The Level of Understanding and Strategies to Enhance Financial Literacy among Malaysian

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ABSTRACT

Financial world is crucial as people assume more responsibility for their own financial security. For that reason, financial literacy play a critical role in helping individual to manage their money wisely. Moreover, the needs to study into a national wide strategy to enhance Malaysians personal financial literacy and improve the necessary abilities to keep their personal financial health in the proper insightful are significantly important. Hence, the objectives of this paper is to identify the understanding level of financial literacy in Malaysia and strategies to enhance financial literacy level among Malaysian. Questionnaires were distributed to 2500 Malaysian in Peninsular Malaysia, age ranging from 18 to 45 years old in 2014. The survey shows that Malaysian consider themselves good in financial literacy but in reality they are still weak in mastering financial literacy knowledge. This study also shows that, in Malaysia context, financial literacy among young men who earn below RM1500 and certificate qualification holders need to be targeted as focus group to increase their financial literacy awareness and financial knowledge. Therefore, strategies to create awareness and improve financial literacy knowledge among Malaysian has been identified in this study. Moreover, a good knowledge in financial literacy will make an important contribution to the soundness and efficiency of the financial system and to the performance of the country's economy.

Keywords: Financial Literacy, Financial Education, Strategies and Malaysia
JEL Classifications: D14, D18, D31, D83, D91

1. INTRODUCTION

Financial literacy is a blend of financial knowledge, awareness, skills, ability, attitudes and behaviors necessary to make prudent and reliable financial decisions to improve financial health. In today's fast-paced community, financial literacy is a fundamental skill for daily life. It means being competent to understand how money works, how to manages income and expenses, how and where to invests, manage financial risks effectively and most importantly avoid financial distress. According to Wachira and Kihiu (2012), financial literacy remain as a significant issues around the world. Improving financial literacy can benefit all level of generations, regardless of age, gender, income, education level, race or family background. It assist consumers make wise decision, day-to-day and throughout their lives. Establishing and promoting enthusiasm in financial literacy is now a focus point of state-run strategic programmes in many countries including the United State of America, the United Kingdom, Australia, Canada,

Japan, Singapore and Malaysia. Recent expansion in financial world have made financial literacy via financial education and other financial and non-financial strategies increasingly relevant for financial health or well-being. Hence, financial education concentrate on financial activities, knowledge, awareness, skills, ability, attitudes and behaviors that encourage towards financial health.

History of financial literacy evolution in United State begin as early as in 2002 with the establishment of its Office of Financial Education by the United State Treasury. The momentum continued with the establishment of Financial Literacy and Education Commission under the Financial Literacy and Education Improvement Act in 2003 by the United State Congress. The Financial Literacy and Education Commission then published its National Strategy on Financial Literacy in 2006. In addition to that, in 2010, the United States Congress approved the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act),

which created the Consumer Financial Protection Bureau (CFPB). One of the mandates that has been assigned to CFPB is promoting financial literacy and financial education through its Consumer Engagement and Education group (US CFPB, 2013). Apart from that, a non-profit organization for instance The Jumpstart Coalition focus on recruiting and training college students and community Corps members to serve preschool children in low-income neighborhoods has championed personal financial literacy strategies through research, blogs, games, free financial education resources, website, award and competitions in the United States as early as 1995. Organization for Economic Co-operation and Development (OECD) is another well-known institution for financial literacy. OECD create and enhance awareness on the importance of financial literacy and financial education around the world. The OECD and its International Network on Financial Education support a unique policy forum for governments to exchange point of views and experiences on financial education issues. OECD actively engages in various strategies to enlighten financial education globally for instance, national strategies for financial education, financial consumer protection, financial education and women, evaluating financial education programmes, measuring financial literacy globally and symposiums.

As for Australia, the government established the Financial Literacy Foundation (FLF) to implement a National Financial Literacy Strategy. The FLF worked to incorporate financial literacy into the educational syllabus, to develop resources and support system for teachers and to cater financial literacy information and materials for the workplace. In 2008, FLF's functions were reassigned to the Australian Securities and Investments Commission, in order to consolidate the Australian government's financial literacy feedback under the commission and to strengthen its role in assuring Australia's economic creditability, accountability and well-being. FLF aims to enhance the financial health of Australians by advancing their financial literacy. The strategy is underpinned by the following four core principles compress of shared responsibility; engagement and effectiveness; encouragement of good practice and diversity and inclusiveness. The action plan were to nurture the next breeding, particularly through the formal education system; encourage the use of free information, tools and resources; and provide quality targeted guidance and support for everyone.

Our neighbor, Singapore government through the Monetary Authority of Singapore (MAS) promotes financial awareness by setting up the Institute for Financial Literacy (IFL) in 2012. IFL is governed conjointly by MoneySENSE and the Singapore Polytechnic to bring together industry and public sector. This collaboration initiatives are setting up financial education and also to create a long-term sustainable programme to improve and strengthen the basic financial literacy of Singaporeans. The IFL aims to build core financial capabilities across a broad spectrum of the Singapore population by providing free and unbiased financial education programs to working adults and their families. IFL regularly offers free talks, financial literacy games, workshops and educational videos to help consumers develop capabilities to make prudent financial decisions that directly affect them and their families. Besides, the institute also intent to provide educational

information to help Singaporean manage their money and better understanding about financial products for their banking, insurance or investment needs.

In Malaysia, Bank Negara Malaysia (BNM) has a mandate to support Malaysian financial literacy level. In 2006, BNM set up the Credit Counseling and Debt Management Agency (AKPK) to assist individuals to handle their financial direction and avoid financial distress. AKPK was established as part of BNM's Financial Sector Master Plan (2000-2010), a 10-year strategy to develop and enhance Malaysian financial sector. AKPK mission is to help individuals via free financial counseling and advice, Debt Management Programme and financial education. AKPK programs are targeted at individuals and groups through various activities consist of workshops, seminars, roadshows, exhibitions, briefing sessions and talks with government agencies, corporations, colleges and universities students. On the other side, BNM announced that financial education will be incorporated into Malaysian school curriculum in stages, beginning 2016. Abu Hassan, Bank Negara Assistant Governor (2015) expressed that BNM in joint effort with the Ministry of Education (MOE), will introduce financial education to year 3 primary school students in 2016 and secondary school students from 2017. Abu Hassan said that the curriculum on financial education in schools would include topics on money management, planning, savings and investments, credit and debt management and insurance. Besides, BNM also has actively organized various local and international events regarding financial literacy including roundtable discussion and international symposium such as Roundtable – National Financial Literacy Strategy under Federation of Malaysian Consumers Associations (FOMCA) and Education and Research Association Consumer in 2014 and Malaysia-OECD High-level Global Symposium on financial well-being in 2015. BNM programmes aim to provide a strategic financial management assistance to the consumers, formulating strategies to address financial literacy and financial education issues in Malaysia, cutting-edge issues in integrating financial education and financial consumer protection policies with a view to enhancing financial health and lastly to highlight the challenges and solutions in delivering effective financial education in Malaysia.

Regardless of numerous initiatives mentioned above, AKPK pointed out that the lack of knowledge in financial literacy was the major reason many individuals, found themselves in indebtedness. They also stress out that individuals get into financial burden is due to attitude, poor credit management and lack in understanding financial literacy. The leading challenge now is to structure a strategy that would balance a consumer that is diverted in different demographic factors. Although various strategies are innovatively being introduced by AKPK and BNM, sorely, Malaysian household debt and bankruptcy rates are at an alarming level. BNM records indicates that household debt to gross domestic product increase to 87.9% in 2014. On top of that, the statistics from the Malaysian Department of Insolvency recorded that in 2013, an average of 1812 people are declared bankrupt per month. The total number of bankrupts as of December 2013 was 253,635. There were 25,552 cases involving young working adult those aged between 25 and 34 years old in Malaysia. Furthermore, the

FOMCA study shows that in 2010, nearly 50% of 3000 individuals who visit the AKPK for credit counseling each month are those who are aged between 30 and 40-year-old. This scenario create a warning situation because the ages of those declared bankrupt now are younger. An increment of bankruptcy in Malaysia with more 47% of young adults' age between 18 and 35-year-old are facing serious debts due to luxury living style but in reality it is beyond their means. Reid (2003) emphasized that people got in heavy debts that leads to bankruptcies, marriage breakdowns, crime pressures and personal hardship because of poor financial planning and financial literacy. Most times, individuals do not know precisely whether they could afford things like a new house, fancy car or the latest electronic gadgets but they still want go for it (AKPK, 2012). The shown figures give a cogency to stakeholders in creating, preparing, adapting and monitoring strategies to upgrade Malaysian financial literacy and their preparedness in a healthier retirement in the future. The need to start looking into a national strategy to help Malaysians improve their personal financial literacy and develop the necessary skills to keep their personal financial healthier in the proper perspective is essential. Strategies to encourage and improve financial literacy among Malaysian should concentrate on financial activities, skills, knowledge and behavior. The strategies could promote individuals ability and capability in a better placed to contribute towards individual's financial health and stronger growth in the economy. Furthermore, Kidwell and Turrisi (2004) indicated that individuals with better financial literacy prepare a proper financial planning and have more access to credit than their counter parts who do not have a proper financial planning and are financially illiterate. Hence, this paper attempt to identify the level of understanding and strategies to enhance financial literacy among Malaysian.

2. LITERATURE REVIEW

This study utilized goal setting theory, a subset of motivational theory which suggests that measurement of financial literacy should be related to financial knowledge, practices and behavior that is in the consumer's best interests, Hilgert et al. (2003). Subsequently, goal setting theory was based on the assumption that much a person reaction is purposeful, in that it is directed by conscious goals (O'Neil and Drillings, 1994). Goal setting theory explains the decision to set a strategic result from dissatisfaction with the current financial level. Setting a goal should include several main elements such as setting a strategy plan that directs actions and behaviors which improve the current unsatisfactory level, energy in pursuing a goal, persistence in achieving a goal, and ability to strategize to reach a goal (Locke and Latham, 2004).

On the other hand, empirical study shows that the lack of financial literacy has been found to be a widespread phenomenon at a global level and is also clearly evident in developed countries such as the United State of America (Lusardi and Mitchell, 2005), the United Kingdom, Japan and Australia (Smith et al., 2005). Harnish (2010) found that individuals should empowered with the basis financial literacy so that they will make a wise decision based on their budget.

Nowadays, financial literacy is becoming an essential commodity for mankind, a basic raw material which is indispensable for development and even for mere survival (UNESCO, 1997). Smillie (2004) indicated that providing financial education for those ages 5 to 25-year-old is important in building a good financial literacy. For that reason, BNM have created financial planning education websites targeted towards Malaysian for instance duitsake.com and bankinfo.com. The website was designed especially to help children and adult to understand what is financial planning and why financial planning is important for their future welfare. Meanwhile Garman and Forgue (2000), described that understanding the principles and terminology of financial knowledge is needed for a successful management of personal financial issues. Jacob et al. (2000) considered personal financial knowledge as knowing conditions, practices, rules and norms required for performing financial duties. Financial knowledge involves concepts, principles, and technological tools that are essential for being smart about money because one of the essential skills that people must acquire to function in our society is the ability to deal with money (Hira, 1997).

Various studies such as Fogarty and MacCarthy (2006) in Australia; Sallie (2009); Lusardi et al. (2009), Chen and Volpe (1998) in US; Schagen and Lines (1996) and Mandell (1997) in UK; Olga (2011) in Russia; Logasvathi (2013) and Dahlia et al. (2009) in Malaysia indicating that financial literacy among youth were low. Apart from that, financial literacy is proven to be positively correlated with late age (Serido et al., 2010 and Marzieh et al. 2013).

Besides, Hayo and Seifert (2003), Alamer et al. (2015), Di Tella et al. (2001), Blanchflower and Oswald (2004), and Leila and Laily (2011) indicated that, overall, females are happier with the financial situation than males. Further studies revealed that women and men perceived different levels of financial well-being as they perceived different levels of financial socialization (Hira and Mugenda, 2000), financial knowledge and skills (Goldsmith and Goldsmith, 1997). Goldsmith and Goldsmith (2006) highlighted in their study that women are less knowledgeable in financial matters. This result is similar with Marzieh et al. (2013) study who prove that men are more financially healthy. Beal and Delpachitra (2003) who measured the level of financial literacy among undergraduate in Australia found that undergraduate with higher financial literacy scores were more likely to be male, have greater work experience, have a higher income and have a lower aggregate risk preference. Chen and Volpe (2002) conducted a survey of financial literacy among college students in the United State and their finding shows that women generally have less knowledge on personal financing topic, less enthusiasm and less likely to have the willingness to learn about personal finance topics than men do. On the other side, the relationship between gender and financial literacy is denied in Joo and Grable (2004).

Moreover, education is also found to be positively correlated with financial literacy according to research by Marzieh et al. (2013) and Joo and Grable (2004). Hilgert et al. (2003) asserts that financial literacy is positively related with education level. Lusardi and Mitchell (2007) explained that financial literacy is highly correlated with school exposure to economics. Those who studies

economies in high school, college or at higher level were much more likely to display higher levels of financial literacy later in life. Meanwhile, Marzieh et al. (2013) claimed that married people are more financially literate that leads to greater financial well-being. In contrast, Joo and Grable (2004) denied the relationship between marital status and financial literacy.

However, studies of income level in individuals have found ambiguous results. Several studies have found decreases in well-being alongside higher income (Diener et al., 1993), while others have failed to find a relationship (Schyns, 2000). Similarly, Muthitacharoen et al. (2014) examined vulnerable households are households with low income because they have low financial literacy, financial access limit and heavy debt service burden. On the other hand, research by Harnish (2010) described that there is still widespread financial illiteracy in America especially among low income earner. Hassan Al-Tamimi and Anood Bin Kalli (2009) concluded investor with higher income had more knowledge in investment than those with lower income.

Furthermore, Morris (2001) conveyed that people need training in financial literacy in order to enhance their knowledge in personal financial management. Adding to that, Johnston (2005) suggested that mortgage counseling has been found to be effective in reducing the risk of mortgage delinquency and worker who attend one-on-one credit counseling sessions have lower debt and fewer delinquencies in USA. Fogarty and MacCarthy (2006) found that undergraduate financial literacy in Australian improved with work experience. Meanwhile, Lusardi and Tufano (2009) asserted that financial literacy varies strongly with employment type.

3. METHODOLOGY

This is an exploratory study with an extensive preliminary work aim to identify the understanding level and strategies to enhance financial literacy level among Malaysians. The unit of analysis used in this study is individual and a cross-sectional data was utilized. Time frame used in this study was year 2014. Simple random sampling using 2500 respondents from Peninsular Malaysia were employed for generalizability purpose in this study. This study utilized descriptive analysis, correlation analysis, independent samples t-test and one-way ANOVA analysis in order to achieve the research objective.

Data gathered through questionnaires in order to measure financial literacy of individuals. A set of 12 questions were asked to measure the financial literacy as dependent variable in this study. There are six questions to gauge the basic financial literacy level of individuals. The questions involved fundamental knowledge on economic and financial conception such as basic numeracy, time value of money and compound interest rate. This study adapted the work of Lusardi and Mitchell (2006; 2008) and Lusardi et al. (2010) to develop questions that demonstrated individuals' understanding about fundamental knowledge on economic and financial conception. The questions to determine the individuals' financial literacy at an advanced level also being asked to test respondents' understanding on risk diversification and financial products and services. Six questions on advance level were

adapted from Lusardi and Mitchell (2007) and Boon et al. (2011). The separation into basic and advanced level of financial literacy provided us with a good platform to gain better insights as to the individuals' performance in financial literacy (Boon et al., 2011). The financial literacy questions scale in the questionnaire is an ordinal-level index where each correct answer scored as one point. A respondent may receive a maximum of one point for each correctly answered question; thus, with 12 questions, the index ranges from 0 to 12, with higher values representing greater financial literacy level. On the other part, as independent variables, demography factors are being tested in this study. For demography factors namely age, gender, education level, employment types, income level and marital status questions are used in this study. Demography factors scale in the questionnaire is a close ended questions and answer options were given for respondents to choose.

4. FINDINGS AND DISCUSSION

Table 1 results demonstrated the respondents' level of financial literacy knowledge based on basic numeral knowledge, time value of money, compounded interest rates, risk diversification and financial and banking products and services.

Based on the results, this study remarks that it is essential for Malaysians to be knowledgeable in financial literacy. Malaysian consider themselves as good in financial literacy but in reality they are unaware that they are financially illiterate. Hence, various strategies such as courses, trainings, workshops, counseling and other exposure on financial literacy issues help Malaysians in gaining financial literacy awareness and knowledge effectively.

Based on Table 2, the results for correlation analysis are given. Correlation analysis expressed that financial literacy as dependent variable is highly and positively correlated with education level with 0.240 and income level at 0.240 (both significant at the level of 0.01). This followed by age with 0.069 (significant at the level of 0.01) and then, gender at 0.085 (significant at the level of 0.01). While else, employment types shows a negative yet significant correlation with financial literacy with −0.105 (significant at the level of 0.01). The finding for marital status shows insignificant correlation with financial literacy.

Tables 3 and 4 shows the result for age factor. The results shows that Levene's test has a probability >0.05, thus, we can assume that the population variances are relatively equal. Therefore, we can use the t-value, degree of freedom and two-tail significant for the equal variances estimation to determine whether differences between ages are exist. The two-tail significance for age pointed out that $P < 0.05$ and significant. To identify where the differences in age lie is, this study perform Tukey honest significant difference (HSD) *post-hoc* test. The Tukey HSD *post-hoc* test illustrated that financial literacy level for age group can be divided into four groups. The age group for 41 to 45-year-old have the level of financial literacy are better than those in other age group. This followed by age group of 31 to 35-year-old. The third age group that getting lower in financial literacy level is 26 to 30-year-old.

Table 1: Level of financial literacy knowledge

Knowledge	Finding	Overall level
Consider yourself on financial literacy level	45.7% indicated that they are very confident and totally agree that they a person who have a very good level of financial literacy knowledge. 16.2% said that they are not confident or disagree that they have the knowledge of good financial literacy	-
Basic numeral knowledge	69% respondents had answered precisely on a basic numeral knowledge. This result concluded that young adult in Malaysia have average level in understanding basic numeral knowledge. Basic numeral knowledge is important in understanding and advancing their knowledge in financial literacy	Average
Time value of money	Meanwhile, respondents shows a poor level in understanding the time value of money concept. Only 36% respondents are able to answer the questions on time value of money correctly. Knowledge of time value of money is important in knowing the true value of money in the future after encounter interest rate, taxes and other internal and external factors. Demonstrated a low level of understanding in time value of money knowledge unable young adult in Malaysia to understand the precise value of money today and in the future (the real value and the growth of money)	Poor
Interest rates	Furthermore, only 30% of respondents answered the interest rates questions correctly. The knowledge of interest rates is useful because interest rates affect the "price" of borrowing money and how much you earn if you save it. Fail in understanding the interest rates concept by young adult in Malaysia will fail them in adequately protect their savings, or do not know how to identify an attractive loan	Poor
Finance and banking products - shares and bonds	Next, the knowledge on finance and banking products especially about shares and bonds. Sadly, only 26% respondents are able to answered questions on finance and banking products correctly. This percentage remarks that young adult in Malaysia are still ignorant to products and services offered by banks and financial institution in Malaysia. Knowledge on products and services offered by banks and financial institutions will enable young adults in Malaysia fully utilizing and take advantage on those products and services	Poor
Risk diversification	Lastly, knowledge on risk diversification. 21% respondents had answered correctly for the questions of risk diversification. The percentage indicated an unpleasant results, where obviously young adults in Malaysia has a low level of understanding and knowledge in risk diversification. The understanding of risk and return concept and the purpose of investing with secure investment is a big question mark when an individual fails to master risk diversification knowledge. A good knowledge in risk diversification is important in deciding a good and secure investment portfolio	Poor

Table 2: Correlation analysis

N=2500	Financial literacy	Age	Gender	Education	Employment	Income	Marital
Financial literacy							
Pearson correlation	1	0.069**	0.085**	0.240**	−0.105**	0.240**	−0.004
Significant (two-tailed)		0.001	0.000	0.000	0.000	0.000	0.824
Age							
Pearson correlation		1	−0.070**	−0.055**	0.111**	0.376**	0.604**
Significant (two-tailed)			0.000	0.006	0.000	0.000	0.000
Gender							
Pearson correlation			1	0.064**	0.003	−0.107**	−0.010
Significant (two-tailed)				0.001	0.895	0.000	0.610
Education							
Pearson correlation				1	−0.008	0.402**	−0.051*
Significant (two-tailed)					0.698	0.000	0.010
Employment							
Pearson correlation					1	0.049*	0.065**
Significant (two-tailed)						0.015	0.001
Income							
Pearson correlation						1	0.321**
Significant (two-tailed)							0.000
Marital							
Pearson correlation							1
Significant (two-tailed)							

Source: Author computation. HSD: Honest significant difference. ** and * the mean difference is significant at the 1% and 5% level respectively

Finally, those in age group from 18 to 25 represented a weak or poor in financial literacy level. This study find a limitation in accessing the level of financial literacy among 36 to 40-year-old. This is due to respondents from 36 to 40-year-old profile data are majority in low education level. Therefore, the results from Tukey HSD *post-hoc* test can generalized for 36 to 40 years old but not comprehensively. As a results, Malaysian in the age group of 18 to 25 need to be given more financial literacy attention. Financial

literacy positively correlated with late age and this is supported by Shim et al. (2010) and Marzieh et al. (2013).

Tables 5 and 6 shows information on gender. The finding revealed that Levene's test has a $P > 0.05$, we can assume that the population variances are relatively equal. Therefore, we can use the t-value, degree of freedom and two-tail significant for the equal variances estimation to determine whether differences between genders are exist. The two-tail significance for gender indicated that $P < 0.05$ and thus is significant. The mean value for

Table 3: Age

Age	Mean
18-25	4.69
26-30	5.13
31-35	5.18
36-40	4.36
41-45	5.73
N	2500
Levene statistic	0.902
F-value	12.399**

Source: Author computation. HSD: Honest significant difference. ** the mean difference is significant at the 1% level

Table 4: *Post-hoc* test using Tukey HSD - Age

(I) Age	(J) Age	Mean difference (I-J)
18-25	26-30	−0.433**
	31-35	−0.487**
	36-40	0.335
	41-45	−1.037**
26-30	18-25	0.433**
	31-35	−0.053
	36-40	0.768**
	41-45	−0.604*
31-35	18-25	0.487**
	26-30	0.053
	36-40	0.821**
	41-45	−0.550
36-40	18-25	−0.335
	26-30	−0.768**
	31-35	−0.821**
	41-45	−1.372**
41-45	18-25	1.037**
	26-30	0.604*
	31-35	0.550
	36-40	1.372**

Source: Author computation. HSD: Honest significant difference. ** and * the mean difference is significant at the 1% and 5% level respectively.

Table 5. Mean value for gender

Gender	Mean
Male	4.75
Female	5.16
N	2500

female (5.16) is relatively higher than male (4.75). It shows that women in Malaysia are relatively financially literate than men in Malaysia. The results of this study is similar to Hayo and Seifert (2003), Di Tella et al. (2001), Blanchflower and Oswald (2004), and Leila and Laily (2011) studies where they indicated that, overall, females are happier with the financial situation compare to males. Meanwhile, the finding of this study is contradict with Beal and Delpachitra (2003) and Chen and Volpe (2002) finding shows that women generally have less knowledge on personal financing topic. Despite, women in Malaysia demonstrated a relatively higher knowledge in financial literacy compare to Malaysian men.

The finding for income factor shows that Levene's test has a probability >0.05, hence, we can assume that the population variances are relatively equal. Furthermore, the two-tail significance for income level shows that $P < 0.05$ and thus is significant. The Tukey HSD *post-hoc* test illustrated that financial literacy level for income level group can be divided into three categories. The category for income level below RM1500 indicated the lower level in the financial literacy knowledge. Meanwhile the second category is the income level from RM1501 to RM 5000. Finally, the category income level from RM 5001 to above RM15000 shows a good level in mastering the financial literacy knowledge. Thus, a planning or strategic need to be think to boost the financial literacy level among Malaysians who earn below RM1500 per month. This study finds that lower income earner have a poor level in mastering financial literacy knowledge and this finding is contradict with Diener et al. (1993) study (Tables 7 and 8).

A part from that, there is a significant differences in financial literacy across the education level as shown by $P < 0.05$ in Tables 9 and 10. However, the homogeneity of variance assumption has been violated ($P < 0.05$) and thus any differences must be undertaken with care. The results of the Tukey HSD *post-hoc* test described where the differences in financial literacy lie. The study finds that, respondents with bachelor degree have a better financial literacy knowledge compare to diploma holder and certificate holder. Meanwhile, respondents with the lowest financial literacy level are certificate holder. A strategic to enhance financial literacy knowledge need to play an important role in improving individuals with certification qualification in Malaysia. This study find a limitation in accessing the level of financial literacy among Master and PhD holders. This is because respondents with Master and PhD qualification are limited. Therefore, the results from Tukey HSD *post-hoc* test cannot be generalized for Master and PhD holders due to respondents sample size only at 3.79% and 0.8% respectively. In Marzieh et al. (2013) and Joo and Grable (2004) research, they found that education is positively and significantly correlated with financial literacy.

Table 6: Independent samples test

Gender	Levene's test for equality of variances		t-test for equality of means		
	F	Significant	t	df	Significant (two-tailed)
Financial literacy					
Equal variances assumed	0.230	0.631	−4.259	2498	0.000
Equal variances not assumed			−4.249	2448.810	0.000

Table 7: Income

Income level	Mean
Below $1500	4.19
$1501 to $3000	5.19
$3001 to $5000	5.36
$5001 to $ 8000	6.30
$8001 to $10,000	5.70
$10,001 to $ 15,000	6.70
Above $15,001	5.38
N	2500
Levene statistic	2.085
F value	31.413**

Source: Author computation. HSD: Honest significant difference. **the mean difference is significant at the 1% level

Table 8: *Post-hoc* test using Tukey HSD - Income

(I) Income	(J) Income	Mean difference (I-J)
Below $1500	$1501 to $3000	−1.003**
	$3001 to $5000	−1.172**
	$5001 to $ 8000	−2.110**
	$8001 to $10000	−1.505**
	$10,001 to $ 15,000	−2.508*
	Above $15001	−1.183
$1501 to $3000	Below $1500	1.003**
	$3001 to $5000	−0.169
	$5001 to $ 8000	−1.106**
	$8001 to $10000	−0.502
	$10,001 to $ 15,000	−1.505
	Above $15,001	−0.180
$3001 to $5000	Below $1500	1.172**
	$1501 to $3000	0.169
	$5001 to $ 8000	−0.938**
	$8001 to $10,000	−0.333
	$10,001 to $15,000	−1.336
	Above $15,001	−0.011
$5001 to $8000	Below $1500	2.110**
	$1501 to $3000	1.106**
	$3001 to $5000	0.938**
	$8001 to $10,000	0.604
	$10,001 to $ 15,000	−0.399
	Above $15,001	0.926
$8001 to $10,000	Below $1500	1.505**
	$1501 to $3000	0.502
	$3001 to $5000	0.333
	$5001 to $ 8000	−0.604
	$10,001 to $15,000	−1.003
	Above $15,001	0.322
$10,001 to $15,000	Below $1500	2.508*
	$1501 to $3000	1.505
	$3001 to $5000	1.336
	$5001 to $ 8000	0.399
	$8001 to $10,000	1.003
	Above $15,001	1.325
Above $15,001	Below $1500	1.183
	$1501 to $3000	0.180
	$3001 to $5000	0.011
	$5001 to $ 8000	−0.926
	$8001 to $10,000	−0.322
	$10,001 to $15,000	−1.325

Source: Author computation. HSD: Honest significant difference. ** and * the mean difference is significant at the 1% and 5% level respectively.

Referring to Tables 11 and 12 for employment, the Levene's test results shows that it has a probability almost 0.05. So, we can assume that the population variances are relatively equal. To determine whether differences between employments do

Table 9: Education level

Education level	Mean
Higher school/certificate	4.03
Diploma	5.10
Bachelor	5.53
Master	5.38
PhD	5.20
N	4.94
Levene statistic	7.187**
F value	46.353**

Source: Author computation. HSD: Honest significant difference. **the mean difference is significant at the 1% level

Table 10: *Post-hoc* test using Tukey HSD -Education

(I) Education	(J) Education	Mean difference (I-J)
Higher school/certificate	Diploma	−1.065**
	Bachelor	−1.504**
	Master	−1.352**
	PhD	−1.169
Diploma	Higher school/certificate	1.065**
	Bachelor	−0.439**
	Master	−0.287
	PhD	−0.104
Bachelor	Higher school/certificate	1.504**
	Diploma	0.439**
	Master	0.152
	PhD	0.335
Master	Higher school/certificate	1.352**
	Diploma	0.287
	Bachelor	−0.152
	PhD	0.183
PhD	Higher school/certificate	1.169
	Diploma	0.104
	Bachelor	−0.335
	Master	−0.183

Source: Author computation. HSD: Honest significant difference. ** and * the mean difference is significant at the 1% and 5% level respectively.

exist, this study use the t-value, degree of freedom and two-tail significant for the equal variances estimation. The two-tail significance for employment described that P < 0.05 and significant. The Tukey HSD *post-hoc* test marked that financial literacy level for employment group can be divided into two groups. The group with a good financial literacy knowledge consists of respondents who work in government and private sector, while else respondents who work as self-employed indicated a lower level in their financial literacy level. Once again, Malaysian government and industry player need to think a strategy that can help Malaysian who is self-employed to be more financially literate.

Meanwhile, for marital status (Tables 13 and 14), Levene's test has a P > 0.05 and this study can assume that the population variances are relatively equal. Further analysis on equal variances estimation to determine whether differences between marital status do exist or otherwise. The two-tail significance for marital indicated that P > 0.05 and thus is not significant. The two group between single and married shows there is no differences between them. This report indicated that neither single or married, financial literacy knowledge is a must for everyone. Their mean value also highlighted that the value between single and married are almost same at 4.95 and 4.93 respectively. This study supports Joo and Grable (2004) findings, which denied the relationship between

marital status and financial literacy. The finding is inconsistence with Marzieh et al. (2013) indicated that married people are more financially literate.

Based on the above results, this study shows that young men aged between 18 and 25 who are self-employed with low levels of education and income below RM1500 are found to be financially illiterate and this group should be highlighted as a target group in raising their level of financial knowledge. Therefore, an effective strategy need to be structured to assist this target group.

Among the strategies that can be implemented for above mention target group is Adult Financial Capability Programme as outlined by BNM. This programme is customized for target audiences by providing them workshops, trainings and counseling sessions. Concurrently, AKPK provides Financial Education Programmes that is targeted at both individuals and groups through various activities, such as counseling and consultation, roadshows, exhibitions, workshops, seminar and talks. In saying so, BNM together with Malaysia's MOE has come out with a school adoption programme in order to make sure financial education start early at primary school level through school curriculum. BNM also equip teachers with financial management skills, so that they are able to teach effectively. These trainings are done via POWER Programme by AKPK's partnership with teachers training institutes.

Since financial decisions are becoming complex and contextual, prudent strategies emphasized in shaping consumers' knowledge, skills, behaviors and attitudes towards money management is essential. This study recommends to establish an institute that operates as a financial literacy activities, collaboration, research and financial education development hub. Alliance with policy makers, industry players and academicians are meaningful in strengthening, co-ordination, information exchange and collaborative programs involving financial literacy agenda. The collaboration would be able to widen alertness of financial literacy and good practice in handling financial issues. Financial education programs can be in a broad-spectrum with an initiative to provide the necessary knowledge, skills and tools for Malaysians to make informed financial decisions with confidence and sensibility. Financial education with appropriate syllabus for different target of audiences, measureable assessment, clear mapping and consistently evaluate from time to time be able to bring the financial literacy and financial knowledge to an excellent level in Malaysia. The institute should be assigned to develop a suitable financial programs that are customized for target audiences and for all levels of society. The program is expected to be able to equip individuals with financial knowledge such as savings, expense management, budgeting, risk management, credit and debt management, investment strategy, financial products and services, insurance, retirement, consumer protection and rights knowledge, wills and trusts. The institute should be able to initiate steps to introduce programs for youth and different gender as spotlighted in this study where extra consideration is crucial for young men in Malaysia. Academicians and industry practitioners can contribute their knowledge and experience through numerous methods for instance round table dialogues, conferences, campaigns, symposiums and financial education fairs are useful in improving the levels of nation's financial literacy directly. An attractive, easy and fun way using technologies such as video presentation using YouTube, websites, social media platform, online and offline games together with mobile games such as millionaire, consumer savvy, mad money, planet orange, financial football, financial soccer, Budgetball, show me the future, stock market game, LifeSmarts U, Moneytopia and others are a fresh way that need to be considered in financial education delivery method that compatible with youths nowadays.

Along with that, a youth financial club from a partnership between the institute and *Malaysian Youth Council* (MBM) would be a smart initiative for young Malaysian as target group as proven by the results in this study. The club should be able to support and ensure meaningful information provided to members to make

Table 11: Employment type

Employment type	Mean
Private	5.08
Government	5.13
Self-employed	4.26
N	4.94
Levene statistic	3.032
F value	23.423**

Source: Author computation. HSD: Honest significant difference. **the mean difference is significant at the 1% level

Table 12: *Post-hoc* test using Tukey HSD - Employment

(I) Employment	(J) Employment	Mean difference (I-J)
Private	Government	−0.048
	Self-employed	0.820**
Government	Private	0.048
	Self-employed	0.868**
Self-employed	Private	−0.820**
	Government	−0.868**

Source: Author computation. HSD: Honest significant difference. **the mean difference is significant at the 1% level

Table 13: Marital status

Marital	Mean
Single	4.95
Married	4.93
N	2500

Table 14: Independent samples test

Marital status	Levene's test for equality of variances		t-test for equality of means		
	F	Significant	t	df	Significant (two-tailed)
Financial literacy					
Equal variances assumed	0.952	0.329	0.223	2498	0.824
Equal variances not assumed			0.225	2159.850	0.822

informed financial decisions that allows them to build, accumulate, manage and preserve their income and further strengthen the position of their wealth. The club together with the institute should be capable in organizing roadshow, engage in exhibitions and financial education fair, conference, seminar, symposium, counseling and consultation session.

Conjointly, the institute collaboration with the Ministry of Human Resources Malaysia (MHR) is highly encouraged to provide programs and propose financial literacy awareness in workplace such as "Financial Health Corner" or "Money Smart Month" are believe to assist and benefit workforce directly. MHR through tailor-mate programs designed by the institute such as talks, workshops, seminars, in-house trainings, help-lines, webinars and e-learning courses that incorporate financial education elements are helpful for target audiences who are unable to further their studies at higher level and low earner as suggested by the finding in this study. Additionally, MHR may encourage to provide certification and accreditation system regarding financial education with the support from the institute. This can inspire and motivate participants in learning financial literacy and financial education that can protect and enhance their financial health.

In conjunction with above, actively engaging in research activities that mainly focuses in financial literacy topic will provide findings to help policy makers in developing guidelines and policies regarding financial literacy and financial health effectiveness.

Once again, this study also point out that Malaysia government and industry players need to systematically plan a strategy that can help Malaysian who is self-employed to be more financially literate. Micro finance partnership, Small and Medium Enterprises (SME) Association of Malaysia could enforce and promote financial literacy and financial health via financial counseling and debt management sessions, dialogues, consultations and build network as a good will to work together on national campaigns encouraging Malaysian SMEs to take positive steps and make the most of their income.

To boot, this study suggests the use of mass media such as television commercials, radio casting and newspaper articles to highlight financial literacy in a more enjoyable and effective manner, perhaps using cartoon characters. Conjointly, ASTRO and National Film Development Corporation Malaysia (FINAS) are in the position to channel and spread financial literacy in more productive ways by producing television shows about financial literacy such as "Oh My Money" and tele-dramas in which the story is consistent with the importance of financial literacy. Strategy plays by universities and colleges are another way that can be emphasized. Universities and colleges can promote financial literacy month by equipping materials and reading tools for their students such as Ringgit Magazine, Money Pocket booklet, broachers and pamphlets.

5. CONCLUSION

In a nutshell, the study understands the critical and emerging complications in managing complex financial issues by all levels.

This study also offer guidelines and strategies to the complex financial challenges, confronted by many organizations and economies globally in diversified fields. As a conclusion, being able to positively handle the financial matters and make wise decisions about money are gist life skills. Enriched financial literacy can help anyone, regardless of age, gender, education or income. Being able to make the most of the money, understand consumers' financial protection and rights, manage financial risks and avoid financial distress can have a positive effect on the financial health of individuals. Malaysians consider themselves good in financial literacy but in reality they are unaware that they are financially illiterate. Therefore, strong and solid strategies need to implement by establishing an institute that mainly focuses on financial literacy is a vital strategy. Not to mention, the roles played by the institute as financial literacy as policy priorities, concrete private and public stakeholders partnership, encourage financial literacy lifelong learning, research findings, monitoring and evaluation financial education using roadmap, a widespread policy solution, mapping and comparable evidence of financial literacy are needed at the national level. This study provides a robust theoretical and practical contributions in the topic of financial literacy. Lastly, the achievement of the strategies will be accomplished by developing a proper framework that reaches everyone.

6. ACKNOWLEDGMENT

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