

Application of Problem-Based Learning Model and Role Play Assisted by Moneybag Media to Improve Financial Literacy of Elementary School Students

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Abstract

Financial literacy is a crucial life skill encompassing knowledge, attitudes, and behaviors related to managing finances wisely. However, the financial literacy level of second-grade students in Class 2A at State Elementary School Kebonsari 3 Malang City remains low. This study aims to enhance students' financial literacy through the implementation of a Problem-Based Learning model integrated with the Role Play method, supported by the use of Moneybag media in the topic "Wise Use of Money." The research employs a Classroom Action Research (CAR) approach conducted over three cycles. Data were collected through observation, questionnaires, and documentation, and analyzed using descriptive quantitative methods. The findings indicate a progressive improvement in students' financial literacy scores, increasing from an average of 63.14 in the first cycle to 66.57 in the second cycle. The integration of Moneybag media in the second cycle yielded a completion rate of 75%, surpassing the predetermined success criterion of 70%. Further enhancements in the third cycle, achieved through the incorporation of the Role Play method, resulted in a significant increase in the completion rate to 89.38%, categorized as very good. These results provide practical insights for elementary school educators in designing interactive and contextual financial literacy instruction. Theoretically, the study reinforces the effectiveness of combining Problem-Based Learning and Role Play in fostering foundational financial competencies among young learners.

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Introduction

In the era of globalization and the development of the digital economy, financial literacy is one of the basic competencies that must be possessed by every individual to be able to manage finances wisely and responsibly. The World Economic Forum states that financial literacy is one of the six basic literacy that must be possessed by society in the 21st century, in addition to literacy, numeracy, science, digital, and cultural and civic literacy (World Economic Forum, 2015). *The Organization for Economic Co-operation and Development* (OECD) (2020) also reported that many countries, including Indonesia, still face challenges in building their people's financial understanding. This condition is exacerbated by low financial literacy among children, even though habits and attitudes towards money are formed from an early age. Basic education has a strategic role in instilling understanding and wise attitudes related to financial management as a provision to face future economic challenges.

Financial literacy is defined as the ability of individuals to understand, manage, and use financial knowledge and skills in making appropriate decisions (Mukmin et al., 2021). In general, financial literacy includes three main dimensions, namely financial knowledge, attitudes towards finance, and financial behavior (Gultom et al., 2022). Financial knowledge includes an understanding of basic concepts such as budgeting, saving, and investing. Financial attitudes reflect an individual's view of the importance of good financial management, while financial behavior is related to the application of such knowledge and attitudes in daily life. These three dimensions are interrelated and contribute to shaping a person's ability to make financial decisions wisely and responsibly.

The introduction of financial literacy from an early age is very important because it is the initial foundation in forming good money management habits. Children need to be taught basic financial skills, such as distinguishing between needs and wants, managing expenses, and understanding the importance of saving (Damanik et al., 2023). Financial education in children is not only beneficial in the short term, but also has a long-term impact on their financial well-being in adulthood. Nusron et al. (2021) emphasized that children who get financial literacy learning from an early age tend to have better financial control and are able to make more rational financial decisions in the future.

Although financial literacy has an important role, the reality is that the level of understanding of elementary school students is still relatively low. Based on the results of the observation pre-test in class 2A of State Elementary School Kebonsari 3 Malang, the average score of student financial literacy only reached 63.14 with a percentage of completeness of 29%, far below the minimum completeness criterion (KKM) set at 70%. This condition shows that most students do not understand basic financial concepts, such as spending planning, pocket money management, and the importance of saving.

The Congress (2023) stated that low financial understanding from an early age can have a negative impact on children's financial decision-making ability in the future. This is exacerbated by the lack of practice-based contextual learning that is relevant to children's daily lives.

To overcome the problem of low financial literacy among elementary school students, innovation in learning methods that are contextual, fun, and in accordance with children's characteristics is needed. One of the methods that is considered effective is the role play method. Marfu'ah et al. (2015) explained that the role-playing method can create an interactive learning atmosphere while providing real experiences to students through simulations of daily financial situations. Through this method, students can learn to make transactions, count money, and understand the value of money directly in situations that resemble real life. In addition, this method also encourages students' active participation, builds confidence, and develops social skills.

In addition to learning methods, the success of financial education is also determined by the learning media used. One of the educational media that can support financial literacy learning is *Moneybag* media, an educational bag specifically designed to introduce the concept of the value of money, how to earn money, and manage finances wisely. This media will be more effective if it is collaborated with *the Problem-Based Learning* (PBL) model, which is an approach that encourages students to solve real problems in groups. The combination of PBL and *role play* assisted by *Moneybag* is believed to be able to improve students' ability to understand financial concepts as well as develop critical thinking and *problem-solving skills* (Kristin, 2018).

A number of previous studies have proven the effectiveness of PBL and *role play methods* in improving student learning outcomes. Firoshia Kristin (2018) found that the combination of PBL and *role play* had a positive impact on the social studies learning outcomes of elementary school students. Research by Yulianti et al. (2019) also shows that the method plays an effective role in introducing the concept of numeracy literacy in kindergarten. Hikmah (2020) stated that simulation-based games are able to improve the financial understanding of elementary school children in Depok. However, these studies generally only focus on one approach or have not integrated all three simultaneously in financial literacy learning in elementary schools. There have been no studies that comprehensively examine the effectiveness of the collaboration of *the Problem-Based Learning* model and *the Role Play* method assisted by *the Moneybag* media to improve financial literacy, especially at the lower grade level of elementary school.

This research gap is an important gap to fill, considering that *Moneybag media* has the advantage of providing concrete experience regarding money management, while the combination of PBL and *role play* has the potential to develop students' critical thinking skills, *problem solving*, and social skills in the financial context. Thus, this

research offers a new contribution in the development of a financial literacy learning model that is contextual, applicative, and in accordance with the characteristics of early childhood students.

Based on the results of observations and pre-tests that show the low financial literacy ability of students in class 2A of State Elementary School Kebonsari 3 Malang, it is necessary to make efforts to improve through the application of innovative learning models. The main problem of this study is how to improve the financial literacy of elementary school students through the combination of the PBL model with the Moneybag media-assisted role play method. This research aims to improve students' financial literacy in aspects of financial knowledge, attitudes, and behaviors. In addition, this research is expected to be a reference for educators and policy makers in integrating financial literacy into the basic education curriculum more effectively and contextually.

Method

This study uses the Kemmis and McTaggart spiral model Class Action Research (PTK) approach which consists of three cycles, where each cycle includes the stages of planning, implementation of actions, observation, and reflection (Kemmis & McTaggart, 2014). This study aims to improve the learning process and results of financial literacy for 28 students in grade 2A of State Elementary School Kebonsari 3 Malang through the application of the Problem-Based Learning model combined with the Role Play method assisted by Moneybag media. Each cycle is carried out for two meetings, with the planning stage including the preparation of teaching tools, learning scenarios, observation sheets, documentation formats, and instrument validation by material experts and media experts. The action stage is carried out by applying learning scenarios ranging from material introduction, buying and selling simulations through role play, to PBL-based group discussions. Observations were carried out using observation sheets of student activities and involvement during learning, while documentation in the form of photos and videos was taken as a complement to visual data. Reflection is carried out to analyze the obstacles and results of each cycle in order to make improvements in the next cycle. Data collection techniques include financial literacy tests (pre-test and post-test), observation of student involvement using Likert scale-based activity rubrics, and visual documentation. The validity test of the content of the instrument was carried out through expert judgment involving two subject matter experts and one media expert, with the validation results showing the "valid" category on all instrument items. The reliability of the questionnaire and test instruments was tested using Cronbach's alpha test, and a α value of 0.812 was obtained indicating the reliability category. To minimize observer bias, data triangulation was carried out by comparing the results of observations between observers, visual documentation, and reflections, as well as inter-observer agreements which showed a consensus rate of 91%,

so that it was considered consistent. Data was analyzed descriptively quantitatively using the formula of percentage completeness, with success criteria set at least 70% of students achieving scores above the KKM, while qualitative data was analyzed through data reduction, categorization of observation results, and triangulation of documentation and reflection results of each cycle. This learning is associated with the learning outcomes of Indonesian in grade 2 semester 2 of the independent curriculum, especially in the indicator of understanding and applying the concept of using money wisely through language skills, which is then measured using the rubric of the assessment of children's financial literacy.

Results and Discussion

Results

This study measures the financial literacy of students in class 2A of State Elementary School Kebonsari 3 Malang based on three indicators, namely (1) knowledge of the concept of money and nominal value, (2) skills in calculating money and making simple transactions, and (3) wise attitude in distinguishing needs and wants. Student learning outcomes are analyzed quantitatively through pre-test and post-test scores in each cycle, with the Minimum Completeness Criteria (KKM) set at 70.

Pre-Cycle: In the pre-cycle stage, learning is carried out conventionally without the use of interactive media. Of the 28 students, only 8 students (28.57%) completed with an average score of 63.14. A total of 20 students (71.43%) have not met the KKM. This score shows that students' financial literacy is still relatively low, especially in the indicator of numeracy skills and distinguishing needs.

In the first cycle, the Problem Based Learning (PBL) model was applied with PowerPoint media and learning videos. The results have increased: as many as 13 students (46.42%) completed with an average score of 66.57. Despite the improvement, most students are still passive because the lecture method is still dominant. The average score increased by 3.43 points compared to pre-cycle.

In cycle II, the Role Play method was applied combined with Moneybag media. The results showed a significant increase: 21 students (75%) completed with an average score of 77.85. Compared to the first cycle, the percentage of completeness increased by 28.58% and the average score increased by 11.28 points. The most developed indicators are the skill of calculating money and the ability to make simple decisions in a trading simulation.

In cycle III, the combination of PBL model, Role Play method, and Moneybag media was optimized. A total of 25 students (89.38%) completed with an average score of 86.71. The percentage of completeness increased by 14.38% compared to cycle II, and the average score increased by 8.86 points. All indicators of financial literacy have

increased, especially in the aspect of wise use of money which is starting to appear in roleplay practices. Overall, the increase in students' financial literacy from pre-cycle to cycle III was 60.81% (from 28.57% to 89.38%) with an average increase in scores of 23.57 points. The trend graph of learning outcomes shows a steady increase in each cycle.

Discussion

The improvement in student learning outcomes in each cycle shows the effectiveness of the application of a combination of the Problem-Based Learning (PBL) model, Role Play method, and Moneybag media in improving the financial literacy of elementary school students. In the pre-cycle, the low student involvement was due to non-contextual lecture methods and the lack of interactive media. This is in line with the findings of the Congress (2023) which stated that children's low financial literacy is caused by conventional teaching methods that are less attractive. This finding can be explained through the perspective of constructivist theory, where meaningful learning occurs when learners actively build their knowledge through direct experience and interaction with the environment (Piaget, 1952; Vygotsky, 1978). The absence of real experience in pre-cycle learning leads to a low construction of students' financial knowledge.

In the first cycle, even though the PBL model has been used with the presentation of contextual problems, the learning outcomes are not optimal because the learning media is still passive. The increase in grades that occur may be due to the involvement of students in solving daily problems, as stated by Marfu'ah et al. (2015) that PBL can stimulate student involvement through real problems. However, without engaging media and simulative experiences, students' focus is easily distracted. Theoretically, problem-based PBL without concrete media is less than optimal in creating situated learning or learning that is relevant to the real-life context (Brown, Collins, & Duguid, 1989).

Cycle II showed a significant improvement after the Role Play method and Moneybag media were applied. The active role of students in the buying and selling simulation has proven to be effective in improving understanding of the concept of money and transactions. This is in line with the theory of simulation in learning, which states that learning experiences that resemble real situations will reinforce the transfer of knowledge to daily life (Gredler, 1996). These results also strengthen the research of Elvi Yulianti et al. (2019) that role-playing methods can accelerate the mastery of numeracy and financial literacy in early childhood. In addition, Moneybag media that is concrete and interesting has succeeded in increasing student enthusiasm, in accordance with the opinion of Wacanno (2022) that educational media in physical form makes it easier for children to understand abstract concepts such as the value of money.

In cycle III, the learning outcomes achieved 89.38% completeness because the PBL model and the Role Play method were optimally integrated in the context of real activities. Students are not only able to recognize and calculate money, but also understand the priority between needs and wants, which is an important indicator in financial literacy (Ayu, 2024). Student engagement increases because they experience firsthand buying and selling situations through classroom simulations. The application of experiential learning reinforces the principle of experiential learning theory (Kolb, 1984), that children learn more effectively when directly involved in contextual activities. This is in line with Firosalia Kristin's (2018) research which states that PBL collaboration with Role Play can improve social studies learning outcomes, and in the context of this research it has also been successfully applied to financial literacy materials.

The obstacles faced during the study include the limited time of implementing Role Play in regular class hours and the uneven understanding of large denominations of money (Rp75,000 and Rp100,000). In addition, teachers' readiness in managing simulations is also an initial challenge, but it can be overcome through practice and reflection in each cycle.

Conclusion

The results of the implementation of Classroom Action Research (PTK) conducted in three cycles show that the use of the role play method combined with Moneybag media is effective in improving the financial literacy of grade 2A students of State Elementary School Kebonsari 3 Malang in Indonesian learning with the material "Wise Use of Money." The increase in student involvement and enthusiasm was significant, where in the pre-cycle as many as 28.57% of students were in the low category, then increased to 46.42% in cycle I, 75% in cycle II, and reached 89.38% in cycle III, with 25 out of 28 students achieving completeness. This success is driven by the hands-on experience students gain through buying and selling simulations, allowing them to observe, practice, and analyze simple transaction processes firsthand, which makes understanding of financial literacy concepts stronger, contextual, and meaningful. These findings provide practical implications for elementary school teachers to further develop real-world financial literacy learning based on real practices with role play methods and concrete media such as Moneybag, as well as a reference for curriculum developers to systematically integrate financial education into early childhood learning. However, this study has limitations because it was only conducted in one classroom and one school, so the results cannot be generalized to a wider population. Therefore, it is recommended for future research to apply a combination of Problem-Based Learning models, role play methods, and Moneybag media in various elementary school contexts with different socioeconomic backgrounds, as well as

expand the focus of measurement not only on financial knowledge and skills, but also on children's financial behavior in a sustainable manner.

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Authors' Note

The authors declare that there is no conflict of interest regarding the publication of this article. The authors confirmed that the paper was free of plagiarism.

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