



Development of a Guess the Picture Media Based on the Snakes and Ladders Game to Improve the Critical Thinking Skills of Fourth Grade Students

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ABSTRACT	ARTICLE INFO
<i>Low levels of critical thinking skills and the limited use of diverse learning media are among the problems faced by elementary schools. This study is a research and development project using the 4D model, which includes the Define, Design, and Dissemination stages. This study aims to 1) develop a picture-guessing medium based on the Snakes and Ladders game to improve students' critical thinking skills, 2) determine the improvement in critical thinking skills through the developed medium, and 3) determine students' and teachers' responses to the medium. The data used were obtained through interviews, observations, documentation, questionnaires, and tests, which were then analyzed qualitatively and quantitatively. The results of the study indicate that the developed teaching aid received a "Highly Suitable" rating with an average percentage of 93.4%. The developed teaching aid was also effective in improving students' critical thinking skills, as evidenced by an N-Gain score of 0.701 in the "High" category. In addition, student and teacher responses to the teaching material achieved an average percentage of 96.3%, falling into the "Very Good" category. Thus, the picture-guessing teaching material based on the Snakes and Ladders game is suitable for use as an alternative learning tool to support the development of critical thinking skills among fourth-grade students.</i> © 2026 Jurnal Pedagogik Pendidikan Dasar 	Article History: Submitted/Received 18 Jun 2026 First Revised 27 Jul 2026 Accepted 09 Aug 2026 First Available online 31 Aug 2026 Publication Date 01 Nov 2026 Keywords: Critical Thinking Skills; Picture Guessing Media; Snakes and Ladders Game

1. INTRODUCTION

Advances in science and technology in the 21st century have brought about many changes in various aspects of human life, one of which is education. The current era of globalization and digitalization demands that students possess Higher-Order Thinking Skills (HOTS), which need to be cultivated from an early age one of these being critical thinking skills. Indonesian language instruction serves as a key tool to support the development of critical thinking skills through learning activities that encourage students to understand information more deeply, express opinions based on logical reasoning, and evaluate issues objectively. This aligns with the view of [Laksono et al. \(2025\)](#) that Indonesian language instruction at the elementary school level is designed to cultivate critical thinking skills through text comprehension, interpretation, reasoning about reading content, and the expression of logical opinions. Therefore, the development of critical thinking must be a major focus in the learning process, particularly at the elementary school level.

The importance of critical thinking skills, as explained above, is actually at odds with the reality on the ground, which shows that students in some schools have low levels of critical thinking skills. The findings of a study at Sampang Kulon Public Elementary School indicate that fourth-grade students fall into the “low” category, with only 20% meeting the performance indicators. This is evidenced by the large number of children who do not actively participate in answering questions when the teacher asks them, and who have difficulty explaining basic concepts, drawing conclusions, and effectively applying strategies and techniques; the critical thinking skills possessed by elementary school students are classified as low, with a percentage of 20%. The findings of [Dewi et al. \(2023\)](#) also show that the highest percentage of students’ critical thinking skills is 13%, while 42% fall into the low category for HOTS questions in elementary school. This situation is a result of classroom management issues and the still-limited use of media, meaning that instruction has not yet fully encouraged students’ active participation. Yet the use of media in instruction is quite essential. As stated by [Karomah et al. \(2024\)](#), instructional media serve as a vehicle for delivering engaging and interactive content that helps boost motivation and improve learning outcomes among elementary school students. In light of this, there is a need for student-centered instructional media that also support the development of critical thinking skills.

Among the innovative solutions that can be implemented to address this issue is the development of a “Snakes and Ladders-Based Picture Guessing” activity—a tool that combines visual elements with a traditional game to create a dynamic and enjoyable learning environment. The use of educational games allows students to learn while playing, making the learning atmosphere more engaging and less monotonous. This aligns with [Hidayah’s \(2023\)](#) view, who states that the Snakes and Ladders game helps students become more engaged—not merely by listening to the teacher’s explanations, but also by observing, performing, and demonstrating tasks. Meanwhile, the picture-guessing activity provides students with the opportunity to observe, interpret, and connect images to the material being studied. These conditions contribute to increased attention, participation, and active engagement during the learning process. Research conducted by [Ramdana \(2025\)](#) shows that picture-guessing games have been proven to enhance critical thinking in early childhood. Additionally, [Surya \(2021\)](#) also notes that picture-guessing games can help

children recognize and remember new words. The combination of images, real objects, and movement helps children more easily associate words with their meanings, and this is far more effective than passive memorization methods. Based on this, this medium can serve as an innovative tool that incorporates visual elements and problem-solving, includes game-like elements, and stimulates students' critical thinking skills.

Several previous studies have also examined this topic, such as the study by [Pratiwi \(2022\)](#), who developed picture-card materials to enhance the critical thinking skills of fourth-grade elementary school students, and the study by [Lestari \(2024\)](#), who developed a "Smart Reading Snakes and Ladders" game to improve the early reading skills of first-grade elementary school students. Both studies employed the ADDIE model of research and development (R&D). Additionally, studies conducted by [Afifah & Umam \(2023\)](#), [Yulianti, Lestari & Rahmaawati \(2022\)](#), and [Eriansyah & Baadilla \(2023\)](#) examined the effects of these interventions; they share a common dependent variable—critical thinking skills—and were all applied in Indonesian language classes. However, this study offers a novelty compared to the five aforementioned studies in the method used—specifically, the 4D R&D model—which involves developing a picture-guessing medium based on the Snakes and Ladders game to enhance critical thinking skills, an approach not previously explored by the five researchers mentioned above.

Based on the previous explanation, it can be concluded that the low level of critical thinking skills among fourth-grade students is a problem that needs to be addressed immediately through appropriate instructional innovations. The development of a picture-guessing activity based on the Snakes and Ladders game is one relevant alternative solution, in which the game rules are deliberately designed to develop students' critical thinking skills in Indonesian language lessons covering the literary device of metaphor. Thus, this study was formulated with a focus on 1) the development of a picture-guessing medium based on the Snakes and Ladders game, 2) the improvement of critical thinking skills through the picture-guessing medium based on the Snakes and Ladders game, and 3) the responses of students and teachers to the picture-guessing medium based on the Snakes and Ladders game.

2. RESEARCH METHODOLOGY

This study employs the research and development (R&D) method. [Sugiyono \(2022\)](#) explains that the research and development (R&D) method is a research approach used to generate new product designs, test the effectiveness of existing products, and develop and create new products. The research procedure used in this study is based on the 4D (Define, Design, Development, and Dissemination) model developed by Tiagarajan. [Sugiyono \(2022\)](#) provides a more detailed explanation of the 4D model, which consists of the Define stage—activities aimed at determining which product will be developed along with its specifications. This stage involves needs analysis conducted through research and literature reviews. The Design stage involves creating a design for the product that has been defined. The Development stage involves transforming the design into a product and repeatedly testing the product's validity until a product that meets the specified requirements is produced. During this stage, development trials are also conducted with research

participants. The Dissemination stage involves disseminating the tested product for use by others.

This study used both qualitative and quantitative data. Qualitative data were obtained through comments, suggestions, and feedback from validators via a questionnaire administered during the development process. Quantitative data were obtained from the validation scores of 8 experts (including 1 questionnaire validator, 1 test validator, 2 language validators, 2 content validators, and 2 media validators), the response scores of teachers and students, and the critical thinking skills test scores used to determine the suitability and effectiveness of the developed media. Meanwhile, the data sources in this study consisted of primary and secondary data sources. Primary data were obtained directly from the research subjects, namely the expert validators (including 1 questionnaire validator, 1 test validator, 2 language validators, 2 content validators, and 2 media validators), 1 classroom teacher, and 25 fourth-grade students who were involved throughout the media development and pilot testing process. Secondary data sources were obtained from various supporting sources such as books, scientific articles, previous studies, and other documents relevant to the research.

The data collection methods used in this study included both test-based and non-test-based techniques. The test-based techniques consisted of multiple-choice and essay questions to measure students' critical thinking skills. Non-test methods included observation, interviews, documentation, and questionnaires to assess the suitability and effectiveness of the media. Observation, interviews, and documentation were used to gather information about classroom learning conditions. Observation and interviews also served as important foundations during the pre-research phase. Meanwhile, questionnaires were used to determine the level of suitability and effectiveness of the media that was developed.

The data analysis techniques used in this study include qualitative and quantitative data analysis. Qualitative data analysis was conducted descriptively to describe the process of developing a picture-guessing game based on the Snakes and Ladders game, following the stages of the 4D model (Define, Design, Development, Dissemination). Meanwhile, quantitative data analysis includes analysis of instrument quality, media feasibility, and media effectiveness. Instrument quality analysis was conducted by testing the validity, reliability, difficulty level, and discriminative power of the questions. The analysis of the media's suitability was based on the scores from the instrument validation, input from subject matter experts and media experts, as well as feedback from students and teachers. The analysis of the media's effectiveness was conducted by comparing the pretest and posttest results for participants' critical thinking skills, calculated using the N-Gain score. To assess the quality of the media through a questionnaire, the formula below was used.

Formula:	Description			
$NP = \frac{R}{SM} \times 100\%$	NP	:	Percentage value to be calculated	
	R	:	Total score achieved	
	SM	:	Maximum score	
	100	:	Constant	

The following table is used to determine the interpretation of the conclusions based on the percentage scores obtained:

Table 1. Expert Test Feasibility Categories

Achievement Percentage	Interpretation
81%-100%	Highly acceptable
61%-80%	Acceptable
41%-60 %	Fairly acceptable
21%-40 %	Unacceptable
≤ 20%	Highly unacceptable

(Marlinda et al, 2023: 84-85)

To determine the effectiveness of the media based on the pretest and posttest results, use the formula below.

$$NGain = \frac{\text{Skor Posttest} - \text{Skor Pretest}}{\text{Skor Ideal} - \text{Skor Pretest}}$$

To see the general categories of N-Gain score improvements, refer to the normalized Gain criteria in the table below.

Table 2. Normalized Gain Criteria

Nilai N-gain	Interpretation
$0,70 \leq g \leq 100$	High
$0,30 \leq g < 0,70$	Moderate
$0,00 < g < 0,30$	Low
$g = 0,00$	No increase
$-1,00 \leq g < 0,00$	Decrease

(Sukarelawan et al., 2024: 11)

3. RESULT AND DISCUSSION

3.1 Development of a Picture-Guessing Activity Based on the Snakes and Ladders Game

This study is a research and development project that produced a final product in the form of a picture-guessing activity based on the Snakes and Ladders game, designed with an attractive interface and tailored to the characteristics and developmental levels of fourth-grade students. The development of this educational tool was based on the 4D model, which consists of the Define, Design, Development, and Dissemination stages.

The first stage is the definition phase, which involves conducting a needs analysis—including an analysis of the curriculum, instructional materials, and student characteristics—and formulating objectives. Interviews with classroom teachers revealed that the school has already implemented the Merdeka Curriculum at all grade levels; therefore, the development of instructional materials was tailored to the learning outcomes and objectives of the Indonesian Language course. Based on the content analysis, the topic of metaphorical figures of speech was selected because it is one of the topics taught that requires students to understand abstract concepts, whereas, based on their cognitive development, fourth-grade students are still in the concrete operational stage. The results of observations and interviews also showed that instruction was still dominated by the lecture method with limited use of teaching materials, so students tended to be less active,

had difficulty concentrating, and were more interested in learning through play than simply sitting and listening to the teacher's explanations. Based on these findings, five learning objectives were formulated in alignment with the learning outcomes of the Merdeka Curriculum and the indicators of critical thinking skills.

The second stage is the design phase, in which the researcher designs the educational material based on the results of the needs analysis. This design process begins with gathering information to serve as the basis for product development and continues with the creation of a storyboard. The resulting product is a picture-guessing game based on the Snakes and Ladders game, printed on a 3x3-meter banner. The snakes and ladders board consists of 41 squares, including 1 finish square, 1 start square, 20 picture squares, 6 question squares, 4 challenge squares, 2 safe squares, 2 ladder squares, and 4 snake head squares. This educational tool also comes with a 15x15 cm dice pad, challenge and question cards, 5 game pieces, and a worksheet.

The third stage is the development stage, during which the researcher begins to develop the media based on the previously designed storyboard. The objective is to determine the feasibility of the product (namely, the questionnaire, test instruments, materials, language, and media) before it is tested on the research subjects. The following table presents the results of the validation of the questionnaire and response instruments.

Table 3. Questionnaire Instrument Validation Results

Aspect	Score	Percentage
Instrument construction/presentation	25	$NP = \frac{R}{SM} \times 100\%$ $NP = \frac{121}{125} \times 100\% = 96,8\%$
Content validity	20	
Consistency among items	25	
Clarity and readability	13	
Language quality	14	
Item quality	24	
Total score	121	Highly Valid

Based on the table above, the validation results for the questionnaire instrument showed a validity percentage of 96.8%, falling into the "highly valid" category. The validator recommended improving the writing style to comply with EYD (Standard Indonesian Spelling) to avoid misunderstandings and adding references for each aspect of the assessment. These recommendations have been implemented, making the questionnaire instrument suitable for validation by subsequent validators. Next, the test instrument was validated, and the results are presented in the following table.

Table 4. Test Instrument Validation Results

Aspect	Score	Percentage
Content	40	$NP = \frac{R}{SM} \times 100\%$
Item Construction	28	
Language	10	$NP = \frac{91}{100} \times 100\% = 91\%$
Clarity of Information	13	
Total score	91	Highly Valid

Based on the table above, the test instrument validation results showed a 91% suitability rate, classified as “highly suitable.” The validators recommended revising and clarifying the language in the test items to avoid ambiguity and adjusting the difficulty level of the items to match the characteristics and language development of fourth-grade students. These recommendations were implemented, making the test items suitable for administration to students in the “Highly Acceptable” category. Consequently, the test items are ready to be administered to students. Subsequently, the researcher conducted content validation with expert validators and obtained the scores presented in the following table.

Table 5. Content Validation Results

Aspect	Subject Matter Expert	
	Expert I	Expert II
Curriculum Relevance	20	20
Accuracy of Content	58	58
Language	19	20
Quantity	97	98
NP%	$\frac{97}{100} \times 100\% = 97\%$	$\frac{98}{100} \times 100\% = 98\%$
Σ Average	$\frac{97\% + 98\%}{2} \times 100 = 97,5\%$	

Based on the table above, the content expert validation results achieved a percentage of 97.5%, falling into the “highly suitable” category. The validators recommended revising illustrations that could potentially lead to ambiguity, adapting the images to the students’ characteristics and developmental levels, and specifying a single KKO for each learning objective. These recommendations have been implemented, making the content in the teaching materials highly suitable for instruction to students. Next, the researcher conducted a language validation with expert validators, the scores of which are presented in the following table.

Table 6. Language Validation Results

Aspect	Linguist	
	Expert I	Expert II
Compliance with Indonesian language standards	19	17
Clarity of information	15	12
Dialogic and interactive	9	10
Readability	5	4
Quantity	48	43
NP%	$\frac{48}{50} \times 100\% = 96\%$	$\frac{43}{50} \times 100\% = 86\%$
Σ Average	$\frac{96\% + 86\%}{2} \times 100 = 91\%$	

Based on the table above, the validation results from the language expert showed a suitability rate of 97.5%, classified as “highly suitable.” The validator provided feedback regarding the use of a single operational verb in the learning objectives, the replacement of illustrations that could potentially lead to ambiguity, and the adaptation of images to the characteristics of the students. All of this feedback has been addressed, and the material has been deemed suitable for implementation.

Table 7. Media Validation Results

Aspect	Media Expert	
	Expert I	Expert II
Appearance	41	42
Media Quality	14	14
Content Relevance	16	18
Presentation	8	10
Quantity	79	84
NP%	$\frac{79}{90} \times 100\% = 87,8\%$	$\frac{84}{90} \times 100\% = 93,3\%$
Σ Average	$\frac{87,8\% + 93,3\%}{2} \times 100 = 90,6\%$	

Based on the table above, the expert validation of the teaching aid yielded a suitability percentage of 90.6%, classified as “highly suitable.” The validators recommended that the game rules be organized more systematically and that a box be added to store the teaching aid and all its components. These recommendations were implemented, and the teaching aid was deemed suitable for use by students. After the teaching material was deemed suitable based on the expert validation results, the next stage was a development pilot test involving 25 fourth-grade students. This pilot test began with a pretest, followed by a lesson using the picture-guessing game based on the Snakes and Ladders game, and concluded with a posttest and evaluation through the distribution of response questionnaires.

The fourth stage is dissemination, during which the materials are distributed on a limited basis by providing the developed teaching aids to classroom teachers as an alternative learning resource for teaching the topic of metaphors. The following images show the developed products.

**Figure 1.** Storage Box**Figure 2.** Challenge and Question Cards**Figure 3.** Snakes and Ladders**Figure 4.** Game Pieces and Dice

3.2 Improving Students' Critical Thinking Skills

The improvement in students' critical thinking skills was analyzed based on pretest and posttest results using the N-Gain test. This analysis aimed to determine the improvement

in students' critical thinking skills after using the instructional media. The results of the analysis are presented in the following table.

Table 7. Critical Thinking Skills Test Results and N-Gain Calculations

Statistical Test	Pretest	Posttest	N-Gain %
Mean	22,8	74,28	70,1
Minimum	0	25	25
Makximum	58	97	95,2
Normalized Gain Criteria	High		
Effectiveness Level Criteria	Fairly Effective		

Based on the table above, it can be seen that the N-Gain calculation results show an average of 0.70, which falls into the "high" category. These results indicate that the picture-guessing activity based on the Snakes and Ladders game is effective in improving the critical thinking skills of fourth-grade students in their Indonesian language class, specifically regarding the topic of metaphors.

3.3 Student and Teacher Responses to the "Snakes and Ladders"-Based Picture Guessing Activity

The responses of teachers and students were determined by calculating the scores from the questionnaires administered during the second dissemination phase, following the implementation of lessons using the picture-guessing game based on the Snakes and Ladders game. The following table presents the students' responses to the teaching material.

Table 8. Student Responses

Aspect	Score	Percentage
Presentation	47	$NP = \frac{R}{SM} \times 100\%$ $\frac{241}{250} \times 100\% = 96,25\%$
Readability	72	
Media Presentation	75	
Critical Thinking	47	
Total Score	241	
Interpretation of Results	Very Good	

Berdasarkan tabel di atas, hasil respons peserta didik terhadap media memperoleh persentase sebesar 96,4% dengan kategori sangat baik. Sedangkan hasil respons guru terhadap media disajikan pada tabel berikut.

Table 9. Teacher's Response

Aspect	Score	Percentage
Content Relevance	14	$NP = \frac{R}{SM} \times 100\%$ $\frac{77}{80} \times 100\% = 96,25\%$
Presentation	14	
Media Presentation	15	
Practicality	14	
Benefits	20	
Total Score	77	
Feasibility Interpretation	Very Good	

Based on the table above, the teachers' responses to the teaching material yielded a percentage of 96.25% in the "very good" category. Overall, the responses from both students and teachers indicate that the teaching material received a very positive response and is suitable for use in teaching the Indonesian language, specifically the topic of metaphors.

Discussion

This study is a research and development project that produced a final product in the form of a picture-guessing activity based on the Snakes and Ladders game, designed with an attractive interface and tailored to the characteristics and developmental levels of fourth-grade students. The development of this educational tool was based on the 4D model, which consists of the Define, Design, Development, and Dissemination stages.

In the early stages of development, a needs analysis was conducted through interviews and observations. The results of the interviews and observations showed that the learning process was still teacher-dominated, the use of learning media was not yet optimal, and student engagement and motivation were low. These conditions resulted in weak critical thinking skills among students. Therefore, a picture-guessing game based on the Snakes and Ladders board game was developed as an alternative learning medium tailored to the characteristics of fourth-grade students and the learning needs related to the topic of metaphorical figures of speech. This is in line with what [Miftah and Rokhman \(2022\)](#) stated that in developing learning media, it is necessary to consider student characteristics, learning objectives, the material being presented, and learning conditions so that the media used aligns with the students' needs.

The "Snakes and Ladders"-based picture-guessing activity was chosen because it integrates learning and play, thereby creating a more engaging, interactive, and learner-centered learning environment. The "Snakes and Ladders" game provides learners with opportunities to actively engage through observing, discussing, answering questions, and completing challenges, while the picture-guessing activity helps learners connect visual information with the abstract concept of metaphor. [Hidayah \(2023\)](#) states that the snakes-and-ladders game helps students become more engaged—not merely by listening to the teacher's explanations, but also by observing, performing, and demonstrating tasks. In line with what was previously mentioned, [Nilamanda et al. \(2025\)](#) explain that the picture-guessing game facilitates students in processing visual information, formulating answers, and understanding the relationships between images and the concepts being studied. Furthermore, the game's flow is designed to provide students with opportunities to engage directly in exploring, making decisions, and solving problems. This aligns with constructivist theory, which emphasizes that knowledge is constructed through direct learning experiences. This finding is supported by a study by [Arumsari et al. \(2023\)](#), which shows that the Snakes and Ladders game is a suitable teaching tool for the topic of metaphorical figures of speech and can help students understand the material in a more engaging way.

The development process for this "Snakes and Ladders"-based picture-guessing activity involved eight validators, including questionnaire validators, test instrument validators, subject matter experts, language experts, and media experts. The validation process was conducted to ensure that the activity and research instruments met feasibility standards

before being pilot-tested with students. Based on the validation results from the eight validators, an average suitability percentage of 93.4% was obtained, falling into the “Highly Suitable” category. This high level of suitability was achieved after several refinements were made based on the validators’ feedback, including revisions to the learning objectives, improvements to the illustrations to better align with the students’ characteristics, the use of more communicative language, and the development of more systematic game rules. These improvements were made to enhance the clarity of the content, ease of use, and the media’s suitability for elementary school students’ characteristics. The high suitability percentage indicates that the developed media meets the criteria for content, language, presentation, and graphic design. This is in accordance with the assessment standards established by the BSNP based on Government Regulation No. 19/2005, Article 43, Paragraph (5), which states that the quality of instructional materials or media can be evaluated through the aspects of content, presentation, language, and graphics. The fulfillment of these four aspects indicates that the media is suitable for use in the learning process.

After being deemed suitable, the media was tested on 25 students. During implementation, the students demonstrated more active engagement compared to previous lessons. This active engagement was evident in their increased participation in asking questions, discussing, explaining their reasoning for choosing answers, and collaborating with their groups to solve the challenges presented. Interaction among students also became more intense as they worked together to interpret the meaning of metaphors based on the images presented. These findings indicate that the developed learning material is capable of creating a more student-centered learning experience. This aligns with the view of [Heryana et al. \(2022\)](#) that learning materials serve as teaching aids to convey content so that messages are more easily understood and students become more motivated and active. Furthermore, these activities also demonstrate that students do not merely passively receive information but construct their own understanding through learning experiences during the game. This aligns with constructivist theory, which states that knowledge is actively constructed through interaction with the environment and learning experiences. In this study, students constructed their knowledge through activities such as observing, discussing, presenting reasons, and drawing conclusions together with their group members. As a result, learning is no longer teacher-centered but rather focused on students’ learning activities.

Students’ active participation during instruction demonstrates a process of deep thinking through activities such as observing, discussing, justifying answers, and determining the most appropriate solutions. These activities align with the concept of critical thinking according to Ennis ([Susilawati et al., 2020](#)), who views critical thinking as a reflective and rational thought process focused on decision-making patterns regarding what to believe, what to do, and what can be justified. To ensure that all students participated optimally in the learning process, the researcher provided assistance to students who were not yet able to read and write by reading aloud the instructions, questions, and statements on the response questionnaire. Even so, the students remained enthusiastic and were able to participate well in the entire series of learning activities.

The critical thinking skills of fourth-grade students improved significantly after using a picture-guessing activity based on the Snakes and Ladders game during lessons on metaphors. This improvement in students' critical thinking skills was demonstrated by the N-Gain calculation, which yielded an average score of 0.701—classified as “high.” This improvement in critical thinking skills was supported by learning activities that gave students the opportunity to observe images, interpret the meaning of metaphors, discuss answers, explain the reasoning behind their choices, and construct sentences using metaphors. In other words, while observing the images, students were asked to identify key information. Furthermore, when discussing answers, students must provide logical justifications and share their opinions with their group members before deciding on the best answer. These activities indirectly help develop skills such as analyzing, evaluating, and decision-making, which are part of the indicators of critical thinking. In addition, the high N-Gain scores were likely influenced by several factors. First, the material was presented in the form of a game, which increased students' motivation to learn. Second, the use of images helps students understand abstract concepts such as metaphors, which can be difficult to grasp. Third, group discussion activities allow students to exchange opinions and defend the answers they have chosen. Fourth, learning takes place actively, so students have a more meaningful learning experience.

The above findings align with Ennis's view that critical thinking encompasses the ability to explain information, make inferences, provide further explanations, and devise strategies for problem-solving. These findings are also supported by [Mahfidah and Julianto \(2025\)](#), who demonstrated that the use of media combined with the Snakes and Ladders game has been shown to enhance the critical thinking skills of elementary school students. The similarity in these results indicates that educational games designed to meet learning needs and objectives not only increase student engagement but also develop their critical thinking skills through an enjoyable and meaningful learning process. The difference lies in the fact that Mahfidah and Julianto's study used a QR code-based snakes-and-ladders game focused on the topic of states of matter, whereas this study developed a picture-guessing game based on the snakes-and-ladders game for the topic of metaphorical figures of speech. Thus, this study expands the application of educational games to Indonesian language instruction.

Student response to the picture-guessing media based on the Snakes and Ladders game achieved a percentage of 96.4% in the “Very Appropriate” category. The high level of student response indicates that the developed media was able to capture students' attention and increase their engagement in learning, as evidenced by their enthusiasm in observing pictures, interpreting the meaning of metaphors, discussing problem-solving, and justifying their answer choices. This finding aligns with the views of [Magdalena \(2021\)](#), who state that engaging instructional media can increase students' attention and motivation to learn, thereby making the learning process more effective. In addition, teachers' responses to the media achieved a 96.25% rating in the “Highly Appropriate” category. This indicates that the developed media is easy to use in the classroom and aligns with the characteristics of fourth-grade elementary school students. Teachers assessed that this media is capable of creating a more engaging learning atmosphere, increasing student participation, and facilitating the teaching of metaphorical language in a more concrete way.

through visual presentations and enjoyable activities. Thus, the positive response from teachers and students indicates that the teaching materials developed are not only suitable for use in the classroom but also have the potential to support the development of students' thinking skills through the design of active and engaging learning activities. The research and development activities concluded with the distribution of the developed materials to classroom teachers as an alternative teaching resource for metaphors for future generations.

4. CONCLUSION

The development of a picture-guessing medium based on the Snakes and Ladders game to enhance students' critical thinking skills was carried out using the 4D approach. Based on validation results from several experts, an average percentage of 93.4% was obtained in the "Highly Suitable" category, making it suitable for use by fourth-grade students in lessons on metaphors. Fourth-grade students' critical thinking skills also improved significantly after using the tool, as evidenced by an N-Gian score of 0.701 with a percentage of 70.1%, which falls into the "High" category. Student and teacher responses to the picture-guessing tool based on the Snakes and Ladders game received a "Very Good" rating with an average percentage of 96.3%. Students demonstrated high enthusiasm and engagement during the learning process, while teachers assessed the media as suitable for use, engaging, and aligned with the students' characteristics. Thus, the picture-guessing media based on the Snakes and Ladders game is suitable for use as an alternative learning medium to support the improvement of fourth-grade students' critical thinking skills.

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