



From local economy to classroom: a contextual snakes and ladders learning media

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ABSTRACT

Purpose: to develop and evaluate the practicality and effectiveness of a context-based snakes and ladders learning media integrating Jombang regency's local economic potential for teaching economic activities to seventh-grade junior high school students.

Method: this study employed a research and development (R&D) approach using the ADDIE model. The media was evaluated through focus group discussions with 5 social studies teachers and classroom implementation involving 32 seventh-grade students. Data were collected using questionnaires and observations and analyzed descriptively.

Findings: the developed learning media was highly practical, with practicality scores of 88.75% from social studies teachers, 90.63% from the classroom teacher, and 93.46% from students. It also demonstrated high effectiveness, achieving 87.50% student engagement and an 89.06% positive student response during classroom implementation.

Implications: context-based Snakes and ladders learning media can serve as an effective and practical alternative for enhancing students' engagement and contextual understanding of economic activities in social studies learning.

Originality: lies in integrating the local economic potential of Jombang Regency into a context-based snakes-and-ladders learning media for social studies.



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Introduction

Indonesia's economic development exhibits increasingly complex dynamics, with the strengthening of the domestic sector and the growth of the creative economy across various regions (Dellyana et al., 2023). National economic growth is determined not only by macroeconomic activity but also by the quality of the public's understanding of economic concepts, which is developed from school age (Oktafia & Fitrayati, 2024; Zahira et al., 2024). Therefore, education plays a strategic role as a vehicle for developing economic literacy, capable of producing a generation that can think

rationally when making economic decisions. Good economic literacy is a crucial foundation for developing productive and competitive human resources, ultimately contributing to national economic development (Kokkinopoulou et al., 2026; Nugraheni & Sudarwati, 2021).

At the junior high school level, economic literacy development is integrated into social studies subjects, specifically through material on economic activities, which include production, distribution, and consumption. This material requires students not only to understand conceptual definitions but also to identify and analyze various economic activities occurring in their environment (Dziubaniuk et al., 2023). Therefore, social studies learning should connect economic concepts to everyday realities so that learning is meaningful and does not stop at rote memorization. However, a phenomenon still frequently encountered in schools is that learning about economic activities is often delivered theoretically through textbooks and lectures. This condition makes abstract economic concepts difficult for early adolescent students to grasp. As a result, students spend more time memorizing terms than understanding the relationships between concepts or their real-life applications. According to Sudarwati (2023), the use of appropriate learning media plays a crucial role in transforming abstract concepts into more concrete concepts through engaging visualizations, thereby increasing students' attention, motivation, and active participation during the learning process.

This phenomenon is also found in social studies learning at SMP Negeri 1 Jombang. Adequate digital learning facilities, such as projectors and a stable internet connection, are available at this school. However, the use of social studies learning media is still dominated by general digital media that have not integrated local potential as a learning resource. Learning about economic activities still relies on textbook examples, so the connection between economic concepts and real-world economic activities in students' environments is not fully utilized. However, strengthening the local context can help students understand how production, distribution, and consumption activities occur in the lives of local communities.

Jombang regency has a diverse and relevant local economic potential as a source for contextual learning. Various economic activities thrive in this region, including the Wonosalam durian center as an agribusiness sector, the bead craft industry in Gudo district that has penetrated the international market, tobacco farming in Kabuh district, and the development of the Brantas Market tourist village as a form of community economic empowerment (BPS Jombang, 2024; Kominfo Jombang, 2023). This potential represents concrete production, distribution, and consumption activities that are very close to students' lives. However, this local economic wealth has not been widely integrated into social studies learning media, so the opportunity to provide contextual learning has not been optimally utilized (Mansyur et al., 2025).

Previous research has developed a snakes and ladders game as a learning tool. Oktafia & Fitrayati (2024); Sari & Afdal (2025) developed a gamified version of snakes and ladders for economics and demonstrated its ability to increase students' motivation to learn. Nurussofa & Astuti (2023) also developed a snakes and ladders game for elementary school mathematics, which was shown to increase motivation to learn. Furthermore, Septiana & Widodo (2025) developed a genially-based digital snakes-and-ladders game on cultural diversity. Rohmah et al. (2022) integrated Jombang local wisdom into social studies teaching materials based on a contextual approach. However, these studies still have several limitations. The snakes and ladders media development carried out has not integrated local economic potential as the main learning content, and research on integrating local wisdom has not been implemented through interactive

educational games. Thus, there is still a research gap regarding the unavailability of snakes and ladders learning media based on a contextual approach that highlights local economic activities in Jombang Regency as a learning resource for grade VII junior high school students.

This research introduces a novel approach by developing a snakes and ladders learning media based on a contextual approach that utilizes the local economic potential of Jombang Regency as the main substance of the game. Each component of the game is designed to present real-life examples of production, distribution, and consumption activities from students' surroundings, so that learning is not only enjoyable but also provides an authentic and meaningful experience. Thus, the developed media serves not only as an educational game but also as a means of connecting economic concepts to the socio-economic realities of the students' environment. The development of this media is based on two main theoretical foundations. First, Jean Piaget's theory of cognitive development posits that junior high school students are in a transitional stage from concrete to formal operations and therefore still require concrete visualizations to understand abstract concepts (Nurussofa & Astuti, 2023). The snakes and ladders game serves as a concrete medium that facilitates the assimilation and accommodation of economic activity concepts. Second, this research uses a contextual teaching and learning (CTL) approach, which emphasizes that learning is more meaningful when students can connect academic material to real-life experiences (Septiana & Widodo, 2025). Through the application of CTL principles, local economic activities in Jombang regency serve as a learning context that enables students to build knowledge grounded in experiences of their immediate environment.

The purpose of this research is to develop a snakes and ladders learning media based on a contextual approach for the economic activities of grade VII junior high school students, to test the validity of the developed media, and to produce learning media suitable for use in the social studies learning process. The media development was carried out using the ADDIE model (Branch, 2009), with a focus on the theoretical validation stage, as recommended in research on the development of learning media. The media's validity was then assessed by experts using validation procedures in accordance with development research (Hardiansyah & Mulyadi, 2022). This research is important because it provides an alternative social studies learning medium that integrates a contextual approach with local economic potential, thereby bringing economic concepts closer to students' real lives. In addition to strengthening the implementation of contextual learning, this research supports the preservation of regional economic potential by integrating it into education. The contribution of this research is expected not only to produce valid and suitable learning media but also to enrich studies on the development of game-based media that utilize local potential as a learning resource. For teachers, this media can be an innovation in social studies learning that is more interesting, interactive, and meaningful, while for students, it is hoped that they will be able to improve their understanding of economic activities through learning experiences that are closer to their socio-economic environment.

Method

This research and development (R&D) project aims to produce a snakes and ladders learning media based on a contextual approach to economic activity for seventh-grade junior high school students. The media development was conducted using the ADDIE (analysis, design, development, implementation, and evaluation) model, as described by Branch (2009). This model was chosen because it provides systematic

development stages and allows for formative evaluation at each phase so that product quality can be gradually refined before being implemented to users (Branch, 2009; Dziubaniuk et al., 2023).

The analysis stage was conducted through curriculum analysis, student characteristics, learning needs, and the identification of local economic potential in Jombang regency relevant to the economic activity material. The design stage included the preparation of media designs in the form of game board designs, challenge cards, game rules, learning indicators, and the integration of local economic potential into each media component. Next, in the development stage, the media design was realized into an initial product that was reviewed through a focus group discussion (FGD) with social studies teachers who were members of the Jombang regency subject teachers' conference (MGMP) to obtain input on the suitability of the material, visual appearance, and ease of use of the media.

The implementation phase was conducted in stages through one-to-one, small-group, and field trials, as recommended in development research (P. K. Sari & Qonita, 2024). The individual trials involved three students to identify language readability, visual comfort, and initial technical challenges. The small-group trials involved 9 students to evaluate the clarity of the game rules, player interactions, and the function of each media component. Furthermore, a field trial was conducted in a seventh-grade class consisting of 32 students to test the operational practicality and effectiveness of the media in social studies learning. The evaluation phase was carried out continuously throughout each development phase by analyzing trial results, user feedback, and product reflections to obtain learning media suitable for use.

The research was conducted at SMP Negeri 1 Jombang, Jombang regency, East Java province. The selection of the research location was based on initial observations showing that the school had adequate digital learning facilities, such as projectors and internet connections. However, social studies learning about economic activities was still dominated by textbooks and verbal delivery of concepts, resulting in students having difficulty connecting the material to real-world conditions in their surroundings. In fact, Jombang regency has a variety of local economic potential that can be utilized as contextual learning resources, including the Wonosalam durian center, the bead craft industry in Gudo district, tobacco farming in Kabuh district, and the Brantas market tourist village as a form of community economic empowerment (BPS Jombang, 2024; Kominfo Jombang, 2023). These potentials were integrated into learning media to make the concepts of production, distribution, and consumption easier to understand through examples close to students' lives (Rohmah et al., 2022).

The research participants were determined using a purposive sampling technique. Participants consisted of five social studies teachers, members of the Jombang regency MGMP, who had at least five years of teaching experience, held professional teacher certificates, and had a minimum educational background of a Bachelor's degree in social studies education or economics education. This group provided input on the initial media design through FGDs. In addition, the study involved a social studies teacher as an independent observer tasked with monitoring student engagement during learning to minimize subjectivity in assessments. The researcher served as the teacher, implementing the media in the learning process, while the field trial subjects comprised 32 seventh-grade students at SMP Negeri 1 Jombang.

Data collection was conducted using several non-test techniques to assess the practicality and effectiveness of the learning media. In the development stage, data were obtained through focus group discussions (FGDs) with MGMP social studies teachers in

Jombang Regency. Discussions focused on assessing the suitability of the economic activity material, integration of local economic potential, the visual appearance of the media, the readability of the game cards, and the ease of implementing the media in learning (Istianah & Putra, 2025). Input from FGD participants was documented in the form of evaluation sheets and discussion transcripts as the basis for product revisions.

After the media was revised, operational practicality data were collected using a teacher-and-student response questionnaire structured on a four-level Likert scale. The questionnaire was used to measure the media's ease of use, clarity of game rules, readability of the material, quality of visual displays, and usefulness in supporting the learning process. Furthermore, the media's effectiveness was measured through a student engagement observation sheet completed by an independent observer during the learning process. Aspects observed included students' visual, verbal, mental, and kinesthetic engagement during the game. To complement the observation data, students were also asked to complete a post-learning response questionnaire to assess their perceptions of interest, learning motivation, ease of understanding the material, and understanding of local economic potential gained through the media.

The data obtained were analyzed quantitatively and qualitatively. Quantitative data, in the form of media practicality assessments from MGMP teachers, user teachers, and students, were analyzed using descriptive statistics with a percentage formula, as follows:

$$\text{Practicality presentation} = \frac{\sum \text{scores obtained}}{\sum \text{maximum score}} \times 100\%$$

The calculation results were then converted into practicality categories based on criteria adapted from Setyosari (2020), namely 81–100% (very practical), 61–80% (practical), 41–60% (less practical), and $\leq 40\%$ (not practical). Media effectiveness was analyzed based on the percentage of active student involvement during learning using the formula:

$$\text{Class engagement percentage} = \frac{\sum \text{average engagement score}}{\sum \text{maximum indicator score}} \times 100\%$$

Media is declared effective if the average active student engagement is at least 70% or the media falls into the active category. Qualitative data obtained from FGD results, observer notes, and researcher reflections were analyzed using the interactive analysis model of Miles et al. (2014), which includes data reduction, data presentation, and conclusion drawing. The results of the qualitative analysis were used to refine the media, resulting in a final product that meets the needs of social studies learning on economic activities in seventh-grade junior high school.

Results and discussion

The development of a snakes and ladders learning media based on a contextual approach for the economic activities of seventh-grade junior high school students was carried out using the ADDIE development model (analysis, design, development, implementation, and evaluation). This model was chosen because it provides a systematic set of development stages, from needs identification to product evaluation, ensuring that the resulting media aligns with students' characteristics and learning

needs. In this study, each stage produces interrelated outcomes that serve as the basis for subsequent stages of development.

The analysis phase was conducted to identify media development needs through curriculum analysis, student characteristics, and an assessment of the learning environment's potential. The results of the curriculum analysis indicate that the economic activities material in the 7th-grade Social Studies subject of the Merdeka curriculum not only emphasizes conceptual mastery of production, distribution, and consumption but also requires students to connect these concepts to economic activities in their environment. Thus, the learning process is expected to provide contextual learning experiences so that students can understand the connection between the material being studied and real life.

An analysis of student characteristics was conducted for 32 seventh-grade students at SMP Negeri 1 Jombang. Based on initial observations, students are in the 12–13 year age range, which is the transitional period from the concrete operational stage to the formal operational stage. At this developmental stage, students still require visual aids and concrete learning activities to understand abstract concepts. In addition, students showed a high interest in game-based learning, tend to learn visually and kinesthetically, and find it easier to maintain attention when learning is packaged interactively than when using conventional lecture methods. The results of the learning environment analysis indicate that SMP Negeri 1 Jombang has adequate learning support facilities, such as LCD projectors and a stable internet connection. However, the use of these facilities has not been optimized for developing social studies learning media that integrate the local context. Learning about economic activities is still dominated by textbooks, so the examples tend to be general and do not reflect economic activities that are close to students' lives.

On the other hand, Jombang regency has various local economic potentials that can be used as contextual learning resources, including the durian agribusiness center in Wonosalam district, the bead craft industry in Gudo district, tobacco farming in Kabuh district, and the development of the Brantas market tourist village as a form of community economic empowerment. These various potentials represent production, distribution, and consumption activities that can be used as real-life examples in social studies learning. Therefore, the results of the needs analysis indicate the need to develop learning media that integrate local economic potential into economic activity materials, making learning more contextual, interesting, and meaningful for students.

The findings from the analysis phase served as the basis for developing the learning media design in the next phase. Media development aimed to provide a learning experience that not only emphasized cognitive aspects but also encouraged active student involvement through play, discussion, and problem-solving activities based on economic phenomena in Jombang Regency. Based on the results of the needs analysis, the next phase was the design phase, which aimed to develop a blueprint for the learning media before producing a real product. The design phase began with developing the basic concept for the snakes and ladders game, tailored to the learning outcomes of the economic activities material. The game board was designed as a 10 × 10 matrix, consisting of 100 squares, with the starting position in the first square and the finish line in the 100th square. Various components were added to the game board, including ladders, snakes, a "Take a Question" box, and several challenge boxes designed to increase student engagement and enthusiasm during learning.

In addition to designing the game board, this stage developed a game mechanism that enables collaborative learning. Students were divided into groups of four. Each

group used a pawn to mark its position on the game board, while moves were determined by rolling a die. If the group whose turn it was could not answer the question on the card, another group was allowed to answer, fostering healthy interaction, discussion, and competition throughout the learning process. This mechanism was designed to encourage participation by all students, not just the group currently playing.

The design phase also produced a grid of question cards arranged by indicators of economic activity, including production, distribution, and consumption. Each question was developed by highlighting examples of Jombang regency's economic potential, so that students would encounter situations close to their daily lives. In addition to the question cards, challenge cards were designed to include physical, social, and character-building activities adapted to the school culture. The combination of game elements, contextual questions, and challenge activities is expected to create a more active and enjoyable learning atmosphere and support the optimal achievement of social studies learning objectives. The results of the design phase, in the form of a media blueprint, then served as a reference in the development phase, namely the process of translating the entire conceptual design into a snakes and ladders learning media product based on a contextual approach, ready for validation and testing.

The development stage is the process of translating the conceptual design from the previous stage into a learning media product ready for use in learning. At this stage, all media components are developed in an integrated manner, including the snakes-and-ladders game board, question cards, game dice, and other supporting materials. Media development was carried out using the canva graphic design platform to produce an attractive, easy-to-modify visual display that aligns with the characteristics of seventh-grade students. The game board was designed digitally using a basic snakes-and-ladders template and then modified to suit the needs of social studies learning. Modifications were made by adjusting the media identity, the layout of the game boxes, the placement of the ladders and snakes, and by inserting "take a question" and "challenge" boxes in several game squares. In addition, each visual element was adapted to the theme of economic activities so that the media functions not only as a game but also as a means of delivering learning materials in a contextualized manner.

Next, a set of question cards on production, distribution, and consumption activities was developed, highlighting the various local economic potentials of Jombang Regency as the primary learning context. The questions were structured based on learning indicators, ensuring that each question not only measured conceptual understanding but also encouraged students to connect the material to economic phenomena in their environment. The media products were then exported as PNGs for a digital game board displayed on a classroom projector, while the question cards were printed as PDFs for immediate use during the game. The media products produced during the development stage consisted of a digital game board, contextual question cards, and dummy dice as supporting media. The developed products are shown in Figures 1, 2, and 3.

Figure 1 shows the final layout of the contextual approach-based snakes and ladders game board, consisting of 100 game tiles. In addition to snakes and ladders as the game's main features, the board includes a "take a question" box and several "challenge" boxes to increase student interaction, participation, and motivation during learning. Figure 2 shows that the question cards are structured based on economic activity, covering production, distribution, and consumption. Each question is linked to a developing economic activity in Jombang Regency, providing students with a more

contextual learning experience. The illustrations on each card are also tailored to the question's content to help students understand the context of the problem.

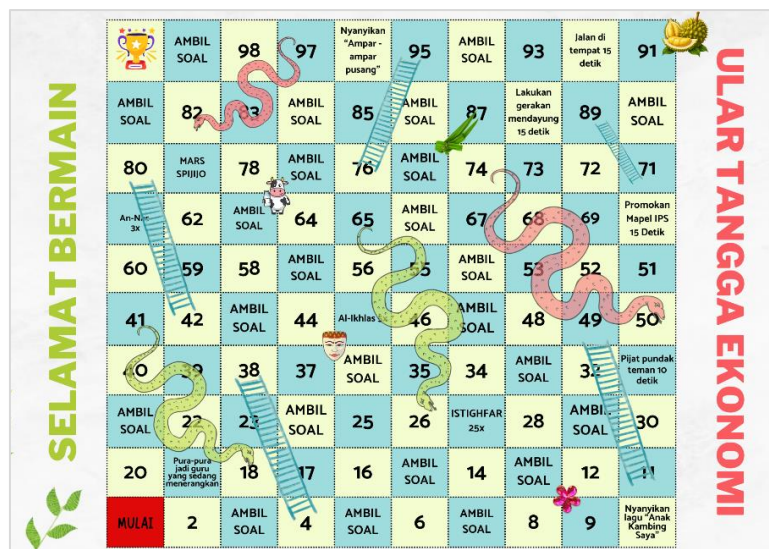


Figure 1 snakes and ladders game board



Figure 2 question cards



Figure 3 doll dice

Figure 3 shows that, as a complement to the game, the media includes flannel doll dice used to determine the number of pawn moves on the game board. The use of soft dice was chosen to increase safety and comfort and to provide a more engaging learning experience through direct play activities. After the initial product was developed, the media was evaluated through an FGD with five social studies teachers who are members of the MGMP in Jombang regency. This activity aimed to gather input on aspects of content, language, visual appearance, and the mechanism of media use before implementation with students. The assessment was carried out using eight indicators, including material suitability, contextuality, language readability, design aesthetics, and ease of use of the media.

The assessment results show that the total score from the five teachers was 142 out of a maximum of 160, so the percentage of the media's initial practicality was calculated as follows.

$$\text{Initial practical presentation} = \frac{142}{160} \times 100\% = 88.75\%$$

An 88.75% score indicates that the learning media falls into the very practical category. These results indicate that, conceptually, the media meets the criteria of ease of use, suitability of the material to learning outcomes, and integration of the concept of economic activity with the local economic potential of Jombang Regency. Therefore, the media is deemed suitable for implementation following refinement based on practitioners' input. In addition to providing quantitative assessments, teachers also provided various inputs that served as the basis for product refinement. The results of the FGD data reduction and follow-up media revisions are presented in Table 1.

Table 1 matrix of results of FGD data reduction stage 1 and media revision actions

Main code	Excerpt from FGD transcript	Corrective action
Visual revisions	<i>"The visual images on the question cards are not appropriate, for example, in the question about agriculture in Megaluh, the image used is a picture of a durian" (MGMP 3 Teacher)</i>	Replace all image elements on the question card to align with the question's content.
Language revisions	<i>"The questions on cards 3, 4, and 5 are still general (e.g., porter, welder, doctor/teacher). The language should be adjusted to include local Jombang subjects, such as porters at the Djombang Baru Sugar Factory or bamboo weavers in Ngoro." (MGMP 4 Teacher)</i>	Changing the draft sentence of the question card with the theme of unskilled laborers becoming sugar cane porters at the Djombang Baru Sugar Factory, skilled laborers becoming Ngoro besek weavers, and educated laborers becoming teachers at SMPN 1 Jombang.
Rules revisions	<i>"The rules for who goes to the front of the class must be clarified, whether every member of the group goes to the front of the class or only a representative, and also clarify what the treatment will be if a group cannot answer the questions on the question card." (MGMP 1 Teacher)</i>	Adding written instructions to the In-Depth Learning Plan that each group member must come to the front of the class; if the group at the front cannot answer the question on the question card, the other groups compete to answer.

Source: primary data, processed

Based on Table 1, the input provided by the MGMP social studies teachers can be grouped into three main aspects: visual, language, and game rules. In terms of visuals, the teacher recommended adjusting the illustrations on the question cards to align with

the questions and avoid misconceptions. Following up on this input, the researcher replaced all images that did not align with the questions' context with illustrations that more accurately depicted local economic activities. In terms of language, the teacher noted that several questions still used generic job examples that did not reflect the local characteristics of Jombang regency. Therefore, the question wording was revised to include examples of jobs closer to students' lives, such as porters at the Djombang Baru Sugar Factory, besek weavers in Ngoro district, and teachers at SMP Negeri 1 Jombang. These changes are expected to strengthen the implementation of the contextual approach in learning.

Furthermore, regarding the game rules, the teacher suggested that the substitution mechanism and the procedure for answering questions be explained in more detail to ensure all students have an equal opportunity to participate in the game. Based on this input, the researcher refined the instructions for using the media by clarifying the game flow, the mechanism for substituting group members, and the procedure for giving other groups opportunities if the group whose turn it is cannot answer the questions. All of these revisions resulted in a learning media product that is more suited to user needs, both in terms of material, visual appearance, and game mechanics. The refined product was then used in the implementation stage to assess the operational practicality and effectiveness of the media for social studies learning in grade VII at SMP Negeri 1 Jombang.

The implementation stage involves applying the snakes and ladders learning media using a contextual approach to real classroom conditions. This stage aims to determine the quality of the media after undergoing development and revision, based on the results of the initial evaluation by practicing teachers of the social studies MGMP Jombang regency. The implementation was carried out during social studies lessons on economic activities in class VII at SMP Negeri 1 Jombang, with a total of 32 students. At this stage, the researcher acted as a supervising teacher, leading learning using contextual snakes-and-ladders media, while another social studies teacher observed the learning activities as an independent observer.

The learning process begins with an introduction to the media, including an explanation of the learning objectives, game rules, and the mechanics of using the snakes and ladders board, question cards, and dice. Students are then divided into small groups to collaboratively play the media. Each group follows the flow of the game by determining their moves based on the outcome of the dice roll, then answering question cards related to economic activity. If the group whose turn it is cannot answer a question, another group may answer. This mechanism fosters interaction among students through discussions, the expression of opinions, and problem-solving together.

The implementation results showed that the use of snakes-and-ladders media based on a contextual approach created a more active learning atmosphere than conventional learning. Students appeared more enthusiastic about participating in learning activities because abstract economic concepts were previously presented through play activities that incorporated visual, kinesthetic, and collaborative elements. Furthermore, using examples from the local economy of Jombang regency on the question cards helped students understand the relationship between production, distribution, and consumption of materials and the economic activities they encounter in their daily lives.

The operational practicality of the media during the implementation phase was assessed based on two data sources: teacher responses as media users and student responses as end users. Teacher assessments were conducted using a practicality

questionnaire that covered ease of use, clarity of game rules, suitability of the media for learning objectives, and the efficiency of learning implementation with contextual snakes and ladders media. Based on the results of the practicality questionnaire completed by the teacher, a score of 29 was obtained out of a maximum score of 32. The percentage of media practicality according to the teacher was calculated using the following formula.

$$\text{Presentation of teacher practicality} = \frac{29}{32} \times 100\% = 90.63\%$$

The calculation results show that the level of media practicality, based on teacher assessment, reached 90.63%, placing it in the very practical category. This indicates that the media can be used easily in the learning process without requiring special technical skills. Teachers also assessed that the game rules were easy to understand, that the flow of media use could be adjusted to the learning time, and that the game components could support the achievement of social studies learning objectives. In addition to teacher assessments, the practicality of the media was analyzed based on student responses after participating in learning with the contextual snakes and ladders media. The student response questionnaire consisted of several indicators, including ease of understanding the game rules, readability of the question cards, interest in the media design, comfort of using game components, and the benefits of the media in helping to understand the material on economic activities.

The results from the questionnaire completed by 32 students showed a total score of 957, compared with an ideal maximum of 1024. The percentage of media practicality, based on student responses, was calculated as follows:

$$\text{Student practical presentation} = \frac{957}{1024} \times 100\% = 93.46\%$$

Based on these results, the media achieved a practicality rating of 93.46% and was categorized as very practical. The high level of positive student responses indicated that the media was easy to use, visually appealing, and capable of providing a different learning experience compared to textbook-based learning. Students also stated that using local economic examples made the material on economic activities easier to understand because it was directly related to their surroundings. In addition to measuring practicality, the implementation phase was conducted to determine the media's effectiveness through observations of students' active engagement during the learning process. Media effectiveness was analyzed based on student learning activities observed by the observer teacher, using an engagement observation sheet covering visual, mental, verbal, and kinesthetic aspects.

The observation results show that the student's active engagement score reached 28 out of a maximum score of 32. The percentage of active engagement was calculated using the following formula.

$$\text{Class engagement percentage} = \frac{28}{32} \times 100\% = 87.5\%$$

The engagement percentage of 87.50% indicates that the snakes and ladders learning media based on a contextual approach is in the very effective category. During

the learning process, students showed high engagement through activities such as reading question cards, discussing in groups, answering questions, paying attention to the game, and participating in physical activities using dice and game pawns. The effectiveness of the media was also strengthened through the results of the student engagement response questionnaire after the learning process was completed. This questionnaire aims to assess students' level of interest, motivation, and learning experience after using the media. Based on the results of the questionnaire completed by 32 students, a total score of 912 was obtained out of a maximum score of 1024. The percentage of student engagement responses was calculated as follows.

$$\text{Engagement response percentage} = \frac{912}{1024} \times 100\% = 89\%$$

The results showed that student engagement reached 89.06%, categorized as very high. Students responded positively because learning through the snakes and ladders game made the economic activity material more interesting, easier to understand, and not only oriented towards memorizing concepts. The integration of Jombang's local economic potential into the media also helped students understand that the economic concepts learned in class are directly related to community activities in their environment. Based on the overall results of the implementation phase, the snakes-and-ladders learning media based on a contextual approach demonstrated very good quality. The media achieved a practicality level of 90.63% based on teacher assessments, 93.46% based on student responses, and 87.50% for learning effectiveness based on active student involvement. These findings indicate that the media can be an alternative to social studies learning that is practical, engaging, and effective at increasing student engagement with economic activity material more contextually.

The evaluation stage is the final stage in developing a snakes and ladders learning media based on a contextual approach for the economic activities material for class VII at SMP Negeri 1 Jombang. This stage aims to obtain a comprehensive picture of product quality based on all data collected during the development process, including needs analysis, product development, initial practicality testing, and classroom implementation. The evaluation is carried out both formatively and summatively to ensure that the developed media meets the criteria of practicality, implementation, and effectiveness as a social studies learning medium.

Formative evaluation is conducted continuously at each stage of development. At the analysis stage, evaluation is conducted by reviewing the suitability of learning needs, student characteristics, and school environmental conditions as the basis for media development. The evaluation results indicate that the primary need in teaching economic activities is not only the theoretical delivery of concepts but also the provision of media that connect learning materials to real-life economic activities around students. These findings form the basis for developing the snakes and ladders media, which integrates the local economic potential of Jombang Regency as a contextual learning resource.

During the development phase, a formative evaluation was conducted through a FGD with five social studies teachers from the Jombang regency social studies MGMP. The evaluation results indicated that the media had an excellent initial practicality rating of 88.75%. However, the practicing teachers offered several suggestions to improve the product's quality. These improvements included adjusting the illustrations on the question cards to reflect the questions' content better, refining the wording of the

questions to reflect Jombang's local economic activities better, and explaining the game rules to make the implementation mechanism easier for teachers and students to understand.

The revisions based on FGD input resulted in more representative learning media, both in terms of visual appearance and pedagogical aspects. Adapting the local context to the question cards enabled the media to function not only as a game but also as a means of introducing students to the region's economic potential. Thus, the formative evaluation process played a crucial role in ensuring that the final product had a strong connection between the social studies material, student characteristics, and the socioeconomic environment in which they lived. Furthermore, a summative evaluation was conducted after the implementation phase by analyzing the overall research data. This evaluation was conducted by combining the results of teacher practicality assessments, student responses, observations of learning engagement, and student responses to the learning experience using the media. A summary of the product evaluation results is presented in Table 2.

Table 2 recapitulation of the results of the evaluation of the snakes and ladders learning media

Evaluation aspects	Data source	Percentage	Category
Initial practicality	MGMP social studies teachers in Jombang regency	88.75%	Very practical
Operational practicality	Social studies teachers	90.63%	Very practical
Operational practicality	Grade VII students	93.46%	Very practical
Media effectiveness	Student engagement observations	87.50%	Very effective
Student engagement response	Student response questionnaire	89.06%	Very high

Source: primary data, processed

Based on Table 2, all evaluation indicators fall into the high category. The initial practicality level, based on the MGMP teacher assessment, was 88.75%, indicating that the media was appropriately designed to meet learning needs. After implementation, the media's practicality was further strengthened through the teacher's assessment of 90.63% and student responses of 93.46%. This indicates that the media is easy to use, has clear game rules, and can be implemented in real-life classroom learning. The effectiveness evaluation results also show that the media can increase active student engagement during the learning process. An engagement percentage of 87.50% indicates that the snakes and ladders game can encourage student engagement visually, verbally, mentally, and kinesthetically. Students not only receive information from the teacher but also play an active role by answering questions, discussing, making decisions, and connecting economic concepts with local phenomena presented in the game.

The students' positive response to the media also indicates that the successfully implemented contextual approach created a more meaningful learning experience. The engagement response percentage of 89.06% indicates that most students felt that learning about economic activities became more interesting and easier to understand when linked to economic activities they were familiar with. The use of local contexts, such as agribusiness potential, creative industries, and the economic activities of the Jombang community, helped students understand that economic concepts are not only found in textbooks but also in everyday life. Based on all the evaluation results, it can be concluded that the snakes and ladders learning media based on a contextual approach has met the criteria as a practical and effective learning media for use in economic activities material for grade VII of junior high school. The developed media not only

provides an alternative to game-based learning but also integrates social studies material with local economic potential as a learning resource. Thus, the final product produced has pedagogical value in increasing student learning engagement while strengthening their understanding of the surrounding socio-economic environment.

Discussion

The results of the study indicate that the snakes and ladders learning media based on a contextual approach on the material of economic activities of class VII of SMP Negeri 1 Jombang has a very high level of practicality based on three assessment sources, namely the initial evaluation results of the MGMP social studies teachers of 88.75%, the operational practicality assessment by the in-charge teacher of 90.63%, and the response of students as end users of 93.46%. The consistency of the results at the three levels of evaluation indicates that the developed media is not only conceptually feasible but also easy to apply in real learning conditions. The high level of practicality is influenced by the media design that combines digital and physical elements (hybrid learning media), namely the use of a Canva-based visual game board displayed on a projector, along with concrete game components such as question cards, pawns, and die-shaped dice. This combination addresses the limitations of digital media, which sometimes require device readiness, technological skills, and more complex preparation time for teachers. This finding aligns with research by Ariessanti et al., (2020); Oktafia & Fitrayati (2024), which demonstrated that gamification-based snakes-and-ladders media can improve the quality of economics learning by presenting easy-to-use game elements and increasing motivation to learn. However, this study suggests further development by integrating local economic contexts to ensure that the media is not only engaging in gameplay but also relevant to students' social environments.

The high level of practicality also demonstrates that the developed media meets the principles of user-oriented instructional design (Sarianty et al., 2025). From a teacher's perspective, the contextual snakes and ladders media facilitates learning management due to its simple rules, clear activity flow, and the lack of advanced technological capabilities. Teachers can still act as learning facilitators without losing control over the achievement of instructional objectives. Meanwhile, from a student's perspective, the use of physical components such as question cards and game dice provides a more concrete learning experience and enhances sensorimotor engagement. This condition aligns with Piaget's view that students aged 12–13 are in a transitional phase of cognitive development from the concrete operational stage to the formal operational stage (Nurussofa & Astuti, 2023). In this phase, students still require concrete representations or direct experience as a link to understand abstract concepts independently. Thus, the snakes and ladders media functions as cognitive scaffolding that helps students build an understanding of the concepts of production, distribution, and consumption through structured play experiences.

In addition to practicality, the media's effectiveness is evident in the high level of active student involvement during the learning process (87.50%) and a positive student response after using the media (89.06%). These findings indicate that the contextual snakes-and-ladders game can shift the pattern of social studies learning from a potentially verbalistic approach to more interactive, student-centered learning. Game activities encourage students to engage in various forms of learning, from reading information on question cards and discussing with group members to presenting arguments and making decisions based on the given economic problems. This condition strengthens Sudarwati's (2023) view that learning media designed attractively can

reduce learning boredom and increase student attention and participation. In contrast to lecture-based learning, which tends to position students as passive recipients of information, game media provides space for students to experience the learning process through social activities, exploration, and problem-solving (Zubair et al., 2024).

The main advantage of this research lies in its use of a contextual approach that integrates the local economic potential of Jombang regency into the learning components. The 34 question cards developed not only contain conceptual questions about economic activities but also highlight real phenomena such as the Gudo glass bead industry, the sugarcane production activities of the Djombang Baru Sugar Factory, local crafts of Mojoagung, trading activities at Brantas Ngogri Market, and various other economic potentials of the Jombang community. This integration demonstrates the implementation of the principle of contextual teaching and learning (CTL), namely learning that connects academic knowledge with students' real-life experiences (Septiana & Widodo, 2025). Through this approach, students not only understand that production is the process of producing goods or services but also see how this concept is applied in the economic activities of the surrounding community. This finding supports the research by Rohmah et al. (2022); Ardiansyah et al. (2024); Yulia & Sutrisno (2024), which emphasized that integrating local wisdom into social studies teaching materials can increase the meaningfulness of learning because students learn through social and cultural environments close to their lives.

The effectiveness of the media is also inseparable from the application of the game-based learning concept, which can create a fun and meaningful learning experience (Velaora et al., 2022). Game elements such as pawn movement, drawing question cards, group challenges, and question-and-answer competitions provide stimuli that maintain students' attention throughout the learning process. The placement of challenge boxes in the form of physical activities, expressions, and character-strengthening activities, such as certain movements, reciting prayers, or activities related to school identity, serves as a variation of activities that maintain class dynamics. This strategy is relevant to the characteristics of generation alpha, who tend to prefer visual, interactive, and direct experience-based learning. The results of this study expand on the findings of Nurussofa & Astuti (2023), who demonstrated that the snakes and ladders game can increase motivation to learn and that game media can also be developed to support social studies learning based on local socioeconomic phenomena at the secondary school level.

Overall, the research results indicate that the contextual approach-based Snakes and Ladders learning media makes a significant contribution to social studies learning innovation by integrating three main aspects: learning technology, play experiences, and the local socioeconomic context. This medium not only serves as a tool for delivering material but also as a learning space that helps students understand the relationship between economic concepts and the realities of community life. Compared to previous studies that generally developed gamification-based snakes and ladders media without strengthening the regional context (Oktafia & Fitrayati, 2024) or still focused on general materials such as mathematics and culture (Nurussofa & Astuti, 2023; Septiana & Widodo, 2025), this research presents a novelty through the localization of Jombang regency's economic content as a social studies learning resource. Therefore, the contextual snakes and ladders media developed can be seen as an alternative, practical, effective, and relevant innovative teaching tool to support social studies learning based on the Independent Curriculum at the junior high school level.

Conclusions

This study successfully developed a snakes-and-ladders learning media based on a contextual approach to economic activity material for seventh-grade junior high school students, using the ADDIE development model. The results of the study indicate that the developed media has very good quality in terms of practicality and effectiveness. The practicality of the media is demonstrated by the results of the initial evaluation of MGMP social studies teachers (88.75%), the assessment of user teachers (90.63%), and student responses (93.46%), all of which fall in the very practical category. In addition, the media shows high effectiveness, with an active student involvement rate of 87.50% and student involvement responses of 89.06%. These findings indicate that integrating a contextual approach, grounded in the local economic potential of Jombang Regency, into game media can create more engaging, interactive, and meaningful social studies learning, helping students connect the concepts of production, distribution, and consumption to everyday realities.

This research provides theoretical and practical contributions to the development of social studies learning. Theoretically, the research results strengthen the application of contextual teaching and learning (CTL) principles and Piaget's theory of cognitive development in the development of game-based learning media that utilize local context as a learning resource. In practice, the developed media can serve as an alternative learning tool that is easy for teachers to implement to support the merdeka curriculum, while also introducing regional economic potential as part of the learning process. However, this research still has limitations because the media implementation was carried out in only one class at one school, with a limited number of participants, and measured effectiveness based on practicality and learning engagement, without directly comparing improvements in learning outcomes with classes using other learning methods.

Based on these limitations, further research is recommended to test the media across a wider range of schools and student characteristics to achieve greater generalizability. Future research could also employ an experimental design with a control group to compare the media's impact on learning outcomes, critical thinking skills, economic literacy, and student retention. Furthermore, media development could be directed toward digital or app-based versions that maintain a contextual approach by integrating local economic potential from various regions, allowing for greater flexibility and adaptability across social studies learning contexts.

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