Developing Financial Literacy Instruments for Youth: An Indonesian Context

Siti Parhah[1], Leni Permana[2], Dadang Dahlan[3]

[1, 2, 3] Universitas Pendidikan Indonesia
sitiparhah@upi.edu

Abstract. Many people still experience fraud in using various financial products and services, showing the importance of increasing financial literacy from a young age. In order to measure the level of financial literacy of young people in Indonesia and determine appropriate measures to improve it so that they can make better financial decisions, it is important to develop standardised financial literacy instruments that are in accordance with regulations and conditions in Indonesia. Using research and development methods, this research has produced a comprehensive financial literacy instrument consisting of 30 items. Content includes money and transactions, planning and managing finances, risk and reward, and financial landscape. The cognitive process includes identifying financial information, analysing information in a financial context, evaluating financial issues, and applying financial knowledge and understanding context consists of individuals, families, and society. Item format consists of simple multiple-choice with a single response selection, complex multiple-choice with multiple response selections, and open response.

Keywords: Financial Literacy, Instruments, Youth.

1. Introduction

Measurement of financial literacy is developing widely, both in terms of population and other aspects such as gender, culture, and factors related to psychometrics[1,2]. This is the background of the situation where the construct of an instrument, in general, has not been able to capture all financial practices that apply in a country and the suitability of the population to be assessed. Therefore, various instruments have emerged that consider various things. Oliver-Márquez et al.[3], for example, compiled an instrument based on a macro aspect approach. Meanwhile, the Organization for Economic Co-operation and Development (OECD), with the Program for International Student Assessment (PISA) tests, developed special instruments for young populations.

The financial literacy test is unique for each country, so an instrument is needed that is adapted to the situation of the country concerned. This is why several countries refuse to participate in financial literacy measurements organised by the OECD[4]. This relates to the construct validity of the instruments compiled by the OECD. They think that the financial literacy assessment is unreliable enough, so it is not possible to use it (Salzer, 2013 in [4]). Huston[5] identified at least three things that make it challenging to measure financial literacy uniformly: the weakness of common construction, the weakness of

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the comprehensive set of questions to measure all components of financial literacy, and the weakness of guidelines in interpreting the measurements made.

Some evidence from previous research shows that customisation is needed in preparing financial literacy. Anong et al.[6] emphasise that the uniqueness of financial practice in Africa requires a customised approach to designing financial literacy measurements. Likewise, according to Worthington and Marzuki[7], in the case of Islamic finance, many financial practices have special constructions, requiring the reframing of financial knowledge for individuals who practice Islamic finance in their daily lives.

The Financial Services Authority (Otoritas Jasa Keuangan-OJK) has developed a framework to measure financial literacy in the Indonesian context. However, the framework compiled is not specific to certain age groups[8]. In fact, according to the OECD report, the financial literacy of Indonesian youth is considered very low, where Indonesia ranks lowest out of the 20 participating countries[9]. Many things are suspected of causing low financial literacy among young Indonesians. One thing that needs to be studied is related to the instrument used to measure it. It could be like what has happened in several other countries that the instrument is unsuitable for Indonesia's situation. So, there is a possibility of a biased instrument that causes misdiagnosis in measuring financial literacy[1,10].

Responding to various things in measuring financial literacy, this study aims to develop and compose specific financial literacy instruments for young populations. The argument for targeting young people is related to several things. Referring to Frisancho[11], children and young adults have the potential to develop habits so that they are expected to have no difficulty when they become adults in dealing with increasingly sophisticated financial markets. In addition, cost efficiency is one of the considerations because the school-age population is easily accessible, so that it will increase the test participation rate.

The preparation of an instrument must pay attention to various aspects, including identifying some of the same criteria, summarising the description of the appropriate measurement instrument as a simple and easy-to-use instrument and providing high-quality information—indicators of the reliability and validity of the instrument[12,13]. Meanwhile, Kunovskaya et al.[14], based on the results of his study, noted that the instruments compiled in financial literacy must consider aspects of the cultural environment, so it is important for each country to have specific standards in its measurement. Apart from that, another important thing is to identify the target group or population of interest to be assessed[1].

The emergence of various kinds of measures of financial literacy shows that there is no "typical" or specific way of developing this instrument. Nevertheless, that does not mean there is no consistency in techniques and general rules in designing an instrument. There may be modifications in designing the questions even though the concept is the same as done by Bruine de Bruin et al.[15], which modified Lusardi and Mitchell's[16] questions. They add a question item to the inflation expectations item.

2. Methods

This study will design a test instrument to measure financial literacy in young people in Indonesia. We use research and development methods to obtain valid and reliable instruments. This study can be considered a baseline study because no tools were created in Indonesia to evaluate financial literacy in this age range.

The design of this instrument is in several ways, especially in the core competencies framework referred to by the OECD. In this case, three important domains will be assessed: content, processes, and contexts. The formulation of the questions adapts to the daily financial practices that the 15-18-year age group often carries out. Then, because we refer to the framework prepared by the OECD, the measurement of developed financial literacy includes aspects of skills, behaviours or confidence, as well as financial decision-making.

The validity of the content of an instrument that is built requires agreement from experts. This is important, considering that measurement instruments can be considered valid if they have judgment from them. Based on this, we tested content validity referring to Aiken[17] in this study. The procedure for this test begins with the ratings (judgements) of a single item by n raters (judges) or the rating of m items by a single rater. As for the reliability, we employ inter-rater (between-rater) reliability. In this test, researchers evaluate agreement in how consistently different (usually trained) raters can assign the same score or category to the study subjects[18]. So, this method supposed that the raters (two or more individuals) agree[19]. In this study, we used 5 experts consisting of 2 financial experts, 1 practitioner, 1 measurement expert, and 1 economics teacher.

3. Results and Discussion

The ability of young people in Indonesia to identify, analyse, and evaluate various types of information, financial situations and problems and use financial knowledge and understanding that is still low must be continuously improved. The goal is to develop individual capacity as citizens of Indonesia and citizens of the world and be able to contribute productively to society. For efforts to increase youth financial literacy to achieve this goal, it must be based on valid, reliable and objective data. In addition to data collection carried out correctly on a representative sample, the instrument's quality determines the data's quality.

This research has developed a test instrument to measure financial literacy in young people in Indonesia that is comprehensive and suitable for economic, social and cultural conditions in Indonesia. The areas assessed refer to the OECD consisting of content, process and context.

The content is intended to assess young Indonesians' knowledge and understanding of money and transactions, planning and managing finances, risk and reward, and financial landscape. The distribution of financial literacy items in the content area includes 8 items on money and transactions, seven items on planning and managing finance, eight on risk and reward, and seven on financial landscape. Money and transaction content includes knowledge and understanding of various forms of money, the purpose of making payments using various available tools such as mobile devices, and managing monetary transactions such as managing cash, calculating the value of

money, and filing financial documents, including those received electronically. Planning and managing finances content includes knowledge and understanding of planning and managing income, expenses, and how to increase wealth and financial well-being in the short and long term. Risk and reward content consists of knowledge and understanding of how to balance and cover risks such as financial losses that cannot be predicted directly by individuals and cannot be covered realistically from personal resources, risks originating from changes in circumstances that have an impact on the ability to maintain living standards and the risks inherent in financial products, as well as managing finances in uncertainty and potential financial gains or losses in various financial contexts. Financial landscape content includes knowledge and understanding of the characters and features of the financial world in Indonesia and the world, as well as the consequences of changes in economic conditions and public policies on welfare for individuals, households and society.

The process area shows the cognitive processes that Indonesian youths apply to respond to financial literacy items. Four process categories have been defined: identify financial information, analyse financial information and situations, evaluate financial issues and apply financial knowledge and understanding. The four are parallel essential cognitive approaches, all of which are part of the financially literate individual's repertoire, not showing a hierarchy of skills. The distribution of financial literacy items in the process area includes four items identifying financial information, eight items analysing financial information and situations, ten items evaluating financial issues, and eight items applying financial knowledge and understanding. Items in which young people are asked to search for and access sources of financial information and recognise their relevance through text, such as tables and charts, show the process of identifying financial information. Items in which they were asked to identify how loan payments and interest are affected by the loan term or whether loan advertisements may include unspecified conditions indicate a process of analysing financial information and situations. Items that assess how young people perceive the incentives different people or institutions may have when they provide financial information or products demonstrate the process of evaluating financial issues. Items that contain tasks to determine whether purchasing power will decrease or increase over time when prices change at a certain level indicate the process of applying financial knowledge and understanding.

The context domain refers to situations where Indonesian youth apply their knowledge, understanding, and financial skills, including individual, family, and social. The distribution of financial literacy items in context areas is 14 individual items, nine family items, and seven society items. Items regarding buying goods and opening a bank account are included in the individual context. The items on buying the family's groceries and keeping records of family expenses are examples of family context. Items on consumer rights and responsibilities, government taxes and charges, and donating to non-profit organisations are included in the societal context.

There are 30 items in this financial literacy instrument for young people in Indonesia. Judging from the item format, there are eight items in the form of simple multiple-choice with a single response selection, 12 items in the form of complex

multiple-choice with multiple response selections, and ten items in the form of open responses to answer in their own words.

Content validity and inter-rater reliability tests were carried out on the developed financial literacy instrument to obtain a valid and reliable instrument. Based on content validity assessment by five experts who assessed 30 items with a scale of 1 to 5 (1-not relevant, 2-less relevant, 3-quite relevant, 4-relevant, 5-very relevant). After calculating the overall coefficient of the instrument, the Aiken validity index was obtained in the good category with a coefficient of 0.8050, which ranged from 0.60 to 1.00. In money and transaction content, validity is in a good category with a coefficient of 0.8438, which ranges from 0.70 to 1.00. In planning and managing financial content, validity is in the sufficient category with a coefficient of 0.7571, which ranges from 0.60 to 0.85. In the risk and reward content, validity is in the sufficient category with a coefficient of 0.7750, which ranges from 0.70 to 0.90. Concerning financial landscape content, validity is in a good category with a coefficient of 0.8429, which ranges from 0.70 to 0.95.

The large Intraclass correlation coefficient (ICC) indicates the developed financial literacy instrument's reliability. Overall, the average rating reliability coefficient of the five raters is 0.5440, which is in the sufficient category. In the money and transactions content, the coefficient is 0.5450, which is in the sufficient category. In planning and managing finance content, the coefficient is 0.573, which is sufficient. In the risk and reward content, the coefficient is 0.061, which is in the low category. In the financial landscape content, the coefficient is 0.631, which is in the sufficient category.

Conclusion

The development of instruments for measuring financial literacy faces various challenges, especially in determining the number of items and the instrument's reliability. In addition, because this study is a baseline study, the instrument we have developed is still in the sufficient category from a reliability point of view. However, the preparation of this instrument is very useful for accurately measuring the level of financial literacy of young people in Indonesia, considering that the characteristics and profiles of young people in Indonesia are unique compared to other countries.

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