FM Publisher
Frontiers Journal of Accounting and Business Research (FJABR)
Volume 02, Issue 01, Article ID FJABR-2019-07

Research Article *Open Access*

FINANCIAL LITERACY FOR ELEMENTARY SCHOOL STUDENTS IN URBAN AREA

Budiana Gomulia, Universitas Katolik Parahyangan
Inge Barlian, Universitas Katolik Parahyangan
Vera Intanie Dewi, Universitas Katolik Parahyangan

Corresponding author: Vera Intanie Dewi, Management Department, Faculty of Economics, Universitas Katolik Parahyangan, Indonesia, Email: vera_id@unpar.ac.id

Citation: Gomulia, B., Barlian, I., & Dewi, V.I. (2020). Financial literacy for elementary school students in urban area. *Frontiers Journal of Accounting and Business Research*, *2*(1), 1-9.

Received Date: *23 September 2019;* ***Accepted Date:*** *20 December 2019;* ***Published Date:*** *14 January 2020.*

ABSTRACT

The theories of financial decision for children and adults are different. Grody et al. (2008) have shown that theories of financial decision for adults depend on the assumption that they are rational beings and have basic knowledge of financial concepts. Meanwhile, theories of financial decision for children emphasize the value of the habit of managing money that can be practiced as a good money management habit that they can rely on throughout their lives. This study has aim to measure the financial knowledge of elementary school students and to develop an education tool model to fill the gap in early financial education by teaching about money turnover concept as a mechanism to understand money management behavior better. The results of this study showed that 67% of students knew financial institution such as bank. The students' habits of saving money were very good with 83% of students already had the habit of saving money. In this study, grade level had significant effect on financial literacy, while gender did not affect financial literacy.

Keywords: Financial Literacy, Financial Knowledge, Elementary School, Money Management Behavior.

INTRODUCTION

Children are often taught to live simply, but are not taught to manage money wisely. Some previous studies stated that individuals' financial behaviors can also be influenced by how parents educate them. Parents play a role in providing information and knowledge of good financial management. Abadi (2015) stated that at the age of four, children can already be invited to communicate about money management that is, using money according to their needs and savings habit. Children aged 8-9 years old can start to be involved in financial activities, such as saving money, creating pocket money spending record, and paying monthly bills, such as electricity bill, water bill, telephone bill, etc. Even at these ages, children can also be introduced to the way to earn money and more importantly, the way to make donation using their own money.

Teaching children about simplicity is not only about money, but also about the difference between needs and wants. Learning to live simply means that children know what is needed, not only what is wanted. Values in the family also have important portion in teaching children the concept of simple living and money management. It is important for a family to have clear and agreed values. Another study stated that children should be taught about money by the time they turn 10 years old, the age at which children must already understand about obligations, consequences, predictive thinking, and mature decision making.

Lessons about money can begin with a lesson about making daily or weekly needs budget. Money is given according to the budget proposed and the spending record is reported after the period is over. This reporting and accountability processes are very important to build honesty and eradicate corrupt mentality in an early age. If the report turns out to be incomplete, it can be evaluated. If there is an error in spending record, it is okay to teach children again and again until they understand and can make financial decisions wisely. In this process, children learn about spending plan.

After being taught how to budget, spend, and report properly, the next step is to provide an understanding of saving. Children are given the understanding to save before spending, not the other way around. Another principle that is also very important is to teach children to give alms using what is left from basic needs budget or budget for donations that has been set from the beginning. Thus, children learn the right concepts in the right way.

Children need to be taught to be caring for others from an early age. Learning to make donation or give alms is important to shape good behavior in the future. Alms do not have to be in the form of money. It can be in the form of sharing toys, reading stories to pediatric patients in hospitals, or helping neighbour to take clothes off the clothesline. Alms can be whatever they can give.

As children turn 12 years old, they can already be taught to have an income or earn a living. It does not have to be fixed income, but at the very least, children know how to earn income. For example, to have an allowance, children can do simple things that can make money. Children are invited to make a business budget, given capital or invited to work together, for example, to make homemade food on weekends, then they can sell the food around the neighbourhood. When children have earned their own income, the concept of alms and the virtues of alms need to be emphasized. The concept of alms can also be taught when children earn money from holiday traditions, such as *'hóngbāo giving'* tradition on Chinese New Year and pocket money on Eid.

The poor condition of current public financial literacy, as evidenced by the rampant fraud in the guise of financial investment, shows the importance of building financial awareness early on. Financial literacy has been largely improved through financial management education for public and school students, both in developed and developing countries, such as Japan, Taiwan, the United States of America, Indonesia, etc. Financial education can be in the form of formal and non-formal educations, for example, financial competitions, financial simulations, and so on. Jump$tart Coalition has also actively promoted financial curricular guidelines for kindergarten level to high school level (K-12).

Many countries emphasize the importance of financial management education and believe that the government should play an active intervention role. Government may incorporate investment and financial management into the official curriculum starting from elementary school level and train students to have good financial literacy by developing their own money management and the concept of its use. The Ministry of Education and Culture, as institution in charge, is expected to have the same attention and begin to incorporate financial management education into the elementary school curriculum guidelines.

From the explanation above, this study aims to find out the description of financial knowledge of elementary school students in order to develop an educational tool model to bridge the gap in the basic education of financial management by teaching the values and concepts of *'earn', 'save', 'donate'*, and *'spend'*.

LITERATURE REVIEW

Financial literacy is the ability of an individual to know and understand personal financial management (Nidar & Bestari. 2012). In previous studies, there were many strong linkages between financial knowledge, financial education, and financial literacy (Budiono, 2014; Hilgert et al., 2003; Huston, 2010). The involvement of parents in financial management education has also started to be studied. Akmal & Saputra (2016) and Widyawati (2012) proved that financial education in family level can influence financial literacy. This finding supports the results of the study of Hung et al. (2009) which stated that financial knowledge is one of the dimensions needed in managing financial resources for financial welfare.

Financial literacy has attracted the attention of many researchers and organizations to develop studies regarding this issue. Several studies showed that it is important to introduce financial literacy earlier in life. Parents, teachers, and surrounding environment can have an influence on children's financial management behavior. Blue et al. (2014) stated that financial literacy education has been included in the elementary and secondary school curriculum in Australia. Meanwhile, Deng et al. (2013) stated that there was a positive correlation between teacher financial literacy and the teaching process of financial education. Teachers generally believe that current elementary school textbooks cannot foster sufficient knowledge of financial management in elementary school students, demonstrating the mismatch of financial curricular education materials for elementary school teachers. Besides teachers, parents also have a role in providing sufficient knowledge for children so that it can have an impact on financial management behavior. This is consistent with the findings of Fajar & Syamlan (2018) which stated that parents who instilled the habit of saving money in their children affected children's financial knowledge.

Financial literacy education for children is not enough if it is just about the introduction of money, but furthermore, financial literacy education for children should be about the concept of wise financial management and control of financial expenditure by distinguishing which one is the needs and wants. Theories of financial decision making for children and adults are also different. Grody et al. (2008) showed that financial decision making theories for adults depend on the assumption that they are rational beings and have basic knowledge of financial concepts. Meanwhile, financial decision making theories for children emphasize the value of the habit of managing money that can be practiced as a good money management that they can rely on throughout their lives. Introducing elementary school students to basic financial literacy will help them develop the basic foundation they need to make good financial decisions throughout their lives. In addition to the role of parents, educational curriculum at schools that teaches good financial behavior is a comprehensive effort to educate children to truly understand financial concepts. According to Rapih (2016), instilling the value of financial literacy requires synergy between families and schools. Financial literacy values need to be instilled as early as possible in children because the cognitive developments of children are still in concrete and developmental stages and thus, it is very effective to instill financial literacy values at those ages.

Walstad et al. (2010) stated that a well-determined and properly implemented financial education program can positively and significantly affect students' financial knowledge. Elonge (2013) conducted study of the importance of financial literacy education among 4^{th} grade and 5^{th} grade students in the Maryland elementary schools. The results of the study showed that 80% of students were able to accurately explain basic financial concepts. Gertz (2016) conducted a study of financial literacy on 3rd grade elementary school students, and the results showed that the students were able to understand most financial concepts.

According to Rapih (2016), there are several steps to educate children about finance:

1. Involving children in financial decision making.
2. Providing an understanding of the difference between needs and wants.
3. Helping children to get accustomed to the habit of saving money from an early age.
4. Gradually introducing financial institutions, such as banks and insurance companies, to children.

Schug & Hagedorn (2005) conducted a study by using Money Savvy Kids® curriculum, which consists of *'The History of Money', 'Where does Money Come From,' 'Kids Can Earn Money Too', 'Saving Money and Bank Field Trips', 'Spending Money', 'Donating Money', 'Investing Money', 'Family Money Press Conference'*. The analysis was conducted using pretest and posttest. The results showed that knowledge significantly affected student attitude. Hagedorn et al. (2016) used Money Savvy Kids® curriculum to measure financial literacy in the Chicago public schools, and the results stated that Money Savvy Kids® program positively affected student behavior and knowledge on saving, spending, and investing money. The study also showed that it is very important to teach children financial literacy, especially regarding good saving programs, economic and financial education, and deliver the subject materials repeatedly as often as possible in the curriculum. Suiter & Meszaros (2005) found that the results of mathematical and economic tests were equally good when personal finance and economic knowledge was given in mathematics classes. The same conclusion was also drawn by Harter & Harter (2009) who used Financial Fitness for Life ® (FFFL) curriculum created by the Council for Economic Education. The study was focused on the application of FFFL in elementary schools, middle schools, and high schools, employing pretest, posttest, control groups, and experimental groups. The results showed that financial knowledge of students in the experimental groups increased after the implementation of FFFL.

RESEARCH METHOD

A survey of elementary school students was conducted by asking them about some basic concepts of financial knowledge, savings habit, and financial behavior. The survey picked a sample of 394 fourth, fifth, and sixth grade elementary school students in the city of Bandung. Data were analyzed using descriptive statistics and logistic regression to test the hypothesis, that was, gender and grade level affect financial literacy. The research model is:

$$\ln\left(\frac{p}{1-p}\right) = B_0 + B_1 GE + B_2 CR + e$$

Annotation:

ln: Natural Logarithm
p: Probability of high level of financial literacy
GE: Gender
CR: Class Rank
e: Residual value

RESULTS AND DISCUSSION

This study was conducted on fourth, fifth and sixth grade students aged 9 to 12 years old. Of the 395 students who became the sample, 52% were female and 48% were male. In terms of saving behavior, 83% of students already had the habit of saving money. Some students had the habit of saving money every day, once a week, or every few days. Overall, almost all students had good financial habits of saving money.

In term of the safest place to save money, two alternative options were presented, namely, bank and piggy bank. Sixty seven present of students responded that the bank was the safest place to save money, while the remaining 33% stated otherwise, that the piggy bank was the safest place to save money. This result showed that the introduction of financial institutions to elementary school students has not been optimal. Even though the number was higher in percentage, it is still a challenge for financial institutions, especially bank, to provide financial literacy education about the role of financial institutions.

Almost all students understood that making donation is a good habit and most students saved money first when they wanted to buy something. From the questions about financial knowledge in terms of calculating the value of money, 92% of students correctly answered the question about calculating the value of money.

The test result using logistic regression showed that grade level had an effect on financial literacy, while gender had no effect on financial literacy. This result supports previous studies which stated that gender did not affect financial literacy (Gunardi et al, 2017; Nidar & Bestari, 2012), but does not support previous studies which stated that gender affected financial literacy (Butters et al., 2012; Lusardi et al., 2010; Lantara & Kartini, 2015; Margaretha & Pambudhi, 2015). Research model is as follows:

$$\ln\left(\frac{P}{1-p}\right) = Bo + B1\ CR$$

Annotation:

p: Probability of high level of financial literacy

CR: Grade Level

Logistic Regression Results

Logistic Regression Results are show in below tables (Tables1-12).

Table 1
CASE PROCESSING SUMMARY

Unweighted Cases[a]		**N**	**Percent**
Selected Cases	Included in Analysis	394	100
	Missing Cases	0	0
	Total	394	100
Unselected Cases		0	0
Total		394	100

a: If weight is in effect, see classification table for the total number of cases.

Table 2 CASE PROCESSING SUMMARY			
Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	394	100
	Missing Cases	0	0
	Total	394	100
Unselected Cases		0	0
Total		394	100
a: If weight is in effect, see classification table for the total number of cases.			

Table 3 DEPENDENT VARIABLE ENCODING	
Original Value	Internal Value
Low Level of Financial knowledge	0
High Level of Financial knowledge	1

Block 0: Beginning Block

Table 4 ITERATION HISTORY[a,b,c]			
Iteration		-2 Log likelihood	Coefficients Constant
Step 0	1	543.914	0.152
	2	543.914	0.153
a: Constant is included in the model.			
b: Initial -2 Log Likelihood: 543.914			
c: Estimation terminated at iteration number 2 because parameter estimates changed by less than 0.001.			

Table 5 CLASSIFICATION TABLE[a,b]					
	Observed		Predicted		
			Level of Financial Knowledge		Percentage Correct
			Low	High	
Step 0	Level of Financial Knowledge	Low	0	182	0
		High	0	212	100
Overall Percentage					53.8
a: Constant is included in the model.					
b: The cut value is .500					

Table 6 VARIABLES IN THE EQUATION							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	0.153	0.101	2.28	1	0.131	1.165

Block 1: Method=Enter

Table 7
ITERATION HISTORY[a,b,c,d]

Iteration		-2 Log likelihood	Coefficients			
			Constant	Grade Level	Gender	Saving Habit
Step 1	1	531.489	-0.486	0.487	-0.093	-0.095
	2	531.483	-0.498	0.498	-0.097	-0.099
	3	531.483	-0.498	0.498	-0.097	-0.099

a: Method: Enter

b: Constant is included in the model.

c: Initial -2 Log Likelihood: 543.914

d: Estimation terminated at iteration number 3 because parameter estimates changed by less than 0.001.

Table 8
OMNIBUS TESTS OF MODEL COEFFICIENTS

		Chi-square	df	Sig.
Step 1	Step	12.43	3	0.006
	Block	12.43	3	0.006
	Model	12.43	3	0.006

Table 9
MODEL SUMMARY

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	531.483[a]	0.031	0.041

a: Estimation terminated at iteration number 3 because parameter estimates changed by less than 0.001.

Table 10
HOSMER AND LEMESHOW TEST

Step	Chi-square	df	Sig.
1	5.641	5	0.343

Table 11
CONTINGENCY TABLE FOR HOSMER AND LEMESHOW TEST

		Level of Financial Knowledge=Low		Level of Financial Knowledge=high		Total
		Observed	Expected	Observed	Expected	
Step 1	1	28	30.749	19	16.251	47
	2	19	16.918	11	13.082	30
	3	22	18.884	14	17.116	36
	4	4	3.5	3	3.5	7
	5	48	42.496	52	57.504	100
	6	44	51.395	84	76.605	128
	7	17	18.058	29	27.942	46

Table 12
CLASSIFICATION TABLE[a]

	Observed		Predicted		
			Level of Financial Knowledge		Percentage Correct
			Low	High	
Step 1	Level of Financial Knowledge	Low	73	109	40.1
		High	47	165	77.8
Overall Percentage					60.4

a: The cut value is .500

CONCLUSION

Based on the results of data analysis, the main conclusions that can be drawn are:

1. Not all students knew financial institutions such as bank as a safe place to save money, but the students' habits of saving money were very good, with 83% of students already had a habit of saving money.
2. In this study, grade level had a significant effect on financial literacy, while gender did not affect financial literacy.
3. From the results of this study, there are still opportunities for financial institutions, educational institutions, and the government to continue to educate about financial literacy.

REFERENCES

Abadi, R. (2015). *The Importance of teach finance in children from early*. Retrieved from https://kreditgogo.com/artikel/Tabungan/Pentingnya-Ajarkan-Keuangan-Pada-Anak-Sejak-Dini.html

Akmal, H., & Saputra,Y.E. (2016). Financial literacy level analysis. *Jurnal Ekonomi dan Bisnis Islam UIN Imam Bonjol*, *1*(2), 235-244.

Blue, L., Grootenboer, P., & Brimble, M. (2014). Financial literacy education in the curriculum: Making the grade or missing the mark? *International Review of Economics Education*, *16*, 51-62.

Budiono, T. (2014). *The linkage of financial attitude, financial behavior & financial knowledge to undergraduate students of Atmajaya University Yogyakarta* (Doctoral dissertation, UAJY).

Butters, R.B., Asarta, J.C., & McCoy1, S.G. (2012). Financial Literacy and Gender in U.S. High School. *Journal of Economics and Finance Education, 11*(2), 142-149.

Deng, H.T., Chi, L.C., Teng, N.Y., Tang, T.C., & Chen, C.L. (2013). Influence of financial literacy of teachers on financial education teaching in elementary schools. *International Journal of e-Education, e-Business, e-Management and e-Learning*, *3*(1), 68.

Elonge, M. (2013). An evaluation of financial literacy in elementary schools towards financial education enhancement: A case study of baltimore public schools. *Literacy Information and Computer Education Journal*, *4*(4), 1283-1291.

Fajar, R., & Syamlan, Y.T. (2018). Do parents and social environment influence student understanding of retirement planning? A study on Islamic economic and business student in Bogor. *IKONOMIKA*, *3*(1), 53-72.

Gertz, S. (2016). *Introducing financial literacy at the elementary level*. (Capstone Projects and Theses), California State University, Monterey Bay. Retrieved from http://digitalcommons.csumb.edu/caps_thes

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. *Available at SSRN 1132388.*

Gunardi, A., Ridwan, M., & Sudarjah, G.M. (2017). The use of financial literacy for growing personal finance. *Jurnal Keuangan dan Perbankan*, *21*(3), 446-458.

Hagedorn, E.A., Schug, M.C., & Suiter, M. (2016). A collaborative approach to financial literacy in the Chicago public schools. *Journal of Private Enterprise*, *31*(1).

Harter, C.L., & Harter, J.F. (2009). Assessing the effectiveness of financial fitness for life in eastern Kentucky. *Journal of Applied Economics and Policy*, *28*(1), 20-33.

Hilgert, M.A., Hogarth, J.M., & Beverly, S.G. (2003). Household financial management: The connection between knowledge and behavior. *Federal Reserve Bulletin, 89*, 309.

Hung, A., Parker, A.M., & Yoong, J. (2009). *Defining and measuring financial literacy*. RAND Labor and Population working paper series. RAND's publications.

Huston, S.J. (2010). Measuring financial literacy. *Journal of Consumer Affairs, 44*(2), 296-316

Lantara, I.W.N., & Kartini, N.K.R. (2015). Financial Literacy among university students: empirical evidence from Indonesia. *Journal of Indonesian Economy and Business*, *30*(3), 247.

Lusardi, A., Mitchell, O.S., & Curto, V. (2010). Financial literacy among the young evidence and implications or consumer policy. *CSF Working Paper no 201009, Econstor The Open Access Publication Sever of the ZBW.*

Margaretha, F., & Pambudhi, R.A. (2015). The level of financial literacy in undergraduate students of the Faculty of Economics. *Jurnal Manajemen dan Kewirausahaan*, *17*(1), 76-85.

Nidar, S.R., & Bestari, S. (2012). Personal financial literacy among university students (case study at Padjadjaran University students, Bandung, Indonesia). *World Journal of Social Sciences*, *2*(4), 162-171.

Rapih, S. (2016). Financial literacy Education in children: Why and how ? *Jurnal Pendidikan dan Kebudayaan*, *6*(2), 14-28.

Schug, M.C., & Hagedorn, E.A. (2005). The money savvy pig™ goes to the big city: Testing the effectiveness of an economics curriculum for young children. *The social studies*, *96*(2), 68-71.

Suiter, M., & Meszaros, B. (2005). Teaching about saving and investing in the elementary and middle school grades. *Social Education*, *69*(2), 92-95.

Walstad, W.B., Rebeck, K., & MacDonald, R.A. (2010). The effects of financial education on the financial knowledge of high school students. *Journal of Consumer Affairs*, *44*(2), 336-357.

Widyawati, I. (2012). Factors that influence the financial literacy of UB's economics and business faculties. *Jurnal Akuntansi dan Pendidikan*, *1*(1), 89-99.