

# The Development of a Financial Literacy Questionnaire for Early Childhood

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Literacy is one of the skills needed to face challenges in the industrial revolution because of the ease of access in obtaining various information and data. One of the basic literacy needs that cannot be separated from everyday life is financial literacy. However, the level of financial literacy in Indonesian people is the lowest of all the ASEAN countries. Therefore, this study aims to analyse the learning of the executive function for improving the financial literacy abilities in early childhood. Through a qualitative approach, data analysis in this research was carried out using interactive analysis based on expert testing of instruments that have been arranged. So that each question in the instrument can already be said to be valid and reliable.

**Key words:** *Instrument, Executive Function, Financial Literacy, Early Childhood.*

## Introduction

With the arrival of the industrial revolution came one of the century's most complex challenges. One feature of the 21st Century is the ease of accessing all sources of data. Thus, people are expected to upskill to improve the quality with which they work. Literacy is an important aspect for people to be able to take advantage of all the facilities that can be accessed with technology. Under these conditions, the Indonesian government developed policies related to the importance of literacy for the people of Indonesia. Literacy is based on policies issued by the Indonesian government, namely financial literacy.

The level of financial literacy of Indonesian people is the lowest of all ASEAN countries. Financial literacy is knowledge and understanding of financial concepts and risks as well as

confidence in applying that knowledge and understanding to make effective financial decisions, so as to improve the well-being of individuals and society (OECD, 2012). Citizens who have financial competence play an important role in the smooth functioning of financial markets and national economic stability (Mandell and Client, 2009; OECD, 2005). This research focuses on efforts to increase financial literacy in children because: (1) children have low levels of financial literacy (Lusardi and Mitchell, 2011), (2) children tend to have premature affluence behaviour, which is wasteful behaviour if there is resource support finance (Jelks, 2005), (3) preparing children for the digital economic era. Some financial experts recommend that financial education should be given early (Mandell, 2009b) to improve financial competence and prevent them from cheating (OECD, 2005). Drever (2015) states that financial literacy learning strategies in early childhood is through activation of the executive function. Executive functions aim for children to have the cognitive ability to focus on long-term goals and delay momentary pleasures so that the child can control desires and prevent wasteful behaviours.

Children who have executive functions as adults will have healthy financial behaviours, good academic ability, have creativity to start a business, and a low tendency to commit criminal acts such as corruption and gratification (Ross, 2011; Holmes & Zimmerman, 2011; Harrington, 2011; Silverman, 2003; Moffitt et al. 2011). Moffitt et al. (2011) conducted a longitudinal study by observing the behaviours of children from the age of 3 years until they were 32 years old. Executive functions are formed due to genetic factors and interventions. Parent, teacher, and family intervention in the development of executive functions in children accompanied by financial and religious knowledge is an optimal approach to the foundation of building anti-corruption characteristics including the temptation to accept gratuities.

Based on the results of Moffitt's research (2011), children who are trained to have strong executive function, will have a high level of success when they are adults, have good academic performance, be independent and will not commit crimes, including corruption. By training not to be tempted by pleasure for a moment, children will have the perseverance to achieve life's more valuable goals, to focus on achieving ultimate happiness and not be tempted to do despicable actions. The right time to practice self-control and the ability to postpone desire is the age of 3-5 years because at this age the executive function is developing rapidly. Intervention programs from an early age can effectively improve the development of executive functions (Andersen & Reidy, 2012). Some experts say that financial literacy education must be given early because it will develop into adulthood (Sosin et al. 1997).

However, currently financial literacy education in Indonesia is still minimal, is not integrated into the school curriculum and is voluntary. This research is very important because there are still limited studies of literature and research in this field. The limitation of the study focuses

on the initial stages of collecting data related to the analysis of financial literacy abilities related to learning in early childhood. Data collection on the level of financial literacy is done by distributing questionnaires to parents, early childhood and teachers. In order for the data to be collected in accordance with the specified objectives, the reliability stage through the analysis of each item on the questionnaire instrument is important to note to be able to see the constancy of the instrument. Analysis of each item is done by testing the instrument against small groups. So that the arranged instruments can become standard instruments in collecting data related to understanding financial literacy in early childhood.

### **Method**

This research was conducted using a quantitative approach. Data analysis of each instrument's question items uses regression analysis. The instruments that have been arranged will be focused on the instruments for teachers. The instrument will be tested on small groups. Before testing it, the instrument goes through the validity test stage on the expert.

### **Result and Discussion**

In this era of industrial revolution, financial literacy is a concern in various countries. This condition is caused by the increasingly realistic awareness of the relationship between management capacity and human welfare in a country. In addition, several events related to financial mismanagement such as reports of high credit card debt, low and negative savings rates, and increased personal economic decline caused many countries to adopt financial education policies (Bernheim, Garrett & Maki, 2001). In Indonesia, the socialization of financial literacy has also begun to decline, including the Financial Services Authority (OJK), Bank Indonesia, the Ministry of Education and Culture, and others. These efforts will greatly help a person when they grow up when they begin to be implanted in children as early as possible, so that when they are adults it is easy to manage and make wise decisions.

Financial literacy that is not yet understood by each family member will affect one's financial health. This statement was reinforced by the results of Chen and Volpe's (1988) study which explained that youth with a poor level of knowledge of financial literacy tended to have wrong opinions about finances and tended to make mistakes in financial decision making. In addition, based on observations it provides an understanding that someone who is an adult and still has been neglected in regulating the economy because since childhood has not been accustomed by parents to manage their personal finances.

Research results increasingly show that financial literacy education is very important to be introduced to children as early as possible. Children have several unique characteristics, have

a high curiosity, and children have a potential to be shaped and developed according to their talents and creativity. Financial literacy education that is given properly and correctly to children will provide sufficient provisions and children will further internalise the values of financial literacy. This is why it affects children when they are adults.

An increasingly global life requires a country's economic system to be connected to the world. In addition, changes in lifestyle and the demands of an increasingly high and modern era make an individual figure able to compete in an almost unlimited world. Changes in lifestyle have become relevant in almost every country. This change in lifestyle is caused by an increase in middle class in several countries, making financial management a mandatory provision. Assuming that the world will continue to experience development and progress, the provision of financial literacy education from an early age for children aims to provide provision to carry out financial management and decisions. The pattern of children's lives in this modern era also tends to bring them closer to consumer things. Recreational activities in nature with the family for tourism have shifted to recreation in shopping centres. This means children will often interact with buying and selling activities. Thus, an understanding of financial management becomes important so that children can distinguish between those that become needs and those that are merely desires.

Children's needs for literacy education is not only for the future of children, but also for the child's life which is becoming increasingly complex. As emphasised by the National Council on Economic Education (NCEE) and the National Council on Social Studies (NCSS), all children must be economically literate in the interests of global economic governance both today and in the future. NCEE (Sefeldt et al, 2010) suggests that there are some abilities that children must have including:

1. Management of personal finances.
2. Understanding and appreciation of the role of workers who produce goods and services.
3. Pulling away in the economic system and understanding of the work system
4. Thinking critically about economic problems, have responsibilities, understand basic economic concepts (production, distribution, and consumption), make economic decisions and give logical reasons about current issues affecting their lives.
5. Be ready to participate in economic production activities aimed at preparing for their future careers.

The committed and active role of various parties will increasingly demand support for the child's needs for financial literacy education. Child development will be affected starting from the microsystem environment (the smallest environment), namely family and school. The family becomes the first community for children and the school is the first time the community

interacts with people outside the family environment. Interaction with friends who will be different from themselves becomes an effective means to internalise the values of financial literacy education to children. The process of instilling the values of financial literacy education requires a long and continuous process. The interrelated and appropriate process between what is obtained in the family and at school must work together.

The family has an important role in teaching financial literacy education to children. Teaching financial literacy education today is supposed to be a parent's obligation, but research shows that many parents do not have the skills to teach financial literacy education to children (Moschis, 1985). In addition, the family as the main educator of a child, interacting with others becomes the child's first source of learning, including activities related to finance. But unfortunately, most parents think that their child deserves an understanding of finances before the child turns 18 (Sabri, McDonald, Hira, and Masud: 2010).

Danes (1994) provides understanding through the results of his research on parental perceptions of the process of socialising financial knowledge in children. In the study Danes found that parents were the main agents in the process of socialising financial literacy knowledge to children, but the majority of knowledge about financial literacy education provided from parents to children was not in accordance with the objectives. This mistake is also often found in Indonesia. Among them, discussions about financial problems with children are considered taboo, the involvement of children in financial management, especially related to them, is very minimal. Whereas it should, the process of financial literacy education for children must be given as early as possible so that the process of internalising financial literacy values becomes more mature and planned.

Good parenting patterns explicitly teach and demonstrate how financial concepts can influence financial literacy knowledge from an early age to adolescence (Clarke et al, 2005). Direct effects such as family discussions and keeping expenses or gifts can increase knowledge, the formation of attitudes, values and behaviour towards money (Allen et al, 2007; Moore & Stephens, 1975; Moschis, 1985; Moschis, Prahast, & Mitcell, 1986).

### **Steps**

The steps parents can take in instilling financial values in children include:

#### ***Involving children in financial decision making***

This stage changes the position of the child who is no longer an object but also a subject. Most parents assume that children deserve to be taught financial literacy education at the age of 18 years (Sabri, McDonald, Hira, and Masud, 2010). Determination of financial decisions relating

to him/her for example pocket money, savings and so on. There are still very few parents involving children in making these decisions. The lack of space for dialogue between parents and children will make children less critical in addressing all the problems that are around.

The simple thing to start introducing financial literacy education to children is to start involving children in making financial decisions at least in matters relating to them. Give children space to discuss the determination of their financial allocations. Decision making will be useful to foster the ability to think critically as well as supporting the investment in the value of financial literacy education in children

### ***Understanding of needs and desires***

One of the characteristics of children is that it still has a concrete nature, so it makes children less able to distinguish between desires and needs. The role of parents in training and educating children about needs and desires is very necessary. These efforts can be done by inviting children to talk and discuss to give them an understanding of the meaning of the goods to be purchased. For example, parents could ask, *'is it just a desire or a true item which is a need that must be met?'* The form of parental love does not have to be proven by obeying all the wishes of the child, but by educating to be able to understand whether it is really a need or just a desire.

### ***Familiarisation with saving***

Efforts to refract children to set aside a small portion of their money that will be useful for the benefit in the future. Habiting children to set aside their money will benefit him in three ways. First, they will get used to not spending all their money so that they will exercise self-control. Second, through saving activities children will have the attitude to be patient and try with their own ability to get something they want. Third, a habit of saving will introduce investment early.

Cultivating strong discipline from parents and intense communication between parents and children will make the saving process easier for children to do. These efforts will provide a strengthening understanding of money and how to use it. When children become adults, they will tend to be intelligent consumers, one of which is to save money (Bowen, 2002).

### ***Introduction to financial institutions***

The majority of parents still think children do not need to save their money in the bank. This will affect the behaviour and outlook of children about the bank in the future. When children are not accustomed to saving money in the bank, later in life children will find it difficult to set

aside money to be deposited in the bank. The introduction of financial institutions to children will be beneficial both in terms of security and in terms of discipline. It is not easy for children to take their money compared to just saving money at home. Children can refrain from fulfilling wishes. In addition, children are accustomed to setting aside their money.

The family is the primary and first educational institution for children, therefore activating the role of parents in providing financial literacy values becomes very important. The results show that children learn about finances from parents through deliberate instruction, participation and practice (explicitly) and through observation (implicitly) (Clarke et al, 2005; John, 1999; Moschis, 1985). Parental unconsciousness of financial literacy education in children will only make children learn and understand if financial management is wrong and meaningless. So that its impact on child development in the face of an increasingly complex world without sufficient knowledge about financial management.

The initial stage is to understand financial literacy in early childhood by collecting data using a questionnaire. The items developed in the instrument are arranged based on the indicator of learning executive functions with financial literacy. The indicators of instrument preparation are attention control aspects in earning money learning, information processing aspects in basic budgeting learning, cognitive flexibility aspects in learning identify theft issues and safety, and aspects of goal setting (goals) settings) in saving money learning.

The revised instrument that was composed by experts focused on several aspects among it

1. Questions according to the instrument grid.
2. The instrument can reveal the quality of the content and reveal material errors submitted so as to support the suggestion of improvement.
3. The instrument can reveal errors in the language used so that it supports suggestions for improvement.
4. The instrument can reveal the quality of the presentation and expose the error of the presentation so as to allow suggestions for improvement.
5. The instrument can reveal the quality of the learning strategy and reveal errors so as to allow suggestions for improvement.
6. The instrument can reveal the overall quality of the material and reveal display errors so as to allow suggestions for improvement.

Based on expert testing focused on the above mentioned aspects of the two experts related to child psychology and economics, generating some input among them related to the alignment of the questions with the theories that form the basis of instrument preparation. In addition, input is more in terms of the use of language that must be adjusted to the target. Related to



content related to the instruments that have been prepared, it must show consistency and focus on the data to be collected related to understanding financial literacy.

## **Conclusion**

Analysis of the instrument items that have been carried out to see the validity and reliability of the instruments that have been compiled for data collection tools for understanding financial literacy in early childhood. Through a qualitative approach, data analysis in this research was carried out using interactive analysis based on expert testing of instruments so that each question in the instrument is known to be valid and reliable.



## REFERENCES

- Anderson, Peter J. & Reidy, Natalie. 2012. Assessing Executive Function in Preschoolers *Neuropsychol Rev* 22:345–360 DOI 10.1007/s11065-012-9220-3
- Carlson, S. (2005). Developmentally sensitive measures of executive function in preschool children. *Developmental Neuropsychology*, 28,595–616.
- Diamond, A., Kirkham, N., & Amso, D. (2002). Conditions under which young children can hold two rules in mind and inhibit a prepotent response. *Developmental Psychology*, 38(3), 352–362
- Drever, Anita, Odders-White, E., Kalish, C. W., Else-Quest, N. M., Hoagland, E. M., & Nelms, E. N. (2015). Foundations of Financial Well-Being: Insights into the Role of Executive Function, Financial Socialization, and Experience-Based Learning in Childhood and Youth. *The Journal of Consumer Affairs*. 49(1), 13-38.
- Espy, K. A., Sheffield, T. D., Wiebe, S. A., Clark, C. A. C., & Moehr, M. J. (2011). Executive control and dimensions of problem behaviors in preschool children. *Journal of Child Psychology and Psychiatry*, 52(1), 33–46
- Garon, Nancy, Bryson, Susan E. and Smith, Isabel M. Executive . 2008. Function in Preschoolers: A Review Using an Integrative Framework. *Psychological Bulletin*. DOI: 10.1037/0033-2909.134.1.31 •
- Hughes, C. H., & Ensor, R. A. (2009). How do families help or hinder the emergence of early executive function? *New Directions for Child and Adolescent Development*, 123,35– 50.
- Huizinga, M., Dolan, C. V., & Van der Molen, M. W. (2006). Age-related change in executive function: developmental trends and a latent variable analysis. *Neuropsychologia*, 44, 2017–2036.
- Huston, S.J. (2010). Measuring financial literacy. *The Journal of Consumer Affairs*, 44(2), 296-312.
- Kochanska, G., Murray, K., Jacques, T., Koenig, A., & Vandecest, K. (1996). Inhibitory control in young children and its role in emerging internalization. *Child Development*, 67,490–507
- Kochanska, G., Murray, K., & Harlan, E. (2000). Effortful control in early childhood: continuity and change, antecedents, and implications for social development. *Developmental Psychology*, 36(2), 220–232



Konishi, S., Nakajima, K., Uchida, I., Kameyama, M., Nakahara, K., Sekihara, K., et al. (1998). Transient activation of inferior prefrontal cortex during cognitive set shifting. *Nature Neuroscience*, 1, 80 – 84

Lehto, J., Juujärvi, P., Kooistra, L., & Pulkkinen, L. (2003). Dimensions of executive functioning: Evidence from children. *British Journal of Developmental Psychology*, 21, 59 – 80.

Lemmon, K., & Moore, C. (2007). The development of prudence in the face of varying future rewards. *Developmental Science*, 10, 502–511

Lusardi, A., & Mitchell, O. S. (2011). Financial literacy and planning: Implications for retirement wellbeing. In O. S. Mitchell & A. Lusardi (Eds.), *Financial Literacy: Implications for Retirement Security and the Financial Market Place* (pp. 17-39). Oxford: Oxford University Press.

Mandell, L., & Klein, L. (2009). The impact of financial literacy education on subsequent financial behavior. *Journal of Financial Counseling and Planning*, 20, 15–24.

Mandell, L. (2009b). *Starting Younger: Evidence Supporting the Effectiveness of Personal Financial Education for Pre-High School Students*. University of Washington and the Aspen. Diakses pada tanggal 29 Desember 2014 melalui <http://www.nationaltheatre.com/ntccom/pdfs/financialliteracy.pdf>

Moore, C., Barresi, J., & Thompson, C. (1998). The cognitive basis of future-oriented prosocial behavior. *Social Development*, 7, 198 –218. 46. Munakata, Y. (2001). Graded representations in behavioral dissociations. *Trends in Cognitive Sciences*, 5, 309 –315.

Nagahama, Y., Fukuyama, H., & Shibasaki, H. (2002). Dissociable mechanisms of attentional shifts within the human prefrontal cortex. *International Congress Series*, 1232, 137–145.

Otoritas Jasa Keuangan (OJK). (2016). *Survey Nasional Literasi dan Inklusi Keuangan*.

Organization for Economic Co-operation and Development (OECD). (2005). *Improving Financial Literacy: Analysis of Issues and Policies*. Paris: OECD.

Remund, D. (2010). Financial literacy explicated: The case for a clearer definition in an increasingly complex economy. *The Journal of Consumer Affairs*, 44(2), 276-295.

Rhoades, B. L., Greenberg, M. T., Lanza, S. T., & Blair, C. (2011). Demographic and familial predictors of early executive function development: contribution of a person-centered perspective. *Journal of Experimental Child Psychology*, 108(3), 638–662.



Ross (2011). *Corporate Finance Fundamental*. Mc-Graw-Hill International Edition

Rothbart, M., & Posner, M. (2001). Mechanism and variation in the development of attentional networks. In C. Nelson & M. Luciana (Eds.), *Handbook of developmental cognitive neuroscience*(pp. 353–363). Cambridge, MA: MIT Press

Sari, Ratna Candra, Rika Fatimah and Suyanto. (2017). Bringing Voluntary Financial Education in Emerging Economy: Role of Financial Socialization during Elementary Years. *The Asia Pacific Education Researcher*

Schoemaker, K., Bunte, T., Wiebe, S. A., Espy, K. A., Dekovic, M., & Matthys, W. (2012). Executive function deficits in preschool children with ADHD and DBD. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, 53(2), 111–119.

Sosin, K., Dick, J., & Reiser, M. L. (1997). Determinants of Achievement of Economics Concept by Elementary School Students. *Journal of Economic Education*, 28(1), 100-121.

Thompson, C., Barresi, J., & Moore, C. (1997). The development of future-oriented prudence and altruism in preschoolers. *Cognitive Development*, 12, 199 –212.

Thorell, L. B., Lindqvist, S., Bergman Nutley, S., Bohlin, G., & Klingberg, T. (2009). Training and transfer effects of executive functions in preschool children. *Developmental Science*, 12(1), 106–113.

Welsh, M., Pennington, B., & Groisser, D. (1991). A normative-developmental study of executive function: A window on prefrontal function in children. *Developmental Neuropsychology*, 7, 131–149