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The Use of Project-Based Learning on Early Childhood Financial Literacy Skills

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Abstract

Literacy is a set of individual abilities and skills in reading, writing, speaking, counting, and problem-solving at a certain level of expertise required in everyday life. Basic literacy consists of 6 things, namely language literacy, numerization literacy, science literacy, digital literacy, financial literacy, and cultural/civic literacy. Financial literacy is education on how to manage finances wisely as needed. Financial literacy education is given to children from an early age with the hope that children are used to managing finances well so that they can be free from financial problems in the future and can achieve their welfare This research is an experimental research that aims to find out whether there is an influence of project-based learning on early childhood financial literacy skills. The data analysis technique is analyzed using the paired sample t-test technique. Based on the paired sample test results, a t-value of -16.412 was obtained with a significance value of 0.001 < 0.05. It can be concluded that project-based learning has a significant effect on early childhood financial literacy skills.

Keywords: Early Childhood, Financial Literacy Skills, Project-Based Learning

Introduction

Literacy is a general term that refers to a set of individual abilities and skills in reading, writing, speaking, arithmetic, and problem-solving at a certain level of skill required in daily life (Aprita et al., 2023). The development of literacy for early childhood in the kindergarten environment is something that educators need to consider to optimize the development of children's intelligence and self-competence, such as critical and analytical thinking skills (Pramitasari et al., 2023). Literacy is a very important basic component in supporting the skills of 21st-century society. Basic literacy consists of 6 things, namely language literacy, numeration literacy, science literacy, digital literacy, financial literacy, and cultural/civic literacy. Financial literacy is education on how to manage finances wisely as needed(Revita

Yanuarsari et al., 2023). Financial literacy education is provided to children from an early age with the hope that they will be used to managing finances well so that they can be free from financial problems in the future and can achieve their welfare. Financial literacy education in children is not just about the introduction of money(Mogelea et al., 2023), but furthermore financial literacy education in children is a concept about the introduction and management of finances wisely so that in the future children are able to control financial expenses by distinguishing which are needs and which are just desires (Rapih 2016).

Literacy plays an important role for social and human development in its ability to change lives (Cone et al., 2022)v. The use of literacy as an exchange of knowledge will continue to grow along with technological advances. Financial literacy is important to be instilled from an early age because the financial knowledge and experience instilled will be internalized in children so that they form their character and habits of managing their finances in the future (Rohmadi 2023). From the results of these observations, this study wants to apply project-based learning, considering that the concept of meaningful learning for early childhood is play, where they will gain meaning by being directly involved in the learning process. Project-based learning is a learning method that is carried out in groups (Gold, 2022). Using project-based learning, children gain learning experience in various jobs and responsibilities that can be carried out in an integrated manner to achieve a common goal.

Literature Review

Financial Literacy Skills

Financial literacy consists of two parts, namely literacy and finance. Literacy itself comes from the Latin word "*literatus*" which means a person who learns, in this case, literacy is very related to the process of reading and writing. Literacy can also be interpreted as a person's ability to process and understand information when reading and writing. (Diaz et al., 2022)

Sevima (2020) states that literacy is a person's ability to process and understand information when reading and writing. Wikipedia in 2023, *the National Institute for Literacy* explains that what is meant by literacy is a person's ability to read, write, speak, count, and solve problems at the level of expertise required in work, family, and society. Literacy can also be interpreted as a set of real skills, specifically cognitive skills in reading and writing that are independent of the context in which the skill in question is acquired, from whom the skill is acquired and how to acquire it.

Hapsari (2020) stated that financial literacy can be interpreted as the ability that a person has to understand and practice various aspects of finance, which includes general knowledge about finance, savings, loans, investments, financial planning so that they are able to manage their *financial* resources by making effective decisions about finance so that a prosperous life can be achieved. Furthermore, Iman (2022) stated that financial literacy is the knowledge and skills to apply an understanding of concepts and risks, skills in order to be able to make effective decisions in a financial context to improve financial well-being, both individual and social, and to be able to participate in the community environment. Based on some of the opinions

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above, it can be concluded that financial literacy skills are a person's skills and knowledge in regulating, knowing risks, and designing financial decisions so that the desired finances are well achieved in the future. (Ulfah & Asyiah, 2023)

Basic Principles in Financial Literacy

Imam (2022) stated five basic principles learned in financial literacy, namely 1) business or work, 2) shopping or consumption, 3) saving, 4) sharing, and 5) borrowing-borrowing. Parents and teachers are references and role models for children in developing financial literacy skills. Therefore, it is hoped that parents and teachers will be able to know, understand, and apply financial literacy in their daily lives. Able to practice a moderate or egahari lifestyle in the family, be disciplined in saving and investing for the future while surviving difficult times and emergencies, encourage and inspire students to share and empathize. Building and strengthening students' character through financial literacy, and being able to recognize various types or forms of financial-related crimes from an early age. (Ojeda et al., 2022)

The Importance of Financial Literacy for Early Childhood

Financial literacy is an important life skills study that is introduced and applied from an early age. The understanding of the concept of money begins to develop from an early age, can be introduced through activities in the Kindergarten environment. Children can discover and learn more about the use of money presented in a more realistic way. Paudpedia (2023) explains that teachers and parents can incorporate financial concepts and money management skills into daily social interactions with adults and include activities that enable the development of financial skills in the educational process.

Project-Based Learning Model

The project-based learning *model* is a series of learning activities that emphasize the process of solving problems faced scientifically. There are three main characteristics of problem-based learning: First, problem-based learning is a learning activity, meaning that in its implementation problem-based learning is a number of activities that students must carry out. Problem-based learning does not expect students to just listen, take notes, and memorize the subject matter; instead, through problem-based learning, students actively think, communicate, search and process data, and conclude. Second, learning activities are directed to solve problems. Problem-based learning puts problems as the key word of the learning process. Third, problem solving is done using a scientific thinking approach. Thinking using scientific methods is a deductive and inductive thinking process.

Research Method

This study uses a quantitative approach through experimental research methods. Experiment as a research situation in which at least one variable, referred to as an experimental variable, is deliberately manipulated by the researcher (Wiesma in Emzir 2017). The type of research used uses pre-experimental designs. Preexperimental designs, where research with an experimental approach is a study that seeks to find the influence of certain variables on other

variables under strictly controlled conditions (Sugiyono 2011). The sample in this study consisted of 15 early age students. The data collection techniques in this study consist of tests, observations, and documentation, then for the data analysis techniques used are divided into descriptive statistical analysis, and inferential analysis.

Result

Overview of project-based learning on early childhood financial literacy skills

The research that has been carried out in kindergarten through observation on the project-based learning process with three meetings, each lasting 150 minutes/face-to-face. The sample used was 15 children aged 5-6 years. The results of observation at each meeting of the project-based learning implementation process consisted of several stages, namely, the initial stage, the development stage and the conclusion stage. The initial stage is carried out in the initial activities and refers to project-based learning steps. During the project-based learning process with three meetings, the teacher uses inspirational videos to stimulate the ability of children to express their ideas and ideas in determining projects to be carried out at the development stage in core activities.

The first step in the project-based learning process is to determine the project using challenging questions, this is done at the development stage. The second step is to plan steps to complete the project collaboratively between teachers and students. The second step is to plan steps to complete the project collaboratively between teachers and students. Observations obtained during the activity process: The teacher facilitates the activities carried out by children in each group. Supportive facilities will certainly support their learning process. Tools, materials and media are available to support activities as well as a conducive, safe and comfortable environment. This is observed in the arrangement of the toys used by children in every face-to-face activity. To ensure children's agility during the implementation of the project-based learning process, teachers monitor each project group at each meeting and focus on the influence of activities on children's financial literacy skills. Based on the results of observer observations, the implementation of learning activities at each meeting with different learning sub-themes shows that the implementation of project-based learning has been maximized, this is shown in the percentage of implementation of the first meeting with which it is focused on the child's ability to understand the function of money and the type of money, what things children can buy with the money they have and how to get money. The effectiveness of teachers in carrying out activities at the first meeting, namely, 72.22% increased to 83.33% at the second meeting, focused on the ability of children to know and compare the prices of goods they want to buy. The percentage of project-based learning implementation in the third meeting increased to 94.44% which was focused on the ability of children to understand their needs and desires and get to know the saving system.

The observation results obtained during project-based learning are carried out, there are several things that teachers need to pay attention to, namely; learning materials that are close to and exist in the environment around the child. A teacher's ability to design learning concepts closely related to children's daily lives greatly helps them develop their

understanding of financial literacy. In addition, the projects presented in learning activities need to be designed so that the learning objectives can be achieved in their entirety and supported by the tools, materials and learning media owned by the school. The things that teachers need to pay attention to are alignment in providing scafollding which aims to adjust the level of teaching in the lesson according to their respective potentials so that the learning outcomes of children's financial skills improve The results of the research described are in line with the opinions expressed by Goodman and Stivers stating that *project-based* learningfacilitate children to carry out learning activities related to real tasks that provide challenges to children related to daily needs to be solved in groups (Yunizha 2023). Based on the results of the research on the implementation of project-based learning, it was concluded that the teacher's ability to carry out the activity steps well will affect children's literacy skills.

Overview of Early Childhood Financial Literacy Skills

a. Overview of children's financial literacy skills Before project-based learning

Before project-based learning is carried out, a pretest is first carried out, as a test to obtain initial data related to children's financial literacy skills. The form of the pretest uses a question and answer method to each child who is used as a sample in this study The purpose of the pretest is to find out the child's initial skills before project-based learning is implemented. Before conducting the pretest, a validation test and rebiality analysis are carried out on each test item that will be used in this study. Early childhood financial literacy skills data before project-based learning

	Pretest Keterampila		
Nilai Interval	Frekuensi	%	Keterangan
17 – 24	2	13,33%	Baik
9 – 16	11	73,34 %	Cukup
1 – 8	2	13,33%	Kurang
Total	15	100%	

Table 1. Financial Literacy Skills Before Project-Based Learning

The results of the frequency data analysis show that the picture of children's financial literacy skills before project-based learning, in general, is still in the adequate category, with a relative frequency of 73.34% of 15 children. In general, children can only mention 2-3 functions of money, types of currency, objects that can be bought with money and a comparison of cheap and expensive prices.

b. Overview of children's financial literacy skills after the implementation of project-based learning

The data from the observation of early childhood financial literacy skills obtained during the project-based learning process with three meetings can be seen in the summary of the descriptive statistical analysis results listed in the following table.

Table 2. Financial Literacy Skills After Project-Based Learning

Nilai Interval	Postest Keterampilar	Keterangan	
remain introducer.	Frekuensi	9.6	
17 – 24	12	80%	Baik
9 – 16	3	20 %	Cukup
1 - 8	-	0 %	Kurang
Total	1.5	100%	

Data on the frequency analysis of financial literacy skills after project-based learning showed that the change from the category was quite increased in the good category to 80%, while the category was quite 20% while in the poor category it was not found. Children's financial literacy skills generally include more than 3 functions and types of currency. Children are also able to mention more than 3 types of objects that can be bought with money and are able to mention the comparison of cheap and expensive prices of more than 3 objects and mention more than 3 right ways to get money

Based on the frequency table of financial literacy skills before and after project-based learning, it will be depicted in the following descriptive statistical data:

Table 3. Financial Literacy Skills Statistical Data before and after Project-Based Learning.

Descriptive Statistics								
	N	Minimum	Maximum	Mean	Std. Deviation			
Pretest	15	8	17	12.33	2.845			
Posstest	15	15	24	19.40	2.640			

Based on the descriptive analysis described above before and after project-based learning, it shows that the average score (*mean*) of children's financial literacy skills has increased Analysis of the data that has been obtained, provides an overview of a significant improvement in children's financial literacy skills after the implementation of project-based learning.

Children's financial literacy skills after participating in project-based learning activities in accordance with the implementation steps provide an overview that there has been an increase from the initial test to obtain a score in the category of moderately increased to the good category. The increase in the average score of financial literacy skills after project-based learning suggests that financial literacy skills can be stimulated through contextual learning through complex activities such as giving children the freedom to explore, plan learning activities, implement projects collaboratively, and produce a product.

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Financial literacy skills at the first meeting improved children's ability to know the function and type of money, understand things that children can buy with their money, and learn how to get halal money. The three projects that children work on provide motivation for children to better understand the financial concepts they need on a daily basis. The ability of a child to understand and practice various aspects of finance. Children's understanding is increasing about the proper use of money and living frugally by diligently saving as well as the saving system using piggy banks or through banks. This is in line with the opinion expressed by Hanifa (2022) that financial literacy is important to be instilled in children from an early age because with the knowledge, hearing, and financial experience that are instilled will leave an imprint on the child so that it is expected to form the character and habits of managing children's finances by seeing good and positive things such as knowing money, seeing the benefits of money, managing it, saving it (saving), paying obligations until seeing needs are more important than wants.

The effect of project-based learning on early childhood financial literacy skills

The effect of project-based learning on early childhood financial literacy skills was tested using data from research results before and after project-based learning. Before the hypothesis test is carried out, a normality and homogeneity test is first carried out. The results of the normality test, which were obtained based on the Shapiro Wilk score for the *pretest* 0.450 > 0.005 and *the posttest* with a sing of 0.837 > 0.005, thus the financial literacy skills were distributed normally. The homogeneity test results were obtained at *values of* 0.692 > 0.05, so it was stated that the pretest and *posttest* data variants were homogeneous. Because the financial literacy skills data are normally distributed and the *pretest* and *postest* data variants are homogeneous, the hypothesis test used uses parametric statistics of *the t-test method The results of the* t-test analysis of the paired sample t-test technique *of the effect of project-based learning on early childhood financial literacy skills The results of the paired sample test The above test obtained a value of t calculated -16.412 with a significance value of 0.001. Based on the previous testing criteria, it was concluded that H0 was rejected and H1 was accepted with a <i>significance value* of 0.001 < 0.05, *or it was stated that* there was an influence on financial literacy skills before and after project-based learning.

Based on the results of the research that has been described, it can be concluded that project-based learning has a positive impact because it makes it easier for children to express their understanding of the function and type of money, project learning stimulation helps children think to recognize things that they can buy with the money they have. Actively involving children to carry out projects that they determine and work on in groups provides them with learning about the comparison of the prices of goods they want to buy, they understand the concept of cheap and expensive prices and understand how to earn halal money through sales projects carried out in the market by a number of traders. Facilities and monitoring that are carried out periodically during this learning process are carried out, providing children with an understanding of the needs and desires as well as learning experiences about the savings system developed by children in collaborative projects to make piggy banks, ATM machines and mosaics in the form of bank buildings. The process of activities that have been carried out in project-based learning is in accordance with the

opinion of Rais (2010) that project-based learning emphasizes contextual learning through complex activities such as giving students the freedom to explore, plan learning activities, carry out projects collaboratively, and produce a product. This is evident from the results of research, which shows that children's financial literacy skills have increased since project-based learning was implemented.

Conclusion

Based on the findings in the research that has been carried out and the discussion in the previous chapter, the conclusion of the results of this study is:

- 1. Overview of the implementation of project-based learning on Early Childhood Financial literacy skills As a first step, teachers provide several challenging questions to stimulate them to determine the *project* to be carried out. The teacher responds according to the answers and ideas and then collaboratively explains the completion steps and project schedule. Teachers facilitate children and invite them to work on projects they have determined. During the process of the activity, the teacher monitors each group. In the final activity, the children were given the opportunity to present the project results and close the activity by evaluating the process and project results with the children in each group.
- 2. Overview of early childhood financial literacy skills Children understand the comparison of the prices of goods they want to buy by mentioning more than 2 comparisons of cheap and expensive goods. Children's understanding of how to earn money is illustrated in the ability to mention more than 3 right ways to get halal money. Understanding needs and desires is illustrated in their ability to mention more than 3 types of needs that are bought with money and mention more than 3 desires that require money and be able to mention more than 2 savings systems.

The results of the research that have been carried out state that there is an influence of project-based learning on financial literacy skills Based on the results of the study, it can be concluded that to improve financial literacy skills in early childhood can be improved through project-based learning as a method in the learning process. Through this project-based learning, children are more motivated to participate in learning activities and make it easier for them to understand financial concepts in a simple way in their lives

Declaration of conflicting interest

The authors declare that there is no conflict of interest in this work.

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