

Visual-based learning media in the form of snakes and ladders game to improve teaching and learning quality in elementary school

Efendi Gultom

FKIP faculty, PGSD, Universitas Negeri Medan, Medan, Indonesia

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ABSTRACT

The quality of education in elementary level is demanded to always be better along with the world's changing. Teacher as the leading role in teaching and studying activity is expected to be able using acceptable media to improve student's learning interest. Visual based teaching media in game formation is one of effective alternative media to improve the studying quality. Children in elementary level have tendency to play. Fun and relaxing situation will help children to increase their learning interest. There is a new paradigm recently that through playing children will be able to learn more and their studying activity will be more effective when the situation is set to be fun. The developing of this learning media in the form of snake and ladder game is aimed to give discourse about alternative teaching media for elementary level. The using of this alternative media is expected to improve the quality of teaching and studying activity in elementary level.

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Corresponding Author:

Efendi Gultom,
FKIP faculty, PGSD,
Universitas Negeri Medan, Medan, Indonesia,
Jl. William Iskandar Ps. V, Kenangan Baru, Deli Serdang Regency, North Sumatra, Indonesia, 20221.
Email: gultonfendi@gmail.com

1. INTRODUCTION

One of the government policies mentioned in the points of National Education Policy Direction for Primary and Secondary Education in 2001/2004 is to reform and stabilize the education system. This aims to improve the quality of education so that teachers (educators) and students (the educated) have optimal quality in carrying out Teaching and Learning Activities (KBM)(Zaidah et al., 2025).

The number of elementary school students that is increasing every year certainly requires serious handling. For this reason, the Education Office has made various efforts to continuously improve the quality of education, including; Improving the quality of pre-service training, with an emphasis on learning activities and mastery of teaching practices(Sprague & Walker, 2021). Improving the recruitment system for teachers and education personnel through selection of prospective teachers and education personnel in collaboration with LPTK and local governments(Muda et al., 2022). Improve the quality of in-service training by giving schools the flexibility to organize teacher up-grading through LPTK and other professional institutions. Empowering professional forums for teachers and principals as a vehicle for discussing the problems of education and teaching that are being faced(Winingsih et al., 2019).

The quality and quality of basic education is always required to be better because of the changing times that occur both nationally and globally(Winingsih et al., 2019). The quality of basic education in Indonesia has not been able to optimally produce Human Resources (HR) that can compete. One of the causes is the quality of educators who are less aware of the importance of updating the quality and teaching strategies(Sahlberg, 2021). The existence of a paradigm that develops in society that the learning process is identical to books and writing, has indirectly killed the creativity of our educators so far to explore a dynamic and effective teaching system(Bozkurt et al., 2020). Thus, many complaints conveyed by various parties that the teaching system in learning schools is synonymous with books and

writing, has indirectly killed the creativity of our educators so far to explore a dynamic and effective teaching system. Thus, there are many complaints that the teaching system in primary schools, which emphasizes one-way communication (lectures) in the classroom, is too boring and monotonous (Praheto et al., 2020). One of the reasons for the lack of teacher tips to build an interactive relationship in Teaching and Learning Activities is the lack of teacher knowledge about the development and use of alternative learning media. A classroom is a teaching system that is too boring and monotonous. One of the reasons for the lack of teacher tips to build an interactive relationship in Teaching and Learning Activities is the lack of teacher knowledge about the development and use of alternative learning media (Callo & Yazon, 2020).

Learning resource media is a useful tool in teaching and learning activities. It can represent something that the teacher cannot convey through words or sentences (Wirawan, 2020). Students' difficulties in understanding certain concepts and principles can be overcome with the help of tools. Even tools are recognized as being able to generate good feedback from students. By utilizing acceptable tactics, teachers can stimulate students' interest in learning.

Simple traditional games can be a source of inspiration in designing a learning media (Laine & Lindberg, 2020). We know that snakes and ladders game is one of the traditional games that is worldwide. This game is not only applicable in our country, but also in many other countries around the world. It is a group game, involving several people and cannot be used individually. Psychologically, snakes and ladders are proven to improve children's ability to interact with social life (Baccini et al., 2019). Unlike electronic media-based games that emphasize individual play, where children will concentrate on fully interacting with electronic media such as computers, video games or play stations. Psychologists say that traditional games tend to be more beneficial than electronic games.

Snakes and Ladders is modified so that it becomes a communicative and easy-to-understand game media, with eye-catching visualization, attractive and fun to use as learning media. Communicative Snakes and Ladders accompanied by attractive images and full color are absolutely necessary in the design of this snakes and ladders (Hariyanti, 2023). In an educational psychology research, it is mentioned that children understand visual language more easily than verbal language. Thus, a learning media that is full of communicative full-color illustrations will increase students' interest in learning and recalling the lessons that have been given.

Snakes and Ladders media is considered very effective for reviewing certain chapters in lessons that are considered the most difficult for students to understand and are less effective if conveyed verbally (Marfira, 2020). With Snakes and Ladders media, teachers can save time to explain in detail certain chapters that need to be explained again structurally. In addition, students can also easily understand what is conveyed by the teacher through this media because students do not feel burdened with repetition of certain units. Learning that involves children's tendency to play is much more effective because students feel more relaxed. For children, learning through play is important. An educational researcher named Peter Kline (Sahlberg & Doyle, 2019) even assures us that learning will be effective if done in a fun atmosphere.

The word media comes from the Latin *medius* which literally means middle, intermediary or introduction. Media when understood broadly are people, materials, or events that build conditions that make students able to acquire knowledge, skills or attitudes (Kellner & Share, 2019). In this sense, teachers, books, texts and the school environment are media. More specifically, the definition of media in the teaching and learning process tends to be defined as graphic, photographic, or electronic tools for capturing, processing, and reconstructing visual or verbal information. With the term mediator, the media indicates its function or role, which is to organize an effective relationship between the two main parties in the learning process, students and lesson content (Septiani & Rejekiingsih, 2020).

Learning resource media is a useful tool in teaching and learning activities. It can represent something that the teacher cannot convey through words or sentences (Puspitarini & Hanif, 2019). The effectiveness of student absorption of difficult and complicated subject matter can occur with the help of tools. Students' difficulties in understanding certain concepts and principles can be overcome with the help of tools. Even stone tools are recognized as being able to generate good feedback from students. By utilizing acceptable tool tactics, teachers can stimulate students' interest in learning. Ideal interaction conditions between teachers and students if the teacher consciously plans his teaching activities systematically by utilizing everything for the benefit of teaching (Mutia et al., 2020).

Each field of study requires a different method of approach in order to be understood by students. Therefore, recognizing a material for the purpose of selecting an approach is very necessary (Alam, 2022). Teachers are required to be able to use tools that can be provided by the school, and it is possible

that these tools are in accordance with the development and demands of the times. At least teachers can use cheap and efficient tools that, although simple, are still effective in achieving the expected goals. Besides being able to use the tools available, teachers are also required to develop skills in making teaching media that will be used if the media is not available (Shahid et al., 2019). says that teaching media as a tool can provide a common experience to students about events in their environment, and allow direct interaction with teachers, society and the environment.

In a teaching and learning process, two very important elements are teaching methods and teaching media. These two aspects are interrelated. The choice of one particular teaching method will affect the type of teaching media that is appropriate, although there are still various other aspects that must be considered in choosing media, including teaching objectives, types of tasks and responses that students are expected to master after teaching takes place. Nevertheless, it can be said that one of the main functions of teaching media is as a teaching aid that also influences the climate, conditions, and environment arranged and created by the teacher (Winarto et al., 2020).

The use of learning media in the teaching and learning process can arouse new desires and interests, generate motivation and stimulation of learning activities and even have psychological effects on students. The use of learning media at the orientation stage of teaching will greatly help the effectiveness of the learning process and the delivery of messages and lesson content at that time. In addition to arousing student motivation and interest, learning media can also help students improve understanding, present data interestingly and reliably, make it easier to interpret and condense information (Mayangsari & Mahardhika, 2019).

The results of research on visual readability associated with learning outcomes show that visualization of messages at both abstract and concrete poles has a relatively similar effect on student learning outcomes. Simplicity in layout (lay out) is one of the things that needs to be considered in making visual learning media. Excessive and unnecessary decorations can be minimized. Students' attention should be centered on the main idea or core of the lesson (Susnjak et al., 2022). Likewise with integration, which means that all visual elements displayed must function together. In other words, images that are too abstract are not very clear to students, while images that are too concrete also cause confusion in students. So when designing a visual learning media, we must pay attention to visual literacy in order to increase the effectiveness of student learning outcomes (Kaliisa et al., 2022).

Children are elements of personality drawn from childhood feelings and experiences that contain the potential for intuition, spontaneity, creativity, and fun (Scholes, 2019). Children have the potential to imitate (imitate), while adults have a role as objects that are imitated. Therefore, in education, teachers are expected to be moral educators and good examples for their students. Children do not have the limits and experiences that allow them to accept all the goals formulated by adults. When children ask an adult about something, it is not the answer that matters, but the process of the adult speaking when giving the answer that makes them feel interested. Children are interested in the process (Ponizovsky-Bergelson et al., 2019). When they talk, it is the activity of talking that interests them and the goal. Because children are always interested in the process, it is more important for teachers to provide guidance and direction than education that seems formal, let alone coercion (Yoon & Templeton, 2019).

2. RESEARCH METHOD

The research in developing this learning media is experimental research using the research design "Factorial Pretest- Posttest Design". This research can show causal relationships and has validity that can be accounted for (Murwaningsih et al., 2023). The population of this study were students and teachers from three different elementary schools in Malang city, namely SDN Bareng III, SDN Lowokwaru VI, SDN Lowokwaru VII and one out-of-school educational institution in the field of English Intensive English Course Malang 2 Branch. Three sets of learning media in the form of a modified snakes and ladders game for the fields of study of science, social studies, and English. Each 1 set of learning media consists of; game plots (snakes and ladders) which are designed more full color and varied, game instructions, 40 question cards, dice and pawns (mascots) (Rachmawan et al., 2019). Pre Test and Post Test in the form of questions with selected answers made in accordance with the field of study and chapter to be evaluated. For science and social studies consisted of 10 choice questions, while for English consisted of 8 questions. The questions were given to students before and after using learning media in the form of snakes and ladders games. The purpose of this pre-test and post-test is to measure the initial ability of students and find out the extent to which this learning media plays a role in efforts to increase elementary school students' understanding of the lesson after students use the snakes and ladders game.

3. RESULTS AND DISCUSSIONS

After conducting observations about the teaching and learning system in elementary schools, we found that in general the motivation of teachers in elementary schools to renew the atmosphere of teaching and learning in the classroom is still lacking. So that teaching and learning activities seem monotonous and tend to be boring. Through this research we hope to contribute ideas and motivation that making learning media is not difficult. Small things around us can actually be an extraordinary inspiration in making learning media as long as we are willing to think creatively (Sudarsana et al., 2020).

The media we created was inspired by the conventional game of snakes and ladders that is well known by children around the world. We modify this popular conventional game so that it can be a learning media that children like and is effective in improving elementary school students' understanding of lessons. By applying design methods and aspects of child psychology to game-shaped learning media, we created 3 sets of learning media for science, social studies and English. Each set of learning media consists of: a) game plots, b) question cards, c) game instructions, d) dice and pawns (mascots).

The game plots are designed more full color and equipped with illustrations that are in accordance with the discussion of the field of study. The illustrations displayed on the game plots and question cards are caricature (cartoon) type illustrations because this type of illustration according to some child psychologists is preferred and more easily captured by elementary school children. The measurement of the effectiveness of this game-based visual learning media can be measured through the comparison of pre-test and post-test scores. After completing the pretest questions, students were given the opportunity to use this snakes and ladders learning media in the form of groups.

One group consists of 8-10 students, and each group has one group leader who will supervise and be the "referee" during the game. The group leader can be replaced by the accompanying teacher if the situation allows. The average pretest score for the science field of study was 65.5, after students used snakes and ladders learning media for the science field of study, the average posttest score rose to 78.3. In the field of social studies, the average pretest score of students is 60.2, while the average post test score is 76.4. The average value of students' pretest for the English study field was 75.1, and the average value of students' posttest after using snakes and ladders learning media rose to 83.3. Based on these data, it can be concluded that students experienced an 18.8% increase in scores after using this snakes and ladders learning media. In addition to making observations to determine student interest in this learning media, a questionnaire with a closed question model was also given.

The questions asked include how to learn and the form of learning media that students like and students' responses to this learning media. Based on the results of the answers to the questionnaire, the following conclusions were obtained; The majority of respondents (39%) stated that crowded or quiet conditions do not affect the way students learn. The majority of respondents (45%) liked this snakes and ladders learning media because of its attractive design and fun and exciting game (Dwijayani, 2019). The majority of respondents (74%) stated that they really liked this snakes and ladders learning media and wanted this kind of learning media to be applied to other fields of study.

Based on the observations made, the enthusiasm of students when using this learning media is very high. making Students look so interested and excited to use this learning media. Students answered the questions earnestly when they stopped at the question plots, and other participants who had not gotten their turn would pay attention to the answers expressed by other participants so that they would not be skipped a round because they could not answer the question correctly (Mutia et al., 2020). Although the situation was less controlled due to the lack of human resources for escorts, but in general we assess that this learning media can be accepted and used well by students.

The opinion of the subject teacher or accompanying teacher in developing this learning media also plays a role in measuring the effectiveness of the media. Based on the evaluation sheet given to the accompanying teacher, it can be assumed that the teacher considers the learning media in the form of a snakes and ladders game to be quite effective in increasing students' interest in the lesson, especially for certain topics that are difficult for students to understand if the teacher does not use tools when presenting the discussion. However, some teachers complain that the game system requires more than one assistant to use this learning media effectively (Utaminingsih et al., 2024). Without good supervision and guidance when using this media, it could be that students are only trapped in the excitement of the game without knowing the essence and benefits of this learning media.

This is of course caused by children's tendency to play, especially games that are carried out in groups. No matter how interesting and effective a learning media is designed, the role of the teacher is absolutely necessary to achieve the goals in teaching and learning activities (Rahim et al., 2022).

4. CONCLUSION

Based on the results of the study, it can be concluded that; a) in general, visual-based learning media in the form of a snakes and ladders game is an effective media to increase students' absorption and understanding of lessons, especially discussions that are difficult to accept without media intermediaries. This can be seen from the increase in students' post test scores after using the learning media; b) students' interest in visual-based learning media is very good, this can be seen from the enthusiasm of students when using this learning media. When students learn in a fun condition, then students can absorb and remember more of the material presented; c) from the teacher's perspective, this learning media is less profitable if there is no additional accompanying teacher to supervise and guide students when using learning media, while in general there is only one subject assistant teacher in each class. Without supervision, students can easily get caught up in the game without being able to absorb the important values conveyed by the learning media.

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