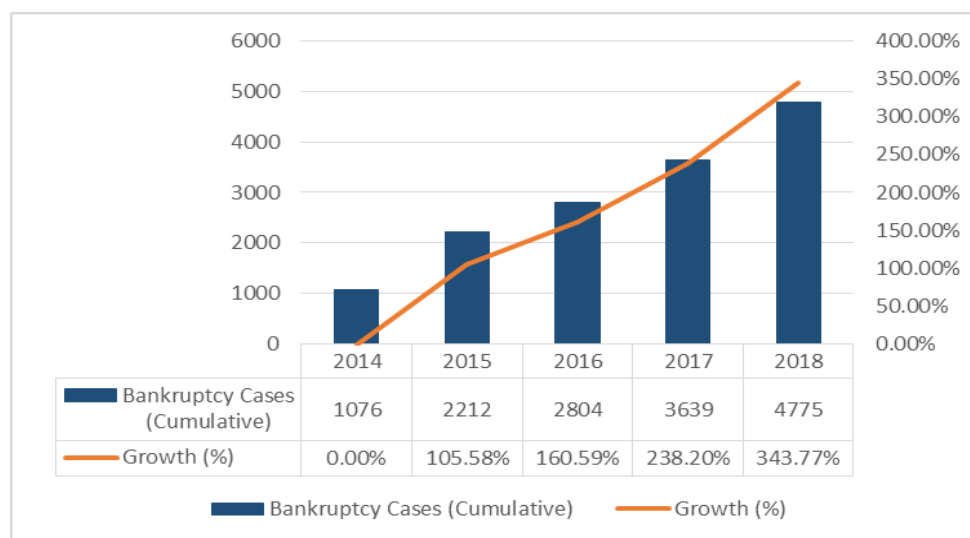


Fig. 1. Cumulative Bankruptcy Cases Reported in Kedah from Year 2014 to 2018

(Source: Malaysia Department of Insolvency, December 2018)

A study conducted in Malaysia shown that there were few financial literacy knowledges taught to children in early stages and this has been verified by a finding from Ghazali, Azer, Mohamad, Arifin and Mat (2017) who conducted a study in Raub, Pahang. Their results showed that high school students were financially illiterate. The researchers also found that students with business exposure could give significant influence on the financial literacy compared to students who did not. While, Sabri and MacDonald (2010) also found that college students in Malaysia were not financially literate although they are considered as market essential consumers. In addition, a study in Kedah also showed that there was weak money management among college students that resulted to poor financial literacy (Ibrahim, Harun and Isa, 2009). In order to handle this financial literacy issues among young people, OECD (2005) recommended that, individuals should have financial education as

early as possible and it should start not only at primary school but also pre – school. Besides that, based on several findings from the previous studies, one of the implications need to be intensify in order to curb the financial literacy in Malaysia is education at school level (Ali, 2013).

In Malaysia, Bank Negara Malaysia and the Securities Commissions Malaysia had launched the “5 Years National Strategy for Financial Literacy” from year 2019 to 2023 with an objective to increase Malaysians’ financial literacy in all life stages starting from school children to retirees. This plan is carried out after result showed that one in three Malaysians that have insufficient income of household usually has less knowledge in managing money thus become financially illiterate. In addition, BNM (2019) found that one in three Malaysian working adults often borrow money to buy essential goods. Lastly, in term of handling their own finances, one in three Malaysians was believed to be lacked discipline and self – control. Based on the road map of five years shaping Malaysians to be financially literate that is meticulously planned by Bank Negara Malaysia, most of the plans were designated to nurture values in early age. An act of grasping the knowledge of managing expenses among Malaysians is the first concern in this road map. There are four actions lie under this priority which firstly is to implement the financial education into the curriculum for each level of education including pre - school, primary school and secondary school. Next is to carry out the financial education through the co - curricular activities. Establishing the capacity development and giving support for teachers is the third action which also becomes the first concern in this road map. Lastly, endless support to the students, parental groups and community will be given. Therefore, it is certainly crucial to delve into the level of financial literacy among children nowadays that one may get greater picture of how to work in raising the literacy rate among them.

Hence, the issue of financial literacy was indeed a national issue. This is because previous study showed lack of financial literacy among Malaysian that spread at all levels (see for examples; Sabri and MacDonald, 2010; Ali, 2013; Murugiah, 2016; Ghazali, Azer, Mohamad, Arifin and Mat, 2017). There were also very little study focusing on children in primary school financial literacy (see for examples; Grody et al., 2008; Holden et al, 2009; Fabris and Luburic, 2016; Harari, 2016; Isomidinova and Singh, 2017). Thus, in order to ensure the national strategy for financial literacy successfully implemented in Kedah, this paper measures the level of financial literacy among children in Kedah and the factors that influence children financial literacy in Kedah. This paper also examines the significant differences in children financial literacy according to children and parental characteristics.

2. LITERATURE REVIEW

OECD (2015) defines the financial literacy as a person’s knowledge, comprehension and skills to manage their finances. According to Lusardi and Mitchell (2013), financial literacy can be defined as an ability of people to process the economic information and make decisions on debt, pension, wealth accumulation and financial planning. However, financial literacy among children can be defined as the capabilities of young children to learn about sharing, savings and spending that will support good financial habits and practices when they become adults in future (Holden et al., 2009).

In 1998, American college students was found financially illiterate that limits their ability to make financial decisions (Chen and Volpe, 1998). A financial illiterate person who failed to make a financial budget and unable to identify a financial product that can satisfy his needs and wants was having a high tendency to be trapped under scams activities (Emmanuel, 2010). Further, a study by Fabris and Luburic (2016) found that the financial literacy level was still unsatisfactory for both children and youth not only in Montenegro region but also globally due to lack of formal financial education provided to young children age from 6 to 19 years old. A study in Malaysia conducted by Ibrahim, Harun and Isa (2009) found that a degree college student in UiTM Kedah were financially illiterate due to inadequate financial knowledge and poor money management skills. Ghazali et al. (2017) stated that financially literacy was important for individuals to make a good financial decision for short-term and long-term period. However, they found that high school students age between 18 and 19 years old were financially illiterate. Ibrahim, Harun and Isa (2009) and Ghazali et al. (2017) agreed that financial illiterate college students in Malaysia tend to have financial difficulties as they were weak in their financial attitudes and financial knowledge.

According to previous literature (see, for example Bernheim et al., 2001; Sohn et al., 2012; Lusardi, 2008; Alekam et al., 2018), financial literacy is positively influenced according to the financial behavior such as behavior of saving and spending where financially literate person save and spend the money wisely. Saving behavior plays a crucial role towards the financial literacy of the Malaysian citizens. According to Wong (2017), if an emergency event occurs to the Malaysian people, more than 75 per cent of Malaysian people faced difficulty to prepare at least RM1,000 cash money. This happened during the pandemic of COVID19 whereby the government of Malaysia has announced Financial Relief Facility at the end of March 2020 to assist Malaysian during the unprecedented crisis. According to Bank Negara Malaysia (2019) 1 in 5 Malaysian working adults did not save money. Carvalho (2019) stated that the EPF 2017 report showed that most Malaysians had poor saving behavior. A retired person can only sustain for 5 years with their EPF savings after their retirement at 60 years old despite that the average lifespan for Malaysian people is at 75 years old.

Financial behavior was found positively influenced adolescent financial literacy where, adolescent financial literacy could be increased to high level if they have a good financial behavior towards money management (Sohn et al., 2012). In Malaysia, a study conducted by Sabri and MacDonald (2010) discovered that college students in Malaysia who have better saving behavior and less financial problems were likely have better financial literacy. According to Harari (2016), children age between 6 to 12 years old with better financial literacy will have good saving behavior and intention on saving money during the financial literacy process. Furthermore, a financial literacy test conducted on adolescent group in South Korea using high school students as their sample also showed that there is a significant positive relationship between saving behavior and financial literacy. A financially literate students have a good saving behavior because they were found to manage their own savings successfully (Sohn et al., 2012).

Davidson (2006) stated that people in modern world tend to “spend now, save later” compared to past years and this trend leads to the increasing number of bankruptcies and family problems. People were too focused on spending money rather than planning for

future. Sorooshian and Teck (2014) found that spending behavior of college students were influenced by their financial literacy. Results showed that when college students were financially illiterate, they were likely having bad spending behavior. They tend to spend more on their wants rather than their necessity. Similar with findings by Alekam, Salleh and Mohktar (2018), Malaysian young generations between ages 18 to 34 years old had positive significant relationship between spending behavior and financial literacy. However, results showed that Malaysian young generations were financially illiterate as they did not spend their money wisely. They tend to spend their money allowances received more on expenses for phone and gadgets. In addition, Bank Negara Malaysia (2019) discovered that Malaysian working adults are spending more than their income. Three out of ten Malaysian working adults borrowed money to buy essential goods.

Furthermore, Chan and McNeal (2006) expressed that parents, peer friends, school and media play important roles and have high influence on a student's financial attitude. According to Lusardi, Mitchel and Curto (2009), financial knowledge of a person was not obtained through the financial education networks but can also be gained through the socialization agents such as family, friends, media and schools. It was in line with findings by Isomidinova and Singh (2017), they stated that financial literacy among students in Uzbekistan significantly influenced by socialization agents where higher level of financial socialization agent resulted in higher level of financial literacy. Besides that, the researcher found that the financial socialization agent played a crucial role in a person's life cycle. Grody et al., (2008) and Harari (2016) agreed that parent play an important role in teaching their children about money. However, Ermisch and Francesconi (2001) found that there was strong evidence that employed parent have less time to interact with their children and it will affect their children learning processes. It was supported by study from Norviltis and MacLean (2003) and Grody et al., (2008), where, they found that when it comes about money, parents rarely or never taking part to talk about money management with their children. This finding was in lined with Jorgensen and Savla (2010), where he found 94 per cent of the young adult age 6 to 17 years old rely to their parents for financial education but many parents do not give an exposure about financial education to their children.

According to OECD (2018), advertising and peer pressure could affect an individual's financial decisions and its outcomes. A research done by Isomidinova and Singh (2017) showed that as children grow older, the financial literacy which children have acquired were strongly influenced by their peers and no longer influenced by their parents. It was supported by Sohn et al. (2012) where they found that as children age more than 15 years old, the financial literacy of children were influenced by their peers and they also stated that family communication about financial matters with the children decrease.

Isomidinova and Singh (2017) stated that by having financial education in school would increase understanding of financial literacy thus improve personal finance of the students. Bank Negara Malaysia (2019) also expressed that financial literacy of Malaysian citizen can be improved through an appropriate and adequate exposure of financial education. Thus, the first strategy and action which could be done to improve the financial literacy is by expanding financial education and it should start from schools. In other hands, it shows that involvement of school holds a significant part of developing and educating financial

literacy among children successfully. Besides that, According to Zaimah et al. (2013), financial education is a program on knowledge and skills that could help to educate and improve students' financial literacy through any related financial concepts or topics. By having a proper financial education in school, it will increase the financial literacy and financial knowledge of the high school students (see for example, Danes et al., 2013; Danes & Haberman, 2007; Asarta, Hill & Meszaros, 2014 & Wagner, 2015).

Research done by Hilgert et al. (2003), shown that financial knowledge could be obtained by people not only from formal education but it can be learned through socialization agents such as peer, family and conservatives media (television and radio). However, in 2006, an overview of financial education and program evaluation showed the level of the students at Georgia and Illinois used media as a platform to seek financial knowledge was only at 3.6 per cent for technology and only 1.5 per cent using CDs (Lyons et al., 2006). In addition, a study done in Malaysia by Ismail, Sergueieva and Singh (2011) showed attitudes of university students in Malaysia is not influenced by conservative media in term of loan repayments. This is because the researchers found that in cases of formal issues like loan repayments or default in payments, Malaysian parents were exposed more to media compared to the students. However, by adapting an online learning in school, it can be an effective tool to detect the lack of financial literacy among students (Wolla, 2017).

3. METHODOLOGY

In total, 320 pupils aged from 7 to 12 years old were recruited as participants from various primary schools in Kedah. This study used simple random sampling procedures as it gives entire population a chance to be selected during the collection data. Besides that, simple random sampling procedures is more straightforward procedures and it reduces a selection bias (Barratt, 2009; Shantikumar, 2018). At first this study used face to face method to collect data, however due to Movement Control Order (MCO) enforced by Malaysia Government on 18th March 2020, the online questionnaire was implemented. Hence the proportion of rural area in the sample is 38.44 per cent compared to urban area with a percentage of 61.56 per cent. The higher rate of respondents in urban area may cause by greater exposure to internet access compared to rural area. Out of 320 usable questionnaires, 175 were collected based on face to face method and the remaining (145 questionnaires) were collected through online method. There were 99 (30.94 per cent) respondents aged between 7 to 9 years old, and the remaining 221(69.06 per cent) respondents are aged between 10 to 12 years old. The sample consists of 154 (48.13 per cent) male students whilst female is 166 (51.87per cent) pupils. The majority ethnic group in this sample is Malays with 311 (97.19 per cent) respondents followed by Indian with 7 (2.19 per cent) and Chinese with 2 (0.63 per cent) respondents.

There were 46 multiple choice questions (refer to Part B of Table 1) distributed to the primary school pupils and 9 multiple choice questions (refer to Part A of Table 1) were prepared for their parents. Table 1 also showed the structure of the questionnaires. The questionnaires were developed through adaptation of previous studies, Incharge Debt Solution (a non-profit credit counseling organization) and The Organisation for Economic Co-operation and Development (OECD).

Table 1. Questionnaire Structure

Questionnaire Structure	Operational definition	Number of Questions	Reference
Part A: Parental Section (Total)		9	
- Parental Characteristics - Parental Roles	Parents Role are described as an attitude and characteristics of the parents that could influence their children financial literacy.		1. Harari (2016) 2. Grody et.al (2008) 3. Jorgensen (2007)
Part B: Students Section (Total)		46	
- Student Characteristics - Financial Literacy	Student characteristics such as age, gender, name of school and ethnics Children Financial literacy is a capability of young children about sharing, saving and spending that will support a good financial habits and practices.	4	1. OECD 2. Incharge Debt Solution 3. Chinen and Endo (2012) 4. Harari (2016) 5. Grody et.al (2008)
Spending Behavior	Spending Behavior are described as an attitude of the children to spend their income to utilize their needs and wants.	7	1. OECD 2. Incharge Debt Solution 3. Harari (2016) 4. Grody et.al (2008)
Saving Behavior	Saving Behaviors are described as attitude of the children to save part of an income after minus their expenses.	10	1. OECD 2. Harari (2016) 3. Grody et.al (2008) 4. Chinen and Endo (2012) 5. Sabri and Mac Donald (2010) 6. Incharge Debt Solution 7. Wolla (2017)
Peer Roles	Peer Role are described as an attitude and characteristics of the peer that could influence the children financial literacy.	4	1. OECD 2. Chen and Volpe (1998)
School Involvement	School Involvement are described as a participation of the school towards the children financial literacy.	3	1. Harari (2016) 2. Jorgensen (2007)
Technology	Technology are described as a medium that usually used by the children could influence the children financial literacy.	3	1. Jorgensen (2007)

The determinants of financial literacy consist of two variables which are financial behavior and financial socialization agent. In this study, financial behavior of the children was measured through saving and spending behavior, whilst financial socialization agents were measured through parents, peer, school involvement and technology/media. The questionnaire initially begins with parents' behavior and background (nine questions); followed by saving behavior (ten questions); spending behavior (seven questions); peer role (four questions); school involvement (three questions) and technology (three questions) According to Lusardi and Mitchell (2013), spending and saving behavior was part of consumer behavior and it showed strong influence towards the financial knowledge of a person during their old age. Thus, saving behavior is used to measure students attitude, either they are saving their pocket money or not. The questions about children saving behavior consists of 10 questions. Spending behavior is also used to measure the children

attitude towards money either they are spending their money wisely according to the needs and wants. Children were asked 7 questions on their spending behavior.

Lusardi et al. (2009), mentioned that human financial knowledge was not obtained through the financial education networks but also obtained through the socialization agents such as family, friends, media and schools. Thus, in order to measure the determinants of financial socialization agent towards the children financial literacy, the questions were designed according to the role of their parents, peers, schools and the influences of media towards the children financial literacy. Shim et al. (2010) stated that parents gave more significant influence towards the first-year university student financial education compared to the schools and it showed a positive relationship towards student financial and their parents. Questionnaires for parents was designed to measure the degree of their parent participation towards the children financial literacy. There were nine questions developed, where four questions were about parental background and five questions for parental roles. According to Isomidinova and Kartar Singh (2017) as children grows older, financial literacy of the children were strongly influenced by their peers and no longer influenced by their parents. Thus, 4 questions were developed in order to measure the influences of the peers and their roles towards children financial literacy. Isomidinova and Kartar Singh (2017) mentioned that by implementing financial education in school, it would improve understanding of financial literacy and personal finance of the students. Hence questions about school involvement were asked to the children to measure the involvement from school towards the children financial literacy. Children were also asked about their experienced on dealing with money in school. There were three questions about school involvement. Furthermore, Barbour and Reeves (2009) found out that offering an online learning classes to the students, can improved their outcomes and skills as well as provide a high-quality learning opportunity to the students. Three questions were asked on children financial experienced towards media/technology that could influenced the financial literacy.

The scales of questionnaire used in this study is based on binary numerical system which value can be either 1 (correct answer) or 0 (wrong answer). Cronbach alpha depends on the scale of measurement and was used for reliability test. In general, the higher the scale the higher the reliability item. Although it is desired to have a Cronbach alpha 0.7 and above (Nunnally, 1978), however, if the scale is below than 10 the Cronbach alpha could be lower (example: 0.5) (Pallant, 2000; Nunnally, 1978). In average, the Cronbach alpha for the questionnaire is 0.55. According to Bujang, Omar and Baharum (2018), the reliability of the questionnaires was also considered acceptable when Cronbach alpha is between 0.50 and 0.70 since the response from questionnaire used binary numerical system.

The ratio for skewness and kurtosis is between +2 to -2 which shows normal tabulation for the data used as suggested by Hair Jr et al. (2010), and George and Mallery (2010), except for data on school involvement. In order to fix this issue, Central Limit Theorem was used as a basis since only one variable found to be abnormal for this study. Central Limit Theorem assumed that the population is normal even though the sample is abnormal. According to Statistics Solution (2013), if the sample size is sufficiently and greater than 200, thus, the normality test is not needed. The scatter plot of the data also shows that the financial

literacy variables were linear correlated and regression analysis can be done for this study. The tolerance value was greater than 0.1 and VIF value was less than 10 for all variables in range as suggested by Pallant (2005), which shows that the independent variables use for this study is almost not correlated to each other (Hair, Anderson, Tatham and Black, 2006).

Based on the questions contained in the questionnaire, which were derived from the literature as mentioned above, a regression model took the following form.

$$FL_{it} = \alpha + \beta_1 SAVING + \beta_2 SPENDING + \beta_3 PARENT + \beta_4 PEER + \beta_5 SCHOOL + \beta_6 TECH + \varepsilon$$

Where,

α is intercept;

FL_{it} is Financial Literacy;

SAVING is Saving Behavior;

SPENDING is Spending Behavior;

PARENT is Parents Role;

PEER is Peer Role;

SCHOOL is School Involvement;

TECH is Technology;

ε is error term.

4. RESULTS

4.1. FINANCIAL LITERACY LEVEL

In order to measure the financial literacy, 15 questions were assigned in the questionnaire. Each question that answered correctly will earn 1 mark. Based on Chen, Volpe and Pavlicko (1996), the passing rate indicator used on this study to measure financial literacy is based on the mean value of the marks, whereby mean score >80 per cent is high level of financial literacy; 60 per cent-79 per cent is moderate level of financial literacy; and below 60 per cent is low level of financial literacy. The mean score for financial literacy in this study is 12.4656. The total score is 15 (15 questions x 1). Thus, the score for financial literacy in this study is 83.10 per cent (12.4656/15). Around 225 (70.31 per cent) children in the sample scored more than 80 per cent (high level of financial literacy). Majority of children in Kedah have high level of financial literacy.

Table 2. Level of Financial Literacy According to Children Characteristics

	Low	Moderate	High
Part A: Financial Literacy Level (N=320)			
Age:			
7 to 9 years old	3 (0.94%)	35 (10.94%)	61 (19.06%)
10 to 12 years old	8 (2.5%)	49 (15.31%)	164 (51.25%)
Gender:			
Male	6 (1.88%)	40 (12.5%)	108 (33.75%)
Female	5 (1.56%)	44 (13.75%)	117 (36.56%)
School location:			
Urban	7 (2.19%)	55 (17.19%)	135 (42.19%)
Rural	4 (1.25%)	29 (9.06%)	90 (28.13%)

Part B: Financial Literacy Level Based on Subclass

	N	Low	Moderate	High
Age:				
7 to 9 years old	99 (30.94%)	3 (3.03%)	35 (35.35%)	61 (61.62%)
10 to 12 years old	221 (69.06%)	8 (3.62%)	49 (22.17%)	164 (74.21%)
Gender:				
Male	154 (48.13%)	6 (3.90%)	40 (25.97%)	108 (70.13%)
Female	166 (51.88%)	5 (3.01%)	44 (26.51%)	117 (70.48%)
School location:				
Urban	197 (61.56%)	7 (3.55%)	55 (27.92%)	135 (68.53%)
Rural	123 (38.44%)	4 (3.25%)	29 (23.58%)	90 (73.17%)

Table 2 (Part A and B) shows the different in children financial literacy according to their age, gender and school location. Part A (refer to Age) of Table 3 shows 61 (19.06 per cent) students from age 7 to 9 years old and 164 (51.25 per cent) students from age 10 to 12 years old were managed to get high-level financial literacy. This study used independent sample t-test to confirm the findings in Table 2. Table 3 shows that the p-value for standard age group 7-9 and 10-12 is less than 0.10. Results in Table 3 indicates that there are significance differences at level of 10 per cent ($P < 10$ per cent) between children financial literacy and their age group and this study was in line with previous study (Chen and Volpe, 1998). It means that there is different in children financial literacy for students from age 10 to 12 years old and students from 7 to 9 years old. The group of children that older in terms of age are having better financial literacy compared to their younger friends. As the age of children increase, the financial literacy will also increase.

Table 3. Independent Sample Test for Financial Literacy According to Age Group

		Levene's Test for Equality of Variances		t-test for Equality of Means					
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error	95% Confidence Lower Upper
Financial Literacy	Equal variances assumed	.185	.667	1.828	318	.068	.02935	.01605	-.00223 .06093
	Equal variances not assumed			1.830	188.928	.069	.02935	.01604	-.00229 .06099

According to Part A (refer to gender) of Table 2, participation from male children in this study is 154 (48.13 per cent) while female children is 166 (51.87 per cent). Both male and female children in Kedah have high-level financial literacy, where, 108 (33.75 per cent) of male students are highly financially literate and 117 (36.56 per cent) of female students are highly financially literate. In order to confirm there is no significant difference between male and female, independent sample t-test was held (refer to Table 4). Result shows that the p-value for male and female is 0.75, which is greater than 0.10. This means that there is no significance differences between children financial literacy for male and female in this study.

Table 4. Independent Sample Test for Financial Literacy According to Gender

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error	95% Confidence Lower Upper	
Financial Literacy	Equal variances assumed	.297	.586	-.319	318	.750	-.00476	.01492	-.03413	-.02460
	Equal variances not assumed			-.319	317.247	.750	-.00476	.01491	-.03410	-.02457

Part A (refer to school location) of Table 2 shows that the total children from urban area is 197 (61.56 per cent) whilst rural area is 123 (38.44 per cent). Results shows both urban and rural area students is highly financially literate where, 135 (41.88 per cent) in urban area and 90 (28.44 per cent) students from rural area were having high level of financial literacy. Part B (refer to school location) of Table 2 shows the students in rural area were highly financially literate compared to urban area. In addition, results also found that more students in urban area is in moderate level of financial literacy compared to rural area. In order to confirm there is significant difference exist between school locations towards the financial literacy, independent sample t-test was run and the result (refer to Table 5) shows that significant different between urban and rural area are at level of 5 per cent, which means, children in rural area are more financially literate compared to urban area.

Table 5. Independent Sample Test for Financial Literacy According to School Location

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error	95% Confidence Lower Upper	
Financial Literacy	Equal variances assumed	.031	.086	-2.190	317	.029	-.03343	.01527	-.06347	-.00340
	Equal variances not assumed			-2.182	253.278	.030	-.03343	.01532	-.06361	-.00325

Table 6 shows the result of One-Way ANOVA in order to measure the differences of children financial literacy according to their parental backgrounds. Results shows that there is significance difference between children financial literacy according to their parental level of education at 1 per cent significant level. This study was in lines with Dubow, Boxer and Huesmann (2009) where they found that parental education level has impact towards children knowledge and behavior in the long-term period. Besides that, results also reported that there is significant difference in children financial literacy according to their parental income level at 5 per cent significant level. This study was in line with the study done by previous literatures (Chen and Volpe, 1998; Calamanto, 2010).

Table 6. One-Way ANOVA for Financial Literacy According to Parental Background

Description	F-Statistics	Sig.
Occupational	0.345	0.708
Education	3.814	0.001

Description	F-Statistics	Sig.
Marital Status	0.196	0.659
Income	3.303	0.038

Regression analysis was run to test the influence of financial behavior variables and financial socialization agent variables towards financial literacy. Based on the results on Table 7, SPENDING is the most influenced predictors (30.6 per cent) towards the children financial literacy in Kedah follows by the children SAVING (28.0 per cent) and were significant at 1 per cent. This result is in line with Alekam et al. (2018) and Sorooshian and Teck (2014) where they found that financial behavior (saving and spending) does have a positive relationship with the children financial literacy. SCHOOL with beta coefficient 11.6 per cent is significant at level of 5 per cent.

PEER has negative beta coefficient (-14.6 per cent) and it is significant at 1 per cent, It means that the lower peer influence, the higher financial literacy among children. This negative relationship between peer and financial literacy is contradict with previous studies. (see, for example, Jamal et al., 2015; Murugiah, 2016; Isomidinova & Singh, 2017; Alekam, Md. Salleh and Mohd. Mokhtar, 2018). This is acceptable as young children at their age are more influenced by their parents compared their peers. SCHOOL also found to be significantly influenced the financial literacy at 5 per cent. This happened because children spend quarter of their daily time at schools. Besides that, BNM (2019) expressed that children financial literacy can be improved by improving the financial education starting from school.

Further, PARENT and TECH variables are also found to have positive effects towards children financial literacy and were significant at 10 per cent. However, both variables show that they were the least influenced variables towards the children financial literacy. Parents that involved a lot with the upbringing of their children tends to influence the level of the children financial literacy. As suggested by Ermisch and Francesconi (2001), there was strong evidence that employed parent have less time to interact with their children that will affects their children learning processes.

In addition, though the TECH is significant, but it is the least influenced variable with coefficient of 8.5 per cent. Based on the questionnaires, half of the children in the sample feels that they do not watched any online advertising and experienced to play online games related to financial. This result is in line with findings by Hilgert et al. (2003), and Lyons et al. (2006).

Table 7. OLS Coefficients showing variables correlated with financial outcomes

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	.345	.050		6.869	.000
SAVING	.283	.053	.280	5.390	.000
SPENDING	.217	.036	.306	6.098	.000
PARENT	.057	.033	.090	1.730	.085
PEER	-.083	.030	-.146	-2.814	.005
SCHOOL	.072	.031	.116	2.320	.021

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
TECH	.038	.023	.085	1.670	.096

**Dependent Variable is Financial Literacy. The r square is 0.275; adjusted r square is 0.261; standard error is 0.11450 and durbin Watson is 1.883*

5. CONCLUSIONS

The main focused of this study is to measure the level of financial literacy among children in Kedah and their determinant factors. This is because as mentioned earlier, Department of Insolvency Malaysia (2018) reported that, there was significant increases in number of bankruptcy cases in Kedah with 36.04 per cent increment from 2017 to 2018. Providing financial education from early stage is very crucial. OECD (2005) recommended that, individuals should have financial education as early as possible and it should start not only at primary school but also pre – school. This study uses 320 young students from rural area and urban area in Kedah as a sample. Results of this study shows that children in Kedah is financially literate. This result is contradicting with the study by Fabris and Luburic (2016) Ibrahim, Harun and Isa (2009) and Ghazali et al. (2017). In addition, results also showed, there was significant difference in children financial literacy according to their class group and school location. Results found that children from 10 to 12 years old is more financially literate compare to children aged from 7 to 9 years old. It shows that as the age of the children increase their awareness and financial literacy is positively increased.

Furthermore, children in rural area was found more financially literate compared to children in urban area. Results also found there is no significant different between male and female. Parents character also play great role in influencing their children's financial literacy. Different education and income level can caused different financial literacy to the children. Result from this study showed that spending behavior, saving behavior, parent role, peer role, school involvement and technology were found as determinant factors toward children financial literacy in Kedah. This result was in line with family financial socialization agent theory and consumer socialization theory. Which showed that financial behavior (savings and spending) and financial socialization agent gave the greatest contributions towards children financial literacy in Kedah.

As mentioned earlier, children financial literacy is not depending only by their behavior but also it derives from children financial socialization agents (Lusardi, Mitchel and Curto, 2009). Results shows that children financial literacy in Kedah were also significantly influenced by their socialization agents. Finding reveals that most influenced factors that influence the financial literacy is school involvement. It shows that school play a crucial role towards children financial literacy. Besides that, by having the greatest contribution towards children financial literacy, school could be a greatest place in shaping children financial behavior and their level of financial literacy. The children financial literacy was also influenced by their biological parent, where parent role has a significant positive correlation towards children financial literacy. It shows that children financial literacy is depends on their parents. With an optimal supervision and providing financial education towards children could help to increase their level of financial literacy. Not only parent role and

school involvement have a significant influenced towards children financial literacy, technology also have a significant influenced towards children financial literacy. Result indicates that the higher the exposure on use of the technology as medium to gain financial knowledge the higher the children financial literacy. However, peer role although it is significant, yet it has negative influence towards children financial literacy. In other way of saying, children financial literacy can be enhanced only if the children have less peer. Thus, school and parent matters more in influencing the level of children financial literacy.

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Reference:

- Alekam, J. E., Md.Salleh, M., & Mohd. Mokhtar, S. (2018). The Effect of Family, Peer, Behavior, Saving and Spending Behavior on Financial Literacy among Young Generations, *AIMI Journal*, 7(3), 309-323.
- Ali, S. (2013). Financial Literacy in Malaysia: Issues and Status Update. Bank Negara Malaysia, Bank Negara Malaysia (Central Bank of Malaysia), *International Seminar on Financial Education and Retirement Savings*, Kuala Lumpur, 17&18 September 2013.
- Asarta, C. J., Hill, A. T., & Meszaros, B. T. (2014). The features and effectiveness of the Keys to Financial Success curriculum. *International Review of Economics Education*, 16(1), 39-50.
- Bank Negara Malaysia (2019). Malaysia National Strategy for Financial Literacy 2019-2023. Kuala Lumpur, Malaysia. Retrieved from <https://www.sc.com.my/api/documentms/download.ashx?id=6385977c-bd2c-4612-bda8-9ce6a5961720>.
- Barbour, M. K., & Reeves, T. C. (2009). The reality of virtual schools: A review of the literature. *Journal of Computers and Education*, 52(2), 402-416.
- Barratt, H., & Shantikumar, S. (2009; 2018). Methods of sampling from a population. Retrieved from Health Knowledge: <https://www.healthknowledge.org.uk/public-health-textbook/research-methods/1a-epidemiology/methods-of-sampling-population>.
- Bernheim, B. D., Garrett, D. M., & Maki, D. M. (1997). Education and Saving: The Long-Term Effects of High School Financial Curriculum Mandates. *NBER Working Paper Series*, 1-30.
- Bujang, M. A., Omar, E. D., & Baharum, N. A. (2018). A Review on Sample Size Determination for Cronbach's Alpha Test: A Simple Guide for Researchers. *Malays J Med Sci*, 25(6), 85-99.
- Calamanto, M. P. (2010). Learning Financial Literacy in the Family. SJSU Scholar Works.
- Carvalho, M. (2019, March 4). Guan Eng: Low financial literacy among Malaysian youth contributing to high bankruptcy rates. Retrieved from The Star: <https://www.thestar.com.my/news/nation/2019/03/04/guan-eng-low-financial-literacy-among-malaysian-youth-contributing-to-high-bankruptcy-rates/>.
- Chan, K., & McNeal, J. U. (2006). Rural Chinese Children as Consumers: Consumption Experience and Information Sources. *Journal of Consumer Behavior: An international Review*, 5, 182-192.
- Chen, H., Volpe, R. P., & Pavlicko, J. J. (1996). Personal investment literacy among college students: A survey. *Financial Practice and Education*, 6(2), 86-94.

- Chen, H., & Volpe, R. P. (1998). An Analysis of Personal Financial Literacy among College Student. *Financial Services Review*, 7(2), 107-128, DOI: 10.1016/S1057-0810(99)80006-7.
- Chinen, K., Endo, H. (2012). Effects of Attitude and Background on Students' Personal Financial Ability: A United States Survey. *International Journal of Management*, 29(2) Part. 2, 778-791.
- Danes, S. M., & Haberman, H. R. (2007). Teen Financial Knowledge, Self-Efficacy, and Behavior: A Gendered View. *Journal of Financial Planning and Planning*, 18(2), 48-60.
- Danes, S. M., Rodriguez, M. C., & Brewton, K. E. (2013). Learning Context When Studying Financial Planning in High Schools: Nesting of Student, Teacher, and Classroom Characteristics. *Journal of Financial Counseling and Planning*, 24(2), 20-36.
- Davidson, I. B. (2006). Financial Literacy Important for Future. *Montana Business Quarterly/Autumn*. Pp 22.
- Department of Insolvency Malaysia. (2018). Bankruptcy Statistics December 2018. Retrieved from <http://www.mdi.gov.my/images/documents/Statistics/Bankruptcy/StatistikKebankrapandisember2018.pdf>.
- Dubow, E., Boxer, P., Huesmann, L. R. (2009). Long-term Effects of Parents' Education on Children's Educational Success: Mediation by Family Interactions, Child Aggression and Teenage Aspirations. *Merril-Palmer Quarterly*, 55(3), 224-249.
- Emmanuel, K. O. (2010). Financial Literacy and Youth Entrepreneurship in South Africa. *African Journal of Economic and Management Studies*, 1(2), 164-182.
- Ermisch, J., Francesconi, M., (2001). The Effect of Parent's Employment on Outcomes for Children. *Joseph Rowntree Foundation*, 228-231.
- Fabris, N., & Luburic, R. (2016). Financial Education of Children and Youth. *Journal of Central Banking Theory and Practice*, 5(2), 65-79. DOI: 10.1515/jcbtp-2016-0011.
- Ghazali, M. S., Azer, I., Mohamad, S. A., Arifin, N. M., & Mat, A. (2017). Personal Financial Literacy among High School Students in Raub, Pahang, Malaysia. *Journal of Engineering and Applied Sciences*, 12(7), 2280-2284. DOI: 10.3923/jeasci.2017.1830.1834.
- George, D., & Mallery, P. (2010). SPSS for Windows Step by Step: A Simple Guide and Reference 17.0 Update. 10th Edition. Boston: Pearson.
- Grody, A. D., Grody, D., Kromann, E., Sutliff, J. (2008). A Financial Literacy and Financial Services Program for Elementary School Grades - Results of a Pilot Study. *SSRN Electronic Journal*, 1-32. DOI: 10.2139/ssrn.1132388.
- Grusec, J. E., & Davidov, M. (2007). Socialization in the family: The roles of parents. In J. E. Grusec & P. D. Hastings (Eds.), *Handbook of socialization: Theory and research* (pp. 284-308). New York and London: Guilford Press.
- Gudmunson, C. G., & Danes, S. M. (2011). Family Financial Socialization: Theory and Critical Review. *Journal of Family and Economic Issues*, 32(4), 644-667.
- Hair, J., Anderson, R., Tatham, R., & Black, W. (2006). *Multivariate Data Analysis*. Upper Saddle River, New Jersey.
- Hair, Jr., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Upper Saddle River, NJ: Prentice Hall.
- Harari, T. T. (2016). "Financial literacy among children: the role of involvement in saving money", *Young Consumers*, 17(2), 197-208, <https://doi.org/10.1108/YC-01-2016-00579>.
- Hilgert, M. A., Hogarth, J. M., & Beverly, S. G. (2003). Household Financial Management: The Connection between Knowledge and Behavior. *Federal Reserve Bulletin*, 310-322.
- Holden, K., Kalish, C., Scheinholtz, L., Dietrich, D., & Novak, B. (2009). Financial Literacy Programs Targeted on Pre-School Children: Development and Evaluation. *La Follette School Working Paper*, 1-25.

- Huhmann, B. A., & McQuitty, S. (2009). A model of consumer financial numeracy. *International Journal of Bank Marketing*, 27(4), 270-293. DOI: 10.1108/02652320910968359.
- Ibrahim, D., Harun, R., Isa, Z. M. (2009). A Study on Financial Literacy of Malaysian Degree Students. Cross-cultural Communication. *Canadian Academy of Oriental and Occidental Culture*. 5(4), 51-59.
- Incharge Debt Solutions (2019). Financial Literacy for Kids. Retrieved from Incharge Debt Solutions: <https://www.incharge.org/financial-literacy/resources-for-teachers/financial-literacy-for-kids/>.
- Ironico, S. (2012). The active role of children as consumers. *Young Consumer*, 13(1), 30-44.
- Ismail, S., Serguieva, A., & Singh, S. (2011). Integrative model of students' attitude to educational loan repayment: A structural modelling approach. *Journal of International Education in Business*, 4(2), 125-140.
- Isomidinova, G., & Singh, K. J. (2017). Determinants of Financial Literacy: A Quantitative Study among Young Students in Tashkent, Uzbekistan. *Electronic Journal of Business and Management*, 2(1), 61-75.
- Jamal, A. A., Ramlan, W., Karim, M. A., Mohidin, R., & Osman, Z. (2015). The Effects of Social Influence and Financial Literacy on Savings Behavior: A Study on Students of Higher Learning Institutions in Kota Kinabalu, Sabah. *International Journal of Business and Social Science*, 6(11), 110-119.
- Jorgensen, B. L., Savla, J. (2010). Financial Literacy of Young Adults: The Importance of Parental Socialization. *Journal of Applied Family Studies*, 465-478. DOI: 10.1111/j.1741-3729.2010.00616.x.
- Lusardi, A., & Mitchell, O. S. (2008). Planning and Financial Literacy. How do Women Fare? *American Economic Review*, 413-417.
- Lusardi, A., Mitchell, O. S., & Curto, V. (2009). Financial Literacy among the Young: Evidence and Implications for Consumer Policy. *Journal of Consumer Affairs*, 44(2), 358-380.
- Lusardi, A., & Mitchell, O. S. (2013). The Economic Importance of Financial Literacy: Theory and Evidence. *Journal of Economic Literature*, 52(1), 5-44.
- Lyons, A. C., Palmer, L., Jayaratne, K. S., & Scherpf, E. (2006). Are We Making the Grade? A National Overview of Financial Education and Program Evaluation. *The Journal of Consumer Affairs*, 40(2) 208-235.
- Mokhtar, N. A. (2015). Pengurusan Kewangan Dalam Kalangan Kanak-Kanak Sekolah Rendah Malaysia. Universiti Putra Malaysia.
- Murugiah, L. (2016). The Level of Understanding and Strategies to Enhance Financial Literacy among Malaysia. *International Journal of Economics and Financial Issues*, 6(s3), 130-139.
- Norvilitis, J. M., MacLean, M. G. (2009). The role of parents in college students' financial behaviors and attitudes. *Journal of Economic Psychology*, 31(1), 55-63.
- Nunnally, J. (1978). Psychometric Theory. New York: Mac-Graw Hill.
- OECD. (2005). OECD Principles and Good Practices for Financial Education and Awareness - Financial Stability Board. Recommendation of the Council, July, 7. http://www.financialstabilityboard.org/2005/06/cos_050622/.
- OECD. (2015). Core Competencies Framework on Financial Literacy for Youth. OECD/INFE. Retrieved from <https://www.oecd.org/finance/Core-Competencies-Framework-Youth.pdf>.
- OECD. (2018). The Application of Behavioural Insights to Financial Literacy and Investor Education Programmes and Initiatives. Retrieved from <http://www.oecd.org/finance/The-Application-of-Behavioural-Insights-to-Financial-Literacy-and-Investor-Education-Programmes-and-Initiatives.pdf>.

- Pallant, J. (2000). Development and validation of scale to measure perceived control of internal states. *Journal of Personality Assessment*, 75, 308-337.
- Sabri, M. F., MacDonald, M. (2010). Savings Behavior and Financial Problems among College Students: The Role of Financial Literacy in Malaysia. *Cross-cultural Communication*, 6(3), 103-110.
- Shim, S., Barber, B. L., Card, N. A., Xiao, J., & Serido, J. (2009). Financial Socialization of First-year College Students: The Roles of Parents, Work, and Education. *Journal of Youth Adolescence*, 35, 1457-1470.
- 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 Adolescence*, 1-12. DOI:10.1016/j.adolescence.2012.02.002.
- Sorooshian, S., & Teck, T. S. (2014). Spending Behaviour of a Case of Asian University Students. *Journal of Asian Social Sciences*, 10(2), 64-69. DOI:10.5539/ass.v10n2p64.
- S&P Global Financial Literacy. (2014). Financial Literacy around the World: Insight from the Standard & Poor Rating Services Global Financial Literacy Survey. World Bank.
- Statistics Solutions. (2013). Normality. Retrieved from <https://www.statisticssolutions.com/normality/>.
- Ward, S. (1974). Consumer Socialization: Initial Study Results. *Advances in Consumer Research*, Vol. 1, 120-125.
- Wolla, S. (2017). Evaluating the effectiveness of an online module for increasing financial literacy. *Social Studies Research and Practices*, 12(2), 154-167.
- Wong, K. (2017, October 4). BNM: Malaysians find it hard to raise cash for emergencies. Retrieved from The Malaysian Reserve: <https://themalaysianreserve.com/2017/10/04/bnm-malaysians-find-hard-raise-cash-emergencies/>.
- Zaimah, R., Sarmila, M., Lyndon, N., Azima, A., Selvadurai, S., Saad, S. (2013). Financial Behavior of Female Teachers in Malaysia. *Asian Social Science*, 9(8), 34-41.