



The use of educational game-based learning media on financial literacy

Dwi Indah Oktaviani^{a*}, Riau University, Kampus Bina Widya KM. 12,5, Simpang Baru, Kec. Tampan, Kota Pekanbaru, Riau 28293, Indonesia, <https://orcid.org/0009-0005-5742-2583>

Gusnardi^b, Riau University, Kampus Bina Widya KM. 12,5, Simpang Baru, Kec. Tampan, Kota Pekanbaru, Riau 28293, Indonesia, <https://orcid.org/0000-0003-1709-4966>

Caska^c, Riau University, Kampus Bina Widya KM. 12,5, Simpang Baru, Kec. Tampan, Kota Pekanbaru, Riau 28293, Indonesia, <https://orcid.org/0000-0001-6029-5953>

Henny Indrawati^d, Riau University, Kampus Bina Widya KM. 12,5, Simpang Baru, Kec. Tampan, Kota Pekanbaru, Riau 28293, Indonesia, <https://orcid.org/0000-0002-5412-7109>

Neni Hermita^e, Riau University, Kampus Bina Widya KM. 12,5, Simpang Baru, Kec. Tampan, Kota Pekanbaru, Riau 28293, Indonesia, <https://orcid.org/0000-0002-5084-8080>

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Abstract

This conceptual article discusses the use of educational games as learning media that can improve student understanding. The use of educational games as an alternative learning media can provide innovative and effective variations in achieving learning objectives and improving student achievement. In addition, the use of educational game learning media also has several advantages. The method used in this article is a literature study and conceptual analysis. Based on the literature review conducted, there are various advantages possessed by educational game learning media, including Practical Experience, Mistakes Without Risk, Highly Motivated and Engaged, Experience-Based Learning, Personalization and Progress Monitoring, Collaborative and Competitive Learning. The findings of this study are beneficial to educators, policymakers, and students especially.

Keywords: Educational games; financial literacy; learning media.

* ADDRESS FOR CORRESPONDENCE: Dwi Indah Oktaviani, Riau University, Kampus Bina Widya KM. 12,5, Simpang Baru, Kec. Tampan, Kota Pekanbaru, Riau 28293, Indonesia. *E-mail address:* dwiindahoktaviani41@gmail.com

1. INTRODUCTION

21st-century education is education with very rapid development of science and technology (Moore et al., 2023). Education is a planned and systematic individual effort to recognize himself and his environment to achieve change in himself (Haeruman et al., 2022). This education aims to prepare students with the literacy skills, knowledge, and attitudes needed to succeed in an increasingly complex, globalized, and digitally connected world. The role of educational institutions in developing literacy skills in 21st-century education is very important. In an era dominated by information and communication, educational institutions have a responsibility to ensure that students have strong literacy skills and prepare students with relevant and adaptive skills to face the challenges of the modern world most especially financially (Guerini et al., 2024).

To produce graduates with literacy skills, educational institutions play an important role in instilling these competencies (Alvarez Padilla et al., 2024). Installation of literacy competence can be done in the learning process carried out by teachers to students. In conducting learning planning, it is necessary to design learning media. Arsyad (as cited in Aghni, 2018) explained that learning media are all things such as tools, the environment, and the chaos of forms of activity that are conditioned to increase knowledge and change attitudes. Learning media is a tool used to help and facilitate learning (Pangestu & Setyaningrum, 2020). Learning media is useful for fostering student interest in following the learning process. So that growing interest can increase student understanding and learning activities become effective. One of the appropriate learning media to foster student interest and understanding is educational games (Thongthip et al., 2024). Educational games are learning aids for teachers that are quite effective in delivering material so that students' desire to learn grows (Sriwahyuni & Mardono, 2016).

The results of previous research explain that "digital game-based learning can be a more effective teaching tool, in terms of motivating students to learn in a complex learning process, rather than traditional instruction (Hwang et al., 2016). The use of games as one of the learning media was chosen because games can provide entertainment to their users. This is in line with the results of research that shows that human psychology prefers entertaining things rather than studying seriously which tends to cause boredom.

Educational games can foster student motivation (Pan & Ke 2023). This is by research conducted by Backlund & Hendrix (2013) with the results of their research stating that "learning approaches that use games create higher learning motivation for students" (Backlund & Hendrix, 2013). Educational games can also improve students' understanding. This is in line with research conducted by Sintaro (2020), titled "Design and Build Educational Games for Historical Places in Indonesia", where the results of the study stated that "educational games have the potential to increase students' knowledge about historical places in Indonesia."

Previous research has suggested that students in 21st-century education should possess skills such as global awareness; financial, economic, and entrepreneurial literacy; civic literacy; and health literacy that can be a provision for students in facing the increasingly rapid changes of the times" (Srigustini & Aisyah, 2021). The World Economic Forum 2015 explains that the generation of the Industrial Revolution era 4.0 must master six basic literacy, that is literacy, numeracy literacy, science literacy, financial literacy, cultural literacy, and civic literacy (Helaludin, 2018). Instilling literacy skills, one of which is financial literacy, can be done early. Instilling financial literacy early on is an important step to help

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students develop a good understanding of finances and form wise habits in managing their money (Siegfried & Wuttke 2021).

According to the National Survey on Financial Literacy and Inclusion (SNLIK), in 2019, Indonesia recorded a financial literacy index of 38.03%. Although this figure is still relatively low, there is an increase compared to the results of SNLIK in 2016, where the financial literacy index was 29.7%. These results show that in general, Indonesians still do not have an adequate understanding of the various financial products and services offered by formal financial institutions. Financial literacy is an important skill that contributes to community empowerment, individual welfare, consumer protection, and increased financial inclusion (Indonesia, 2021). In many countries, financial literacy has become a national program that has a significant impact on their financial sector. An example is the United States with its program known as "Promoting Financial Success in the United States: National Strategy for Financial Literacy". The level of financial literacy in the United States far surpasses Indonesia. According to the data, the financial literacy rate of high school students in Indonesia reached 35.7%, while in the United States it reached 44.3%. To catch up, the Indonesian government has issued a program "Blueprint for Indonesia's National Financial Literacy Strategy" (Kusumaningtyas & Sakti, 2017).

Previous research explains that low financial literacy is a serious issue because it can hurt financial behavior, and financial condition, and increase financial risks. In addition, with the emergence of increasingly complex financial mechanisms and products and derivatives, low financial literacy also has the potential to put individuals involved in these products at risk of losing money due to ignorance or information asymmetry between those who are informed and those who are not informed (Hidayat, 2015).

The financial literacy of adolescents is still low because they still live a hedonic lifestyle without thinking about life in the long term. Based on previous research which states that "in this modernization era, students often lack knowledge and even forget about how to manage their finances. Furthermore, they tend to shop using gadgets through online shops and can make payments on the spot, which can cause students to get caught up in hedonic behavior" (Ulfah et al., 2021).

The low level of financial literacy in Indonesia, especially among high school students, demands great efforts from the world of education in the country. Students need to be given an understanding of financial literacy to contribute to Indonesia's economic growth. The process of learning financial literacy is the same as the learning process in general which can be facilitated by using learning media. The influence of technological developments on media instruction increases the accessibility of digital games for all ages. Through digital games, special integrated learning content can be provided during play (Ishak et al., 2023). One of the learning media that can be used to improve students' understanding of financial literacy is educational games.

Educational games are learning aids for teachers that are quite effective in delivering material so that students' desire to learn grows (Sriwahyuni & Mardono, 2016). Educational games are closely related to increasing financial literacy. In a study conducted by Luhsasi (2017) entitled "The Use of Causal Category Online Games as a Facility for Financial Literacy Education and Student Financial Management"; the results of his research showed that the use of online games influenced financial literacy. That is, in online games, there is information that is directly or indirectly related to financial literacy (Luhsasi, 2017).

Based on the results of observations, several problems were found, as follows: The financial literacy ability of students is still low, this is based on the results of a pretest on financial literacy conducted;

Teachers more often use textbooks and write on the blackboard to explain the material; In economics learning, teachers usually use PowerPoint slides to display material to students, then explain it, and give practice questions. This results in students only needing to listen and record explanations from the teacher, resulting in less development of students' abilities independently. Only a small percentage of students are active in the learning process in the classroom; There has been no development of technology-based learning media specific to economics subjects so the monotonous learning process makes students quickly feel bored and bored in following the learning.

1.1. Purpose of study

Therefore, through this study, researchers will conduct an in-depth analysis of the benefits of educational games as an alternative learning media that can improve student understanding of the needs of students for educational games.

2. METHODS AND MATERIALS

The method used in this article is a literature study and conceptual analysis. The author searched relevant literature to obtain in-depth information and understanding of the use of educational game learning media in an educational context. Then, the authors conducted a conceptual analysis to explore various concepts and theories related to the use of educational game-learning media, as well as to analyze the benefits and advantages associated with their use. This conceptual analysis assists the writer in building arguments and compiling a comprehensive view of the topic.

3. RESULTS

Based on the results of the literature found several advantages of using educational game learning media to increase understanding of financial literacy among others:

1. Practical Experience: Educational games can provide practical experience in managing finances. Through in-game simulation, players can learn to manage budgets, make investment decisions, manage savings, and deal with real financial situations. This helps players understand financial concepts and strategies in contexts that are relevant and applicable in everyday life.

2. Mistakes Without Risk: In educational games, players can learn from mistakes without any actual financial consequences. They can try various financial strategies, take risks, and see the results without having to face a real loss of money. Thus, educational games provide an opportunity to experiment, understand the impact of financial decisions, and develop risk management skills.

3. Highly Motivated and Engaged: Educational games offer an engaging and fun gaming experience. With interactive views, challenges, and rewards, educational games can increase player motivation and involvement in learning financial literacy. This helps maintain player interest and facilitates a better understanding of financial concepts and principles.

4. Experience-Based Learning: Educational games allow players to learn through hands-on experience. They can take on roles in complex financial situations and face relevant challenges. In the process of playing the game, players have to make financial decisions, face the consequences, and see the impact on their financial condition. This helps players understand cause-and-effect relationships in a financial context and develop wise decision-making skills.

5. Personalization and Progress Monitoring: The educational game can be adapted to the player's level of financial knowledge and skills. They can adjust the difficulty level, provide suitable challenges, and provide immediate feedback. With personalization, players can learn at their own pace and track

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their progress over time. This allows for effective monitoring and adjustment of the financial literacy learning process.

6. Collaborative and Competitive Learning: Some educational games integrate elements of collaboration and competition. Players can collaborate with friends or teams to solve financial problems or participate in competitions to achieve certain financial goals. Collaboration and competition can improve social interaction, and teamwork skills, and expand understanding of financial concepts through discussion and healthy competition.

These advantages make educational games an effective tool in increasing financial literacy. They provide practical experience, motivate, provide feedback, and facilitate better understanding and development of financial skills.

4. CONCLUSION

The utilization of educational games as learning media is an alternative that can be used to enrich a variety of learning media. Interesting learning innovations have an important role in achieving learning goals and improving student achievement. In addition, the use of educational game learning media also provides various advantages. There are six advantages possessed by educational game learning media, namely: Practical Experience; Mistakes Without Risk; Highly Motivated and Engaged; Experience-Based Learning; Personalization, and Progress Monitoring; Collaborative and Competitive Learning.

The development of educational games needs to be done for other financial literacy learning materials. This educational game needs to be disseminated more widely so that it can be used by the public to facilitate financial literacy learning.

Conflict of Interest: The authors declare no conflict of interest.

Ethical Approval: The study adheres to the ethical guidelines for conducting research.

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