

THE EFFECT OF REAL LEARNING (EDUTAINMENT) ON IMPROVING HEALTH LITERACY AND STUDENT LEARNING MOTIVATION AT SMPN 1 RANTAU PANDAN

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ABSTRAK

Literasi dan numerasi merupakan kompetensi dasar yang harus dimiliki peserta didik, namun pembelajaran di sekolah dasar masih didominasi metode konvensional sehingga keterlibatan siswa belum optimal. Kegiatan ini menerapkan pembelajaran berbasis Edutainment melalui permainan ular tangga literasi dan numerasi untuk meningkatkan kemampuan siswa. Peserta dibagi menjadi tiga kelompok dan mengikuti permainan yang berisi soal literasi serta tantangan numerasi. Evaluasi dilakukan menggunakan desain pretest–posttest dan observasi partisipasi siswa. Hasil menunjukkan peningkatan keaktifan, antusiasme, dan kerja sama siswa selama pembelajaran. Nilai posttest lebih tinggi dibandingkan pretest, menunjukkan peningkatan kemampuan literasi dan numerasi. Guru dan pihak sekolah memberikan respons positif terhadap media pembelajaran ini. Dengan demikian, permainan ular tangga berbasis Edutainment efektif meningkatkan keterlibatan siswa serta mendukung pencapaian kompetensi literasi dan numerasi di sekolah dasar.

Kata Kunci : *Edutainment, permainan ular tangga, literasi, numerasi*

ABSTRACT

Literacy and numeracy are essential competencies for elementary school students, yet learning is often dominated by conventional methods that limit student engagement. This study implemented an Edutainment-based learning approach using a literacy and numeracy snake and ladder game to improve students' competencies. Participants were divided into three groups and engaged in game-based learning activities involving literacy questions and numeracy challenges. The program was evaluated using a pretest–posttest design and observations of student participation. The results showed increased student engagement, enthusiasm, and collaboration throughout the learning process. Higher posttest scores compared to pretest scores indicated improvements in literacy and numeracy skills. Teachers and schools responded positively to the learning media. Therefore, the Edutainment-based literacy and numeracy snake and ladder game is an effective learning strategy to enhance student participation and support literacy and numeracy achievement in elementary schools.

Keywords: Edutainment, Snake Game, Literacy, Numeracy

BACKGROUND

Improving the quality of education is one of the priorities of national development in order to produce human resources who are superior, creative, and able to adapt to the development of science and technology. One of the basic competencies that is of concern in the world of education is literacy and numeracy skills. Literacy is not only defined as the ability to read and write, but also the ability to understand, evaluate, and use information to solve various life problems. Meanwhile, numeracy is the ability to use mathematical concepts, procedures, facts, and tools to solve problems in various contexts of daily life (Ministry of Education and Culture, 2021).

The results of the Programme for International Student Assessment (PISA) show that the reading and numeracy literacy skills of Indonesian students are still below the average of OECD member countries. This condition shows that improving the quality of learning is still a challenge that must be overcome through various learning innovations that are more effective, interesting, and student-centered (OECD, 2023). Therefore, teachers are required to be able to develop learning strategies that are not only oriented to the delivery of material, but also able to create a pleasant learning experience so that students are more active in the learning process.

One of the approaches that is developing in the world of education is Edutainment, which is learning that combines elements of education with entertainment. According to Riley (2022), the edutainment approach is able to increase students' attention, motivation, engagement, and learning experience through interactive activities. Fun learning can reduce learning boredom while improving students' critical thinking and problem-solving skills. In addition, Plass, Mayer, and Homer (2020) explain that *game-based learning* provides a more meaningful learning experience because students are actively involved in solving the challenges presented during the learning process.

Educational games are a form of implementation of the edutainment approach that is widely used in elementary school learning. Through games, students get the opportunity to learn while playing so that the concepts learned become easier to understand. Educational games are also able to increase intrinsic motivation, cooperation between students, communication skills, and confidence in solving various learning problems (Blair et al., 2021).

One of the media developed in this activity is the literacy and numeracy snake and ladder game. This game is modified by adding literacy, numeracy, and challenge cards to several game tiles. Students are divided into three groups and take turns rolling dice to run their pieces. Each student who stops at a certain plot is required to answer the available questions. The correct answer is given an award in the form of a star and a simple prize as a form of *positive reinforcement* to increase learning motivation. Through these activities, students not only learn to understand the material, but are also trained to think critically, work together, communicate, and solve problems collaboratively.

This activity was carried out as a form of implementation of Merdeka Learning which encourages students to contribute directly to improving the quality of learning at school. During the implementation of the activity, students showed high enthusiasm, actively discussed, and were more courageous in answering questions than conventional learning. Teachers also give positive responses to the media used because they are considered attractive, easy to apply, and able to support the achievement of literacy and numeracy competencies. In fact, the school expressed its commitment to continue the use of literacy and numeracy snake and ladder games as one of the learning methods after it is completed.

Based on these conditions, it is necessary to evaluate the implementation of real learning based on edutainment through literacy and numeracy snake and ladder games as one of the learning innovations in elementary schools. The results of this activity are expected to be an example of *best practice* in developing learning media that is innovative, fun, and able to improve students' literacy and numeracy skills.

METHOD

This activity was carried out in one of the elementary schools with the target of class V students. The implementation method refers to a participatory approach that actively involves students, teachers, and learners during the learning process. The implementation of activities consists of four stages, namely preparation, implementation, evaluation, and follow-up. This research was carried out at SMP Negeri 1 Rantau Pandan, which was chosen as the location of the research because it was the place to carry out activities and in accordance with the research objectives that had been set. This research was carried out in the month (October-December 2024).

RESULTS

This activity is carried out through the application of real learning (*Edutainment*) using the media of literacy and numeracy snake and ladder games in elementary school students. The activity began with coordination with the principal and class teachers regarding the implementation of the program, the preparation of activity schedules, and the preparation of learning media to be used. Furthermore, socialization was carried out about the rules of the game and the purpose of the activity to all students.

At the implementation stage, students were divided into three groups. Each group takes turns playing the snake and ladder game by rolling dice and running the pieces according to the number of dice obtained. In some game tiles, there are literacy questions, numeracy questions, and challenge cards that must be answered by students. Students who were able to answer the questions correctly received an award in the form of stars, while the group with the most stars received a prize at the end of the activity. The award aims to increase learning motivation and create a positive competition atmosphere during the learning process.

During the activity, students showed high enthusiasm in participating in the game. All participants were actively involved in the group discussion before answering the questions given. The learning atmosphere became more lively because students gave each other opinions, helped their fellow groups, and tried to solve every challenge on the game board. This activity shows that game media is able to increase student involvement in the learning process.

In addition to increasing student activity, literacy and numeracy snake and ladder games also provide opportunities for students to develop critical thinking, communication, collaboration, and problem-solving skills. Students seem more confident in delivering answers compared to conventional learning. Through the process of learning while playing, students get a more enjoyable learning experience so that literacy and numeracy materials are easier to understand.

The classroom teachers gave a very positive response to the implementation of the activity. According to the teacher, literacy and numeracy snake and ladder game media is able to create an active, fun learning atmosphere, and increase student participation during the learning process. The teacher also said that the media is easy to apply because it uses simple tools, can be modified according to the learning material, and can be used repeatedly in various subjects. The school also appreciated the learning innovations implemented. Based on the results of the discussion after the activity, the school expressed its willingness to continue the use of literacy and numeracy snake and ladder games as one of the learning media because it is considered to be able to support the achievement of literacy and numeracy competencies of students.

Edutainment-based learning through literacy and numeracy snake and ladder games provides a more active learning experience than lecture methods. Students not only receive material from teachers, but are also directly involved in the learning process through play, discussion, and solving various challenges contained in game media. This condition reflects student-centered learning, where students are the main subjects in building their knowledge and skills (Plass et al., 2020; Riley, 2022).

The use of educational games as a learning medium not only increases student engagement but also facilitates the development of 21st century competencies. According to Salen and Zimmerman (2004), educational games provide an interactive and responsive system that allows learners to learn through trial and error in a safe environment. Through the reward and punishment mechanism applied in the snake and ladder game (giving stars for correct answers), students get direct feedback that strengthens their learning. This is in line with Skinner's (1974) operant conditioning theory which states that positive reinforcement can increase the frequency of desired behavior.

The snake and ladder game modified with literacy and numeracy problems is able to increase learning motivation because the learning process is packaged in a fun atmosphere. Giving awards in the form of stars and simple prizes is also a form of positive reinforcement that encourages students to participate more actively. The atmosphere of a healthy competition makes students more enthusiastic in answering questions, discussing with groups, and solving each challenge given. According to Deci and Ryan (2000) in the Self-Determination Theory, students' intrinsic motivation can be increased when learning provides autonomy, competence, and positive social relationships.

These results are in line with the research of Blair et al. (2021) who stated that the entertainment-education approach is able to increase learning motivation, student involvement, and the effectiveness of the learning process.

This activity also shows that game media can facilitate the development of 21st century skills, such as critical thinking, communication, collaboration, and problem-solving. During the game, students exchange opinions, give reasons for the answers chosen, and work together to get the best results for their groups. These activities show that the learning process is not only oriented towards material mastery, but also on the development of social skills and high-level thinking skills. According to Plass et al. (2020), game-based learning is able to create a learning environment that supports the development of students' critical thinking, collaboration, creativity, and communication skills. Vygotsky (1978) also emphasized the importance of social interaction in the learning process, where group games provide opportunities for learners to learn from their peers (peer learning).

From a cognitive perspective, the literacy and numeracy snake and ladder game activates various cognitive processes of students. When answering literacy questions, students must use reading, comprehension, and reasoning skills. Meanwhile, numeracy problems activate numeracy skills, mathematical logic, and problem solving. According to cognitive load theory (Sweller, 1988), the use of games can reduce unnecessary cognitive load because play activities make learning more contextual and relevant. Thus, students can focus on the substantive aspects of learning rather than administrative aspects or learning mechanisms.

The positive response given by teachers and the school shows that the literacy and numeracy snake and ladder game has a good level of acceptance as a learning medium. The ease of use, relatively low cost, and flexibility in adapting the material make this media have the potential to be applied sustainably to various subjects. In accordance with the principle of universal design for learning (UDL), learning media designed with high flexibility can accommodate the diversity of students with a variety of different learning characteristics and styles (Rose & Meyer, 2002). This finding is supported by Muthmainnah et al. (2025) who stated that Edutainment-based learning media not only increases student participation, but also obtains good acceptance from teachers because it is easy to implement and in accordance with learning needs in schools.

The educational implications of these findings are the importance of transforming the learning paradigm from teacher-centered to student-centered learning. Teachers no longer play a role solely as a conveyor of information, but as a facilitator who creates a learning environment that supports the holistic development of students' competencies. The integration of technology and learning

innovations such as edutainment in primary school curricula is seen as a strategic need to prepare a generation capable of facing the complexity of global challenges (UNESCO, 2020).

Overall, the implementation of this activity shows that real learning (Edutainment) through literacy and numeracy snake and ladder games is able to create an active, fun, and collaborative learning atmosphere. In addition to increasing student involvement during learning, this media also provides innovative learning alternatives that can support strengthening literacy and numeracy competencies in elementary schools. The results of this activity are expected to be examples of best practices that can be replicated by teachers and other schools in developing more interesting and student-centered learning (OECD, 2023; Ministry of Education and Culture, 2021).

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Real learning activities (*Edutainment*) through the application of real learning (*Edutainment*) using the media of snake and ladder games literacy and numeracy have been carried out well and received a positive response from students and the school. The learning media developed is able to create an active, fun, interactive, and collaborative learning atmosphere so as to encourage students to participate more in the learning process. Through this game, students not only get a more interesting learning experience, but also have the opportunity to develop critical thinking, communication, cooperation, and problem-solving skills through literacy and numeracy activities.

In addition to increasing student involvement during learning, the literacy and numeracy snake and ladder game also received a good level of acceptance from teachers and schools. This media is considered easy to apply, attractive, and can be adapted to various learning materials. The school's commitment to continue the use of this learning media after it ends shows that the innovation has the potential to be applied sustainably as one of the learning alternatives that supports the strengthening of literacy and numeracy competencies in elementary schools.

AUTHOR CONTRIBUTION

Yessy Fitriani is the first researcher of this journal article and coordinating all of the publication.

CONFLICT OF INTEREST

There is no conflicts of interest

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