



Family 100 meets canva: a game-based approach to financial literacy education

Muhamad Andi*, Ninik Sudarwati

Universitas PGRI Jombang, Jawa Timur, Indonesia

*Correspondence author: muhamadandi99@guru.smp.belajar.id

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ABSTRACT

Purpose: to develop a canva-based family 100 quiz learning media for financial literacy in junior high school social studies, and to evaluate its practicality as an interactive learning medium.

Method: this study used a research and development (R&D) approach based on the ADDIE model. Data were collected from 32 seventh-grade students and two social studies teachers using observations, FGDs, expert validation, and questionnaires, and analyzed descriptively to assess the validity and practicality of the developed media.

Findings: the developed canva-based family 100 quiz was found to be feasible and highly practical by both experts and users. The media received very high practicality scores from teachers and students, indicating that it is easy to use, engaging, and suitable for social studies learning on financial literacy.

Implications: integrating canva with game-based learning can enhance student engagement and provide an innovative, interactive learning alternative for social studies, particularly in financial literacy education.

Originality: lies in the development of a canva-based family 100 quiz that integrates game-based learning specifically for financial literacy in junior high school social studies, combining interactive digital media with a contextual learning game model.



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Introduction

Digital transformation has transformed various aspects of life, including educational practices (Akour & Alenezi, 2022). 21st-century learning demands that teachers no longer act solely as information transmitters but as facilitators who create active, collaborative, and student-centered learning experiences (Thayati et al., 2025). In this context, learning media is a crucial component determining the success of the learning process because it can help present material in a more engaging, contextual, and interactive manner. The use of appropriate learning media has been proven to increase student attention, motivation, participation, and understanding of the material

being studied (Febrina & Setiawan, 2024; Kandia et al., 2023; Rahim et al., 2022). Therefore, the use of digital technology as a learning medium is an integral part of school curriculum implementation.

One of the rapidly growing digital platforms widely used in education is canva (Astaño, 2025; Jamaludin & Sedek, 2024). This platform offers a variety of visual design features, animations, videos, interactive presentations, and learning templates, enabling teachers to easily develop learning materials without requiring professional design skills. Canva's presence opens up opportunities for teachers to create more creative, engaging, and digitally-adapted learning (Damanik & Rozi, 2026). However, canva's use in schools is still predominantly for presentations or other materials, while its potential as an interactive, game-based learning medium remains underutilized.

This phenomenon was also found at SMP Negeri 2 Ploso. Based on initial observations and focus group discussions (FGDs) with social studies teachers, the learning process is still dominated by lecture methods with media limited to textbooks and simple presentations. This condition causes students to tend to be passive, less engaged in learning, and easily lose attention during the learning process. This situation presents a challenge because social studies learning not only emphasizes mastery of concepts but also aims to develop critical thinking skills, problem-solving, decision-making, and the ability to understand socio-economic phenomena that occur in everyday life. The limited interactive learning media prevents these goals from being achieved optimally.

This issue becomes even more important when linked to financial literacy. Financial literacy is an individual's ability to understand financial concepts, manage economic resources, and make wise financial decisions (Bai, 2023; Shi et al., 2025). This ability has been recognized as an essential competency that should be instilled from school age so that students can make various economic decisions in real life (Mancone et al., 2024). However, financial literacy concepts are often perceived as abstract and less engaging when presented through conventional learning approaches (Malik & Fürstenau, 2024). Therefore, innovative learning media are needed that connect financial literacy concepts with contextual, interactive, and enjoyable learning activities, enabling students to build their understanding through direct learning experiences.

Previous research has shown that canva has great potential as a digital learning medium. Rahayu & Ansori (2025) demonstrated that canva can improve the quality of learning material presentation through the use of visual and multimedia elements. Sugiarni et al. (2024) also found that canva supports learning innovation because it makes it easier for teachers to develop creative media. Research by Hafiz et al. (2024); Ilahy et al. (2025); Wulandari & Utama (2025) reinforces these findings by demonstrating that canva-based learning media can increase student engagement, creativity, and learning interactivity. On the other hand, the game-based learning approach has also received widespread attention in educational research. Susaniari & Santosa (2024) demonstrated through a systematic review that game-based learning consistently increases students' motivation, participation, and learning experience. Similar findings were presented by Jun & Lucas (2024), who explained that the integration of game elements, challenges, competition, and direct feedback can create a more engaging learning environment than conventional learning. Andari et al. (2025) even emphasized that the application of game-based learning in social studies learning can increase student engagement and encourage the formation of more meaningful learning experiences.

However, the literature review shows that most previous research focuses on using canva as a presentation medium, a learning video, or interactive media in general. Research on game-based learning generally develops games using other applications or platforms without integrating canva as the primary medium. Furthermore, most studies primarily test the effectiveness of media on learning outcomes using a quantitative approach, while research describing the media development process based on needs analysis, focus group discussion (FGD) results, and gap analysis between actual and ideal learning conditions is relatively limited. Thus, there is a research gap indicating the absence of studies specifically developing the canva-based family 100 quiz media for financial literacy learning in junior high school social studies through a user-oriented development approach.

The novelty of this research lies in the development of learning media in the form of a canva-based family 100 quiz specifically designed for financial literacy material in junior high school social studies learning. Another novelty lies not only in the resulting media product, but also in the development process that begins with needs identification, FGDs with teachers, and learning gap analysis so that the developed media truly suits the characteristics of students and learning needs at school. This study aims to explore the need for developing social studies learning media on financial literacy material, describe the process of developing the canva-based family 100 quiz media based on the results of the needs analysis and FGDs, and identify the characteristics and practicality of the developed media in supporting more interactive and enjoyable social studies learning.

This research is based on constructivist theory, which views knowledge as actively constructed through learning experiences and interactions with the learning environment. From this perspective, students gain a deeper understanding when directly involved in problem-solving activities, discussions, and collaboration. This principle is combined with game-based learning theory, which emphasizes that game elements such as challenges, competition, rewards, and feedback can increase intrinsic motivation, engagement, and student learning experiences. The integration of these two theoretical foundations serves as the conceptual basis for developing the canva-based family 100 quiz media as a learning medium that encourages students to construct their knowledge through educational game activities actively.

This research has both theoretical and practical significance. Theoretically, this research is expected to enrich the study of canva's integration with a game-based learning approach in social studies, particularly in financial literacy. Practically, the developed media is expected to be an alternative learning innovation that is easy for teachers to implement, increase student engagement in the learning process, and support the implementation of more active, collaborative, and meaningful 21st-century learning. Furthermore, the results of this study are expected to serve as a reference for future researchers in developing game-based digital learning media for various subjects and educational levels.

Method

This study employed a research and development (R&D) methodology, referring to the ADDIE (analysis, design, development, implementation, and evaluation) development model proposed by Branch (2009). The ADDIE model was chosen because it has systematic and flexible development stages, making it suitable for developing canva-based digital learning media. This study aimed to produce a learning medium in the form of a family 100 quiz on financial literacy material in junior high school social

studies that meets the validity and practicality aspects as a learning medium.

The research was conducted at SMP Negeri 2 Ploso, Jombang, East Java. The research subjects included social studies teachers as media users, expert validators consisting of material experts and media experts, and junior high school students involved in the product trial stage. Research data were collected using several techniques, namely observation, focus group discussions (FGD), expert validation sheets, and user response questionnaires. Observations and FGDs were used to identify learning conditions, student characteristics, and media development needs, while validation sheets and questionnaires were used to obtain data regarding the feasibility and practicality of the developed media.

The ADDIE model in this study consists of five stages. The first stage is analysis, which involves identifying learning needs through initial observations and focus group discussions (FGDs). The FGDs involved students from the Master of Economics Education program and practicing teachers as resource persons to obtain information on the current state of social studies learning, the learning media currently used, obstacles to creating active learning, student characteristics, and the need for innovative learning media. The analysis results showed that learning was still dominated by lecture methods with limited media use, resulting in students being less active. In addition, FGD participants identified that students were more interested in competitive learning, collaborative learning, using attractive visuals, and involving game elements. These findings served as the basis for determining the specifications of the media to be developed.

The second stage is design. At this stage, a learning media design is prepared in the form of a canva-based family 100 quiz tailored to learning outcomes, learning objectives, financial literacy material characteristics, and student characteristics. The design includes the development of game flow, learning scenarios, media display design, quiz question composition, assessment system, and the integration of various visual elements, animations, icons, and colors that support student engagement during the learning process. The third stage is development, namely realizing the media design into a product that can be used in learning. Development is carried out using the canva platform by utilizing various interactive features to produce media that is attractive and easy for teachers to operate. Material experts and media experts then validate the developed product to assess the suitability of the content, linguistic aspects, visual appearance, ease of use, and technical quality of the media. Input and suggestions from the validators are used as the basis for revisions to obtain a product that is suitable for implementation.

The fourth stage is implementation, the media that have been declared suitable are then tested in the social studies learning process. In this implementation, students are divided into several groups and take turns participating in the Family 100 quiz game, while the teacher acts as both facilitator and moderator of the game. During the implementation process, observations are made on the implementation of the media use, and data is collected regarding the practicality of the media through teacher and student response questionnaires. This stage aims to determine the ease of use of the media, student engagement during learning, and the media's suitability to the learning conditions in the classroom.

The final stage is evaluation. Evaluation is conducted formatively at each stage of development and summatively after media implementation is complete. The evaluation includes analysis of expert validation results, teacher responses, and student responses to the developed media. Aspects evaluated include content quality, media presentation,

ease of use, media usefulness in learning, and practicality. Evaluation results are used as a basis for product refinement to achieve learning media that meet user needs and learning objectives.

Data yang diperoleh dianalisis menggunakan teknik analisis deskriptif kuantitatif dan kualitatif. Data kuantitatif berasal dari hasil penilaian validator, guru, dan siswa yang dihitung dalam bentuk persentase untuk menentukan tingkat kelayakan dan kepraktisan media. Sementara itu, data kualitatif berupa komentar, kritik, dan saran dari validator maupun pengguna dianalisis secara deskriptif sebagai dasar dalam melakukan revisi dan penyempurnaan produk. Kombinasi kedua teknik analisis tersebut digunakan untuk memastikan bahwa media pembelajaran yang dikembangkan memenuhi kriteria praktis, dan sesuai dengan kebutuhan pembelajaran IPS pada materi literasi keuangan. Penilaian kriteria praktis dapat dilihat pada Tabel 1.

Table 1 criteria for practicality

Percentage (%)	Practicality criteria
76-100	Very practical
51-75	Practical
26-50	Less practical
0-25	Not practical

Results and discussion

This research was conducted at SMP Negeri 2 Ploso, involving 32 seventh-grade students and two social studies teachers as subjects. The product developed was a canva-based family 100 quiz learning media for financial literacy. The development process adhered to the ADDIE model, which consists of five stages: analysis, design, development, implementation, and evaluation. The results of each stage are described below.

Analysis stage

The analysis phase aims to identify learning media development needs through observation and focus group discussions (FGDs). The analysis results indicate that the social studies learning process is still dominated by a teacher-centered approach, limited use of learning media, and low student engagement during the learning process. Conversely, teachers expect more student-centered learning supported by interactive, engaging media that can create a pleasant learning atmosphere. A comparison between actual and ideal learning conditions is presented in Table 2.

Table 2 results of gap analysis

Actual conditions	Expected conditions
Learning is still teacher-centered	Student-centered learning
Students are less active during learning	Students actively participate in learning
Learning media is less varied	Using interactive learning media
Learning tends to be monotonous	A more enjoyable and competitive learning environment

Source: primary data, processed

The gap analysis revealed that a key need in social studies learning lies in providing learning media that can increase student engagement through interactive learning activities. This finding formed the basis for the development of a canva-based family 100 quiz as a solution to the challenges encountered in the field.

Design stage

Based on the needs analysis, a learning media design was conducted in the form of a family 100 quiz. This stage included developing financial literacy materials, developing questions, designing game mechanics, a scoring system, designing the display, selecting colors, icons, animations, sound effects, and designing the layout of each slide in canva. All components were designed to create an engaging learning experience while also facilitating teachers' management of learning activities.

Development stage

The development phase resulted in a learning medium in the form of a canva-based family 100 quiz designed in an interactive presentation format that integrates visual elements, games, and financial literacy materials. This medium was developed by considering pedagogical aspects, the suitability of social studies material, and the characteristics of junior high school students to create a more engaging and meaningful learning experience. The resulting product not only presents the material informatively but is also packaged as a quiz game that requires active student participation in the learning process. The completed product was then validated by material and media experts to ensure its suitability in terms of content, visual design, and ease of use.

Material validation focused on the suitability of financial literacy concepts to social studies learning outcomes, the depth of the material, and the appropriateness of the presentation of questions within the context of students' daily lives. Meanwhile, media validation emphasized aspects of visual appearance, text readability, design consistency, navigation between slides, and the media's appeal as an interactive learning tool. The initial appearance of the developed media is presented in Figure 1 as a representation of the canva-based family 100 quiz interface design used in the learning process. This appearance demonstrates the integration of visual elements such as color, icons, animations, and layouts designed to increase student appeal and engagement during game-based learning activities.

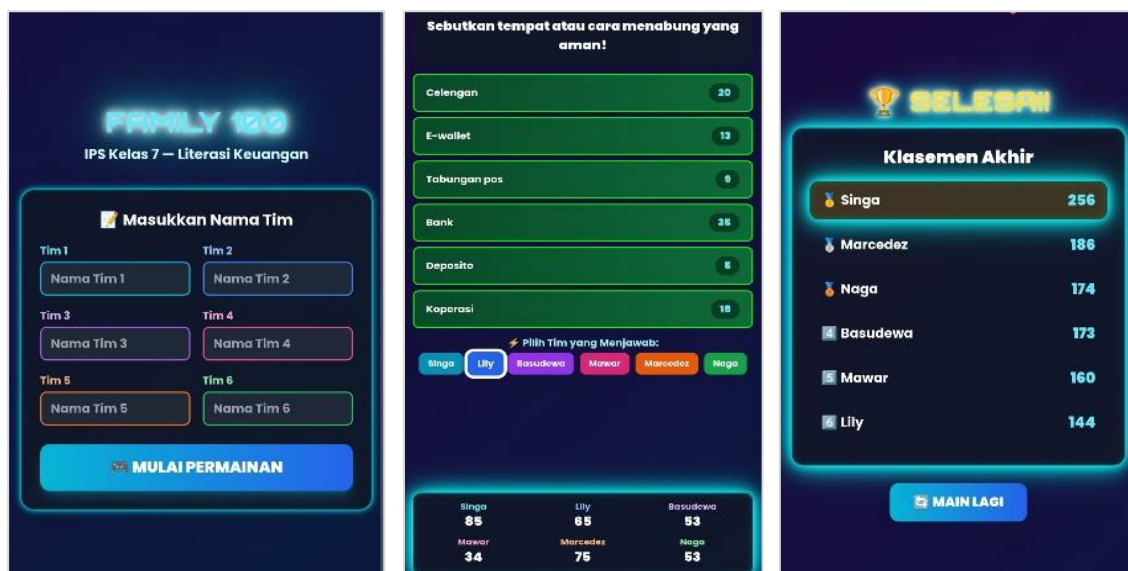


Figure 1 shows the media display of the canva-based family 100 quiz

The validation results indicate that the media meet the eligibility criteria for use as a social studies learning medium for financial literacy. In general, the validators gave a positive assessment of the suitability of the content, media design, and ease of use.

However, the validators provided several notes for improvement as an effort to refine the media before implementation with students. The feedback provided primarily concerned visual aspects and material presentation. For the visual aspect, it was recommended to adjust the display composition to reduce overcrowding, increase color contrast to improve readability, and maintain design consistency between slides. For the material aspect, several questions were revised to be more contextual and closer to students' daily experiences, particularly in the context of simple financial decision-making. All of this feedback was then used as the basis for product revisions, optimizing the resulting media, both in terms of appearance and material substance. This revision process ensured that the canva-based family 100 quiz media was not only theoretically feasible based on expert validation results, but also more ready for use in real-life classroom learning as an effective and engaging interactive learning medium.

Implementation stage

The media, which had been declared suitable, was then implemented in the social studies learning material on financial literacy. The learning was conducted in groups, with each group competing to answer questions in a family 100 game format. The teacher acted as both facilitator and moderator, ensuring an interactive learning process. The practicality of the media was evaluated through teacher assessments as practitioners and student responses after using the media. The results of the practitioner assessments are presented in Table 2.

Table 2 results of practicality assessment by teachers (practitioners)

Aspect	Percentage	Criteria
Appearance	91%	Very practical
Content	96%	Very practical
Ease of use	94%	Very practical
Average	93.6%	Very practical

Source: primary data, processed

Based on Table 2, the media achieved an average practicality rating of 93.6%, categorized as very practical. The content aspect achieved the highest score (96%), indicating that the material presented was in line with learning outcomes and easy to understand. Meanwhile, the appearance (91%) and ease of use (94%) aspects indicated that teachers considered the media easy to operate and had a visual design that supported learning. In addition to teacher assessments, student responses were also used to determine the level of practicality of the media from the perspective of the primary user. A summary of the student responses is presented in Table 3.

Table 3 results of student responses to learning media

Aspect	Percentage	Criteria
Appearance	91.6%	Very practical
Content	88.5%	Very practical
Ease of use	88.5%	Very practical
Average	89.5%	Very practical

Source: primary data, processed

The results in Table 3 show that students responded very positively to the learning media, with an average score of 89.5%. The display aspect received the highest score (91.6%), while the interactivity and usability aspects each received scores of 88.5%. These results indicate that the media is capable of creating an engaging learning

experience, is easy to use, and increases student participation during the learning process. Comparing the teacher assessment results (93.6%) and student responses (89.5%) consistently indicates that the developed media falls into the very practical category. The agreement between the assessments from both user groups confirms that the Canva-based Family 100 quiz has a high level of practicality and is suitable for implementation in social studies learning.

Evaluation stage

The evaluation phase was conducted after the implementation process to identify the media's strengths and limitations as a basis for product refinement. The evaluation results showed several advantages of the media. First, it increased student engagement through games involving all group members. Second, the competitive element in the quizzes increased student motivation and interest in learning. Third, the engaging visual design, animation, and sound effects created a more enjoyable learning environment. Furthermore, the media fostered communication and collaboration among students, fostered understanding of financial literacy concepts, was easily developed using canva, and could be applied to both face-to-face and technology-based learning.

On the other hand, this study also identified several limitations. The use of media requires supporting devices such as laptops and projectors, so its implementation depends on the availability of school facilities. Game activities also have the potential to increase classroom dynamics, requiring teachers to implement good classroom management. Furthermore, some groups still found students who tended to be passive and dependent on other group members. However, these limitations can be minimized through group role allocation and teacher support throughout the learning process.

Discussion

The development of game-based learning media in this study demonstrates that digital media innovation serves not only as a tool for delivering material but also as a means to build more meaningful learning experiences. In the context of social studies learning, learning media plays a strategic role because the material studied emphasizes not only conceptual mastery but also the ability to analyze social phenomena, make decisions, and solve problems related to everyday life (Daryanes et al., 2023; Ridwan et al., 2025). Therefore, the development of media that can connect academic concepts with contextual learning activities is a crucial need in the implementation of 21st-century learning.

Theoretically, the findings of this study can be explained through a constructivist perspective, which views knowledge as actively constructed by students through interactions with the learning environment. In the constructivist perspective, teachers no longer act as the sole source of information, but rather as facilitators who provide learning experiences that enable students to construct their own understanding (Putri et al., 2024; Shakeela & Vijayalakshmi, 2023). The family 100 quiz media provides space for students to discuss, put forward arguments, test their understanding, and reflect on answers with their group members. These activities demonstrate that the learning process occurs through social interaction and negotiation of meaning, making learning more meaningful than one-way delivery of material.

The principle of constructivism also explains that effective learning occurs when students are given the opportunity to connect new knowledge with prior experiences (Le & Nguyen, 2024). In financial literacy, this approach is particularly relevant because concepts such as needs, wants, money management, and economic decision-making are

part of students' daily lives. When these concepts are packaged in a game that presents a realistic situation, students not only retain information but also build conceptual understanding based on the learning experiences they experience during the game.

From a game-based learning perspective, media effectiveness can be understood through the presence of game elements (game mechanics) that can increase students' intrinsic motivation (Ishak et al., 2023). Game-based learning theory explains that challenges, competition, rewards, game rules, and feedback are components that can create a more engaging learning experience than conventional learning (Thesen et al., 2023). These elements serve not only as entertainment but also as stimuli that encourage students to engage cognitively and socially in solving each learning challenge. Thus, games function as learning vehicles, not simply recreational activities.

This interpretation aligns with the results of a systematic study by Susaniari & Santosa (2024), which showed that game-based learning contributes to increased learning motivation, student engagement, and the quality of the learning experience. Susaniari & Santosa (2024) emphasized that learning activities utilizing game mechanics can increase intrinsic motivation because students are encouraged to achieve learning goals through the challenges presented. In the context of this research, the integration of the family 100 model with financial literacy materials demonstrates that the competitive element can be directed to support the achievement of learning goals, not simply to increase enjoyment during the learning process.

The results of this study also support the findings of Jun & Lucas (2024), who explained that a game-based learning approach improves the quality of interactions in learning. These interactions occur not only between students and the media, but also between students and teachers, between students, and between students and the material being studied. From a social studies learning perspective, the quality of these interactions is crucial because social learning requires communication, argumentation, collaboration, and shared decision-making. Therefore, game-based media has great potential to support the achievement of 21st-century competencies, particularly critical thinking, communication, collaboration, and creativity.

From a digital media development perspective, this research expands the use of Canva, which has been primarily used as a presentation design platform or visual media. Research by Sugiarni et al. (2024); Rahayu & Ansori (2025); Wulandari & Utama (2025) shows that canva is effective in improving the quality of learning displays through more engaging presentations. However, most of these studies still position canva as a tool for media design, rather than as an interactive learning environment. This research demonstrates that canva's features can be utilized more optimally to build game-based learning experiences, expanding canva's function from simply a design application to an interactive learning medium.

Another contribution of this research lies in the integration of digital media with a game-based learning approach in financial literacy. Previously, canva-based media development and game-based learning research were generally conducted separately. Canva was primarily used as a presentation medium, while educational games were developed using specialized applications that required more advanced technical skills. This research demonstrates that integrating these two approaches can be achieved through a platform easily accessible to teachers, making learning innovations more realistic for implementation in schools with limited resources.

The development of media for financial literacy materials also has broader implications for strengthening life skills. Financial literacy is a skill that relates not only to understanding economic concepts but also to the ability to make rational decisions in

everyday life (Bai, 2023). Therefore, presenting material through games allows students to learn financial concepts in more contextual situations, allowing them to connect the learning material to real-life experiences. This approach aligns with the characteristics of social studies learning, which emphasizes the connection between academic concepts and social reality.

From an instructional design perspective, the use of the ADDIE model in this study demonstrates that the success of a medium is determined not only by the quality of the final product but also by the quality of its development process. The stages of needs analysis, design, development, implementation, and evaluation allow every design decision to be based on the actual needs of users. This approach aligns with Branch's (2009) view that instructional media development must be carried out systematically so that the resulting product truly aligns with the characteristics of students, learning objectives, and the context of its implementation. Thus, a systematic development process is an important factor supporting media acceptance in the school environment.

Compared with previous research, this study offers conceptual and methodological contributions. Conceptually, this study expands the study of the integration of constructivism and game-based learning theories in the development of canva-based learning media. Methodologically, this study places needs analysis and forum group discussions as the foundation of the media development process, ensuring that the resulting product not only meets technical requirements but also meets user needs. This approach is still relatively rare in learning media development research, which generally focuses more on testing product effectiveness than on the development process.

Conclusions

This research successfully developed a learning media in the form of a canva-based family 100 quiz for financial literacy material in social studies subjects in junior high schools using the ADDIE development model. The development process, which began with needs analysis, focus group discussions (FGDs), design, development, implementation, and evaluation, resulted in learning media that suited the characteristics of students and the needs of teachers. The results of expert validation and practicality tests showed that the developed media met the criteria for feasibility and were highly practical for use in learning. These findings indicate that the integration of canva with a game-based learning approach can provide a more interactive, collaborative, and student-centered learning experience, thus potentially supporting social studies learning, particularly in financial literacy material.

This research contributes both theoretically and practically. Theoretically, this research enriches the study of the integration of constructivist theory and game-based learning in the development of canva-based digital learning media. Furthermore, this research offers a media development approach that starts from user needs analysis through observation and FGDs, resulting in a more contextual product compared to media development that is solely oriented towards technical aspects. Practically, the canva-based Family 100 quiz media can be an alternative for social studies teachers in creating more engaging, interactive, and easy-to-implement learning because it utilizes an easily accessible platform. Thus, this research contributes to the development of digital learning innovations that support the implementation of 21st-century learning.

However, this study has several limitations. The media implementation was conducted in a single school with a limited number of subjects, so the research findings cannot be generalized to a broader context. Furthermore, this study focused on the

development, validity, and practicality of the media, thus not comprehensively testing the media's influence on improving student learning outcomes, critical thinking skills, or financial literacy. Therefore, further research is recommended to involve a more diverse sample, implement an experimental design to test the media's effectiveness on various learning outcomes, and develop more adaptive interactive features, such as providing automatic feedback, integration with digital learning platforms, or implementing more comprehensive gamification elements to ensure the media has broader benefits in social studies learning and other subjects.

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