

“Personal Financial Literacy among High School Students in Raub Pahang, Malaysia”

¹Mohd Samsuri Ghazali, ¹Ilyani Azer, ¹Siti Aishah Mohamad,

¹Nur Afizah Muhamad Arifin and ²Azmi Mat

¹Faculty of Business Management, Universiti Teknologi MARA, Bandar Jengka,
26400 Bandar Tun Razak, Pahang, Malaysia

²Faculty of Business Management, Universiti Teknologi MARA, 40450 Shah Alam, Slangor, Malaysia

Abstract: Topics on personal finance literacy are still considered minimal in Malaysia. If there are surveys on them done by researchers the majority of the studies focused on residents as a whole and did not directly address the youngsters. This study aimed to verify Malaysian student’s level of personal financial literacy and focused on investigating the effects of gender, ethnicity, age and bank account ownership on a student’s financial knowledge. In addition, this study also aimed to analyze the relationship between the student’s educational background and personal financial literacy. This study utilized the descriptive analysis, independent samples t-test and one-way ANOVA analysis in order to achieve the research objective. It was found that the high school students were not financial literate and the findings were consistent with several academic works conducted on the topic globally. The results were alarming and a sign for the government to undertake drastic action in increasing the literacy of high school student’s personal financial knowledge.

Key words: Personal financial literacy, high school students, knowledge, alarming, descriptive

INTRODUCTION

High school is a crucial time in a student’s life. This is the transition period for the students to either further their studies on higher education learning or start to seek their first jobs. High school results whether excelling or failing, will lead them to achieve some degree of financial autonomy. For those who excel, they will go to college and start to coop with their own financial responsibilities such as paying collage fees making financial budget and managing their own education loan. There is no exception for those who did not plan to continue their studies where the big challenge will wait for them; looking for jobs and managing their own salaries. Both situations will be a big challenge for them. How well they cope with these challenges depends in part on the financial knowledge and behaviors they acquire prior to arriving at this stage (Lyons *et al.*, 2006). Being financially literate is important for individuals to make sound financial decisions in the short-term and the long-term period.

Malaysians consider themselves good in financial literacy but in reality, they are unaware that they are financially illiterate (Murugiah, 2016). Furthermore, in Malaysia, topics on personal finance literacy are still considered minimal and if there are programs or activities being done on it, they were never addressed directly to

young consumers (Ibrahim *et al.*, 2010). Instead, there is no consensus definition of financial literacy (Huston, 2010). Results from prior studies at some countries show that the level of financial literacy among high school students is poor (Cameron *et al.*, 2013) even at the basic understanding such as interest rate, inflation and risk diversification. The lack of knowledge and awareness in financial aspects as well as the lack of instruments and appropriate plans may bring about a negative impact to the long term quality of life (Idris *et al.*, 2013). Although, the government of Malaysia through Bank Negara Malaysia in collaboration with the Ministry of Education will integrate financial education elements into the core subjects of the new school curriculum for the high school level on 2017, no other studies on financial literacy focusing on specific group of high school students have been done in this country.

This study aimed to verify Malaysian student’s level of personal financial literacy and focused on investigating the effects of gender, ethnicity, age and bank account ownership on a student’s financial knowledge. In addition, this study also aimed to analyze the relationship between the student’s educational background and personal financial literacy. This study was guided by the following research questions:

- What is the level of financial literacy of high school students in Raub?
- Is there a significant difference in the financial literacy of high school students based on gender?
- Is there a significant difference in the financial literacy of high school students based on age?
- Is there a significant difference in the financial literacy of high school students based on ethnicity?
- Is there a significant difference in the financial literacy of high school students based on personal bank account ownership?
- Is there a significant difference in the financial literacy of high school students based on their educational background?

Literature review: Financial literacy is defined as the “people’s ability to process economic information and make informed decisions about financial planning, wealth accumulation, debt and pensions” (Lusardi and Mitchell, 2014). Being financially literate is important for individuals to make sound financial decisions, both in the short-term and the long-term period. It is also the case that communities and the national economy with informed and financially literate consumers will have more stable and efficient markets.

Previous research has indicated that financial literacy can have important implications on financial behavior. People with low financial literacy are more likely to have problems with debt (Jang *et al.*, 2014). According to Lusardi *et al.* (2010) financial literacy is an important component of sound financial decision making and many young people wish they had more financial knowledge. People with low financial literacy are more likely to have financial related issues in the real world (Lusardi and Tufano, 2009a, b). Financial education at an early age can reduce the financial illiteracy and alleviate financial difficulties among youth significantly (Mohamed, 2016).

Previous research: The majority of empirical studies on personal finance literacy among high school students done at different countries showed poor results. Danes and Hira (1987) were the 1st scholars to undertake academic work on financial literacy on senior high school students. An academic work by A National Council on Economic Education study (NCEE, 2005) stressed that there was inadequate personal finance literacy among senior high students and that had a negative effect on their financial decisions and behavior. The comparison between studies in Hamilton, New Zealand with samples from Japan and the United States found that financial literacy is poor in all three countries but is substantially worse in New Zealand and the United States than in Japan (Cameron *et al.*, 2013). This study suggested that all three

countries should work harder to develop the financial literacy of their high school students. Studies in Korea had made a comparison of financial literacy based on the bloom’s cognitive level and indicated that Korean students showed relatively strong financial literacy at the cognitive level of knowledge but weak financial literacy at higher cognitive levels of comprehension and application (Falahati and Paim, 2011).

Determinant of financial literacy: Financial literacy is alarmingly affected by demographic characteristics such as age, education level, gender, parents, peers, etc. Several academic works had been conducted across countries to confirm this. A study by Lewis Mandell showed that gender is one of the important elements in financial literacy where women are considerably less financial literate than men. This result was similar with Marzieh which proved that men are more financially healthy. In addition, a research by Lawrance indicated that females are more likely to have a credit card than male students and males on the other hand were reported to be more confident about making financial decisions. However, the relationship between gender and financial literacy was denied in the study done by Joo and Grable (2004).

Students are more financially literate if they are older (Cameron *et al.*, 2013). But, some researchers were not confident about the truth of this statement and thought that age does not matter (Brown and Graf, 2013). Lusardi *et al.* (2009, 2010) were confident that financial knowledge can decrease again once an individual has reached the age of 55.

Sabri and MacDonald (2010) investigated the situation in Malaysia and found that the financial literacy of college students which was also low there was related to ethnicity (and student’s childhood consumer experiences). It was apparent that Chinese students had a low level of financial knowledge compared to their Malay counterparts. In the United States as well this was the case; Lusardi Mitchell (2014) found evidence of major differences in financial literacy across racial groups: African-Americans and Hispanics displayed much lower levels of financial literacy than caucasians.

Mandell noticed that high school students with their own savings account had better financial knowledge. In addition Deuflhard *et al.* (2014) stated that 82% of all Dutch households had savings accounts; these often represent the bulk of their financial wealth. They found that financial literacy had a positive significant relationship with the household’s average earnings on savings accounts: financially literate investors were more successful in selecting the savings account that yielded the highest return.

A strong positive relationship was found between the level of education and the financial literacy. Chen and Volpe (1998) noticed by means of a survey that the scores on the test were determined mostly by the education level and the subject that the participants studied at school. Business majors, for example had better scores than others. In 2008, Mandell demonstrated by means of a questionnaire (composed of 31 questions) that the average score of college students was nearly 15% above that of high school seniors.

MATERIALS AND METHODS

The purpose of this study was to verify the high school student's aged between 18 and 19 level of personal financial literacy. Moreover, we investigated whether their financial literacy was related to gender, age, ethnicity, educational background and own savings account. This study utilized descriptive analysis, independent samples t-test and one-way ANOVA analysis in order to achieve the research objectives.

The population for this study consisted of 458 high school students in the academic year of 2015-2016 and attending 4 high schools at a rural area of Pahang, Malaysia which is the Raub District. The schools consisted of SMK Tersang, SMK Dong, SMK Seri Raub and SMK Mahmood. A convenience sampling of the high school student population was used and participation was voluntary. From 458 high school students, 210 agreed to participate in this survey. The time frame used in this study was 2016.

Financial literacy in this research was measured by the survey of personal financial literacy among high school students in jumpstart (Taft *et al.*, 2013). The survey instrument was created by Dr. Lewis Mandell. This survey includes 31 questions that consist of 6 aspects of financial literacy which are financial responsibility and decision making, income and career, planning and money management, credit and debt, risk management and insurance and saving and investing.

From the 31 jumpstart questions survey, we selected only 25 questions in this study because some financial institutions and terms used in the jumpstart were different from the Malaysian market environment. To ensure that there were no substantial cultural barriers inherent in answering the questions, we used questionnaires that had already been translated into the Malay language. Furthermore, as the independent variable, demographic factors namely age, gender, ethnicity, personal bank account ownership and educational background were used in this study.

RESULTS AND DISCUSSION

Participants: Based on the 207 students who responded to the survey, 36.7% were male and 63.3% were female students. The ethnic composition was Malay (61.4%), Chinese (34.8%) and Indian (3.9%). The age of the respondents was between 18-19 years old. The majority of the students owned a personal bank account (90.3%). Meanwhile, for the educational background, 66.2% had business background as a student and the rest came from the science stream background (33.8%).

Research question 1: What is the financial literacy of high school students at Raub, Pahang Malaysia? Table 1 presents the descriptive statistics for all students in the study on their financial literacy levels. The overall literacy scores had a possible range from 0-100. According to the guidelines established by the jumpStart coalition, scores below 70 indicated a non-pass score on the survey while scores of 70 and above were considered as the passing level. The mean score for this sample equalled to 50.01 indicating that these students were not financial literate as measured by this instrument.

Research question 2: Is there a significant difference in the financial literacy of high school student based on gender? An independent-samples t-test was conducted to compare the JumpStart survey scores in males and females. There was a significant difference in the scores for males ($M = 48.00$, $SD = 13.17$) and females ($M = 51.18$, $SD = 9.13$) at 0.05 level; $t(117.34) = -2.041$, $p = 0.001$. It showed that female students in Malaysian high schools were relatively more financial literate than male students. This result was similar to Murugiah (2016) but contradicted with Lewis Mandell's and Marzieh's.

Research question 3: Is there a significant difference in the financial literacy of high school students, based on age? An independent-samples t-test was conducted to compare the jumpstart survey scores based on their age. The findings showed that there was no significant difference in the scores of students with age 18 years old ($M = 48.77$, $SD = 12.12$) and 19 years old ($M = 50.48$, $SD = 10.35$). This result suggested that age of the respondents does not have an effect on financial literacy.

Research question 4: Is there a significant difference in the financial literacy of high school students based on ethnicity? The one-way ANOVA between group analysis of variance was conducted to explore the difference in the financial literacy of high school students according to their ethnicity. There was a significant difference at

Table 1: Descriptive statistics for jumpstart survey scores

Variables	Value	Percentage	Mean	SD	d	Min.	Max.
Survey score	207	100.0	50.01	10.87	1680.00	-	-
Male	76	36.7	48.00	13.17	117.34	20	80
Female	131	63.3	51.18	9.13	-	16	68
18 years old	57	27.5	48.77	12.12	88.78	20	76
19 years old	150	72.5	50.48	10.35	2.00	20	80
Malay	127	61.4	51.37	10.66	-	16	76
Chinese	72	34.8	47.56	11.28	2.00	20	80
Indian	8	3.9	50.50	6.74	-	40	56
Bussiness	137	66.2	52.09	9.98	123.53	20	80
Non-business	70	33.8	45.94	11.45	-	16	68
Personal bank							
Account	187	90.3	50.35	10.74	-	16	80
Owner ship	-	-	-	-	-	-	-
No bank	-	-	-	-	22.48	-	-
Account	20	9.7	46080.00	11.83	-	24	72
Oenership	-	-	-	-	-	-	-

the $p < 0.05$ for the three ethnicity groups: $F(2, 204) = 2.889, p = 0.058$. Despite reaching statistical significance, the actual difference in the mean scores between the groups was quite small. The effect size, calculated using eta squared was 0.02. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for Malay ($M = 51.37, SD = 10.66$) was significantly different from Chinese ($M = 47.56, SD = 11.28$). Indian ($M = 50.50, SD = 6.74$) did not differ significantly from either Malay or Chinese. This result reflected the study done by Sabri and MacDonald (2010) for students at the university level where Chinese students had a low level of financial knowledge compared to Malay.

Research question 5: Is there a significant difference in the financial literacy of high school students based on their educational background?: An independent-samples t test was conducted to compare the jumpstart survey scores among business and non-business background students. There was a significant difference in the scores for students with a business background ($M = 52.09, SD = 9.98$) and those with a non-business background ($M = 45.94, SD = 9.45$) conditions at the 0.05 level; $t(205) = 3.983, p = 0.054$. The magnitude of the differences in the means was moderate ($\eta^2 = 0.07$). This result was parallel with Mandel's, Marzieh's and Murugiah (2016)'s which indicated that education is positively and significantly correlated with financial literacy.

Research question 6: Is there a significant difference in the financial literacy of high school students based on personal bank account ownership? An independent-samples t-test was conducted to compare the jumpstart survey scores among students with a personal bank account ownership. There was no significant difference in the scores of students with a personal bank account ownership ($M = 50.35, SD = 10.74$)

and no personal bank account ownership ($M = 46.80, SD = 11.83$). The result suggested that personal bank account ownership does not have an effect on financial literacy. Even though, the number of students that had a personal bank account was high this did not contribute to the knowledge of finance to them. This was due to the requirement for them to open up a bank account for their scholarship purposes.

CONCLUSION

As a conclusion, we found that high school students in Raub were not financially literate and the finding was consistent with the findings of several academic works conducted on the topic globally (Murugiah, 2016; Cameron *et al.*, 2013). As indicated in the literature, people with low financial literacy tend to have financial issues in the real world (Lusardi and Tufano, 2009a, b). This result is a sign for the government to undertake drastic action in increasing the literacy of high school student's personal financial knowledge. The findings also suggested that the students that had business knowledge were more literate than non business students. Thus, it pointed out that business major students were informally exposed to certain concepts of financial management which gave significant impacts on their understanding of certain financial literacy issues. Therefore, the Malaysian government's action in introducing the personal finance subject in all schools in 2017 was very precise.

ACKNOWLEDGEMENTS

The researchers wish to take this opportunity to express a special gratitude and appreciation to acknowledge that this research was supported by iRAGS Grant Number: 600-RMI/iRAGS 5/3(24/2015) under Universiti Teknologi MARA.

REFERENCES

- Brown, M. and R. Graf, 2013. Financial literacy and retirement planning in Switzerland. *Numeracy*, 6: 1-6.
- Cameron, M.P., R. Calderwood, A. Cox, S. Lim and M. Yamaoka, 2013. Factors Associated with Financial Literacy Among High School Students. University of Waikato, Hamilton, New Zealand.
- Chen, H. and R.P. Volpe, 1998. An analysis of personal financial literacy among college students. *Financial Serv. Rev.*, 7: 107-128.
- Danes, S.M. and T.K. Hira, 1987. Money management knowledge of college students. *J. Stud. Financial Aid*, 17: 4-16.
- Deuflhard, F., D. Georganakos and R. Inderst, 2014. Financial literacy and savings account returns. MSc Thesis, Social Science Research Network, University of Leicester, Leicester, England, UK.
- Falahati, L. and L.H. Paim, 2011. Gender differences in financial well-being, financial socialization and financial knowledge among college students. *Life Sci. J. Acta Zhengzhou Univ. Overseas Ed.*, 8: 173-178.
- Huston, S.J., 2010. Measuring financial literacy. *J. Consum. Affairs*, 44: 296-316.
- Ibrahim, D.I.D., R. Harun and Z.M. Isa, 2010. A study on financial literacy of Malaysian degree students. *Cross Cult. Commun.*, 5: 51-59.
- Idris, F.H., K.S.D. Krishnan and N. Azmi, 2013. Relationship between financial literacy and financial distress among youths in Malaysia-an empirical study. *Geografia Malaysian J. Soc. Space*, 9: 106-117.
- Jang, K., J. Hahn and H.J. Park, 2014. Comparison of financial literacy between Korean and US high school students. *Intl. Rev. Econ. Educ.*, 16: 22-38.
- Joo, S.H. and J.E. Grable, 2004. An exploratory framework of the determinants of financial satisfaction. *J. Family Econ. Issues*, 25: 25-50.
- Lusardi, A. and O.S. Mitchell, 2014. The economic importance of financial literacy: Theory and evidence. *J. Econ. Lit.*, 52: 5-44.
- Lusardi, A. and P. Tufano, 2009a. Debt literacy, financial experiences and overindebtedness. Master Thesis, National Bureau of Economic Research, Cambridge, England, UK.
- Lusardi, A. and P. Tufano, 2009b. Debt literacy, financial experiences and overindebtedness. NBER Working Paper No. 14808, March 2009, Italy, pp: 1-44.
- Lusardi, A., O.S. Mitchell and V. Curto, 2009. Financial literacy and financial sophistication among older Americans. Master Thesis, National Bureau of Economic Research, Cambridge, England, UK.
- Lusardi, A., O.S. Mitchell and V. Curto, 2010. Financial literacy among the young. *J. Consumer Affairs*, 44: 358-380.
- Lyons, A.C., E. Scherpf and H. Roberts, 2006. Financial education and communication between parents and children. *J. Consum. Educ.*, 23: 64-67.
- Mohamed, O.E.B., 2016. Financial education in building financial literacy among sudanese youth. *Intl. J. Innovation Educ. Res.*, 3: 90-101.
- Murugiah, L., 2016. The level of understanding and strategies to enhance financial literacy among Malaysian. *Intl. J. Econ. Financial Issues*, 6: 130-139.
- NCEE, 2005. What American teens and adults know about economics. National Council on Economic Education, Washington, DC.
- Sabri, M.F. and M. MacDonald, 2010. Savings behavior and financial problems among college students: The role of financial literacy in Malaysia. *Cross Cult. Commun.*, 6: 103-110.
- Taft, M.K., Z.Z. Hosein, S.M.T. Mehrizi and A. Roshan, 2013. The relation between financial literacy, financial wellbeing and financial concerns. *Intl. J. Bus. Manage.*, 8: 63-75.