Utilisation of Game-Based Learning Media to Optimise the Learning Process at Bodhisattva Junior High School Bandar Lampung

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Abstract: Effective and innovative learning is important in improving the quality of education in today's digital era. This study aims to describe the implementation of game-based learning media utilisation in optimising the learning process at Bodhisattva Junior High School in Bandar Lampung. The research method used is the literature review method by analysing 10 journal articles related to the use of game-based learning media. The results showed that the utilisation of game-based learning media at Bodhisattva Junior High School Bandar Lampung proved to be an effective strategy to optimise the learning process. Game-based learning media makes the learning process more interesting and fun, thus increasing students' motivation and engagement in learning. Games allow active interaction with the subject matter and can be tailored to each student's learning ability and pace, enabling more personalised and effective learning.

Introduction

Learning is the most important investment for every nation, especially for developing nations that are actively developing their countries. Learning development is inseparable from the responsibility of an educator, how the educator transforms the knowledge possessed with existing teaching materials, and by paying attention to teaching methods that are easily accepted by students so that the goals are achieved in accordance with what is expected. The goal to be achieved, then in the learning process the teacher must carry out an activity called evaluation. (Idrus L, 2019).

The learning process must focus on contexts and experiences that can make students have interest and can carry out learning activities. In other words, the quality of learning will be greatly influenced by the quality of lesson planning used. The learning planning model should be based on active learning. During teaching and learning activities, students must be active in using their cognitive aspects to build new knowledge. Lesson plans that are developed by emphasising a variety of activities that require students to be more actively involved will have an influence on their learning experience. Children who are actively

involved during the learning process will have many learning experiences, while children who are less actively involved during the learning process will only gain a little learning experience.(Poppy Anggraeni, 2018).

Learning outcomes can generally be categorised into 3 indicators, namely 1) learning effectiveness which is usually measured by the level of success (achievement) of students from various angles, 2) learning efficiency which is usually measured by learning time or learning costs, and 3) learning attractiveness which is usually measured by the tendency of students to want to learn continuously (Tarigan, D., & Siagian, 2015). The author's observation at Bodhisattva Junior High School in Bandar Lampung, the learning process is not optimal, marked by very low student learning outcomes, especially in class VIII with a result of 65.9%.

Table 1 Student learning outcomes at Bodhisattva Junior High School Bandar Lampung

Description	Class		
	VII	VIII	IX
Number Of Student	92	88	72
Complated	43	30	42
Complated	49	58	30
Average Completion	46,7	34,1	58,3
Average Not Completion	53,3	65,9	41,7
Total	**100**	**100**	**100**

Source: learning outcomes data

Based on the data above, it shows that students at Bodhisattva Junior High School in Bandar Lampung have decreased learning outcomes such as in class VII getting an average of 53.3% of incomplete grades, class VIII 65.9%, and class IX 41.7%. This means that the low learning outcomes certainly have an impact on learning objectives. Yeni Asmara and Dina Sri Nindianti, (2019) suggest that classroom management is a benchmark for achieving what is the learning objective effectively and efficiently in the education process, in general, educational goals are said to have been achieved if classroom management is well implemented in the school itself. Classroom management is defined as an effort made by the teacher as a classroom manager in managing students in the classroom which is carried out to design or design so as to be able to create and at the same time maintain a pleasant atmosphere, generating student motivation to always be actively involved when the learning process takes place in the classroom environment so that such a conducive atmosphere will be able to help support the success of the previously planned teaching programme. (Asmara & Nindianti, 2019).

Researcher interviews with students, it is known that low learning outcomes are influenced by the learning environment, such as teachers explaining more learning material, students are not involved during the learning process, students continue to take notes and assignments, lack of learning media, and teachers tend to dictate during the learning process. Furthermore, the learning process tends to reduce students' interest, motivation and critical thinking, which is caused by the teacher's conventional learning style.

The researcher's study while at Bodhisattva Junior High School Bandar Lampung, learning resources are still conventional such as printed books, teaching materials, and the lack of learning media used by teachers to implement learning in the classroom. Students of

Bodhisattva Junior High School Bandar Lampung have varied characteristics, such as family background, social environment and social influence. While the general characteristics of students of Bodhisattya Junior High School Bandar Lampung are 1) Students are in the age range of around 12-15 years, which is an important period in physical, emotional, and social development; 2) Students are in the formal operational stage of cognitive development according to Piaget's theory, where they begin to think abstractly, logically, and systematically. The ability to understand more complex concepts begins to develop; 3) Students begin to seek self-identity and independence. They are often influenced by peers and begin to develop deeper and more meaningful social relationships. Emotions can be more intense and varied; 4) Learning motivation can be influenced by the relevance of the subject matter to their daily lives and personal interests; 5) Students are generally very tech-savvy and often use gadgets and social media in their daily lives. Technology can be a powerful tool in the teaching and learning process if used wisely; 6) Junior high school students are in an identity-seeking phase where they begin to form a view of themselves and the world around them. Influences from family, peers, and media are significant in this identity formation.

The globalisation of the information technology industry revolution has a significant impact on teachers and students in the learning and teaching process. The utilisation of technology as a learning media can certainly contribute to teachers to develop learning and train creativity and innovation in designing learning and learning at Bodhisattva Junior High School Bandar Lampung with the aim of improving students' cognitive, affective and psychomotor abilities and creating collaborative and fun learning. For this reason, this study aims to describe the implementation of Game-Based Learning Media Utilisation to Optimise the Learning Process at Bodhisattva Junior High School Bandar Lampung.

Research Methods

This research uses the literature review method of game-based learning media utilisation to optimise the interactive learning process. There are 10 journals used by researchers, most of the research was conducted in Indonesia. The author searches for journals related to the use of game-based learning media to optimise the learning process. Journal searches were conducted using Google Scholar, Garuda Portal and Biomedcentral. The articles used used Indonesian and English full-text articles. All game-based learning media journals for Optimising the Learning Process in tabular form are then reviewed, analysed, and see the results of optimising game-based learning media have been or criticised and finally make a summary..

Research Results And Discussion

Research Results
The results of this study using keywords and some article restrictions, the number of articles that have been found is 10 relevant articles. All of these journals are related to the keywords set by researchers. Table 1 is the result of the literature found by researchers.
Research Results
Table 2 Results of optimising the learning process with game-based learning media

Author Name and Year	Review Title	Research Results
Hari, Komang Dewi, Santhi Ayu,	Optimising Teachers' Skills in Designing	Through a series of service stages that have been carried out, it can be concluded that

Author Name and Year	Review Title	Research Results
I Gusti Melati, Sri Purnaya, I Gede Putu, 2022	Technological, Pedagogical and Content Knowledge-Based Learning Tools	first, there is an increase in teacher skills in making TPACK-based lesson plans by 66.67%; second, there is an increase in teacher skills in designing learning media based on using Canva by 55.56%; third, there is an increase in teacher skills in making assessments in the form of educational games with the Wordwall application by 77.78%. In the implementation of the training, the teachers gave a very positive response and hoped that this activity could continue. (Hari et al., 2022)
Baharizqi, Sindi Ladya Iskandar, Sofyan Kurniawan, Dede Trie (2023)	Optimising the Implementation of Game-Based Learning Models in 21st Century Learning in Primary Schools	Innovative learning in the 21st century has characteristics that lead to interactive, holistic, integrative, scientific, contextual, thematic, effective, collaborative, and learner-centred learning, and the implementation of learning is directed using learning models/methods related to these characteristics. It can be concluded that Game-Based Learning is suitable as an innovation in learning. because the results of the preliminary study show that Game-Based Learning is effective and efficient and based on the literature study Game-Based Learning has many benefits and advantages which are its advantages. (Baharizqi et al., 2023)
Misael Hendrivan Pasaribu, Tanti Listian, (2021)	Optimisation of online learning media to encourage students' active learning in mathematics class	The use of online learning media to carry out online learning is inseparable from the role of teachers in choosing and optimising media and its functions appropriately, including in learning mathematics. The optimisation that teachers do by using Cisco Webex is by involving students in learning and discussion with the help of the features contained in Cisco Webex. Especially because the video sharpness is up to Full-HD, the teacher can observe each student and if you see students who are less active, the teacher encourages these students to get involved in the discussion. The optimisation that teachers

Author Name and Year	Review Title	Research Results
		use by using Quizizz itself is to use Quizizz as a medium to check student understanding. That way, every student is encouraged to be involved in working on the questions given and be involved in practice. (Misael Hendrivan Pasaribu, 2021)
Aslami, Raudhatul (2021)	Optimising Indonesian language learning using nearpod application-based learning media	The use of Nearpod application can be used in distance learning. The use of Nearpod app is highly recommended to teachers because it has many innovative and educational features to create interactive learning, can be accessed for free, and is easily accessible using mobile phones by students. Nearpod application can optimise Indonesian language learning, for example on biography text material. Indonesian language learning related to biography text, can use Nearpod application content, such as Video, Web Content, Slide and Slide Show to deliver the material. Nearpod is also very practical to be used to evaluate Indonesian language learning on biography text through Matching Pairs, Open Pairs, and Open Show activities. through Matching Pairs, Open Ended Question, Time To Climb, Fill In the Blank, and Poll activities. (Aslami, 2021)
Hasanah, Fitria Nur. Taurusta, Cindy. Untari, Rahmania Sri. Nurul, Dini (2021)	An android-based educational game as an optimisation of online learning during the Covid 19 pandemic	The educational game was validated by material experts, learning media experts, and tested on a limited group. The feasibility level of the android-based educational game by material experts in the content aspect of the material is 93.2% and the language aspect is 93.3% with very feasible criteria. The level of feasibility by media experts is 90% for content quality aspects, design and audio aspects with a percentage of 95%, and 93.75% in the aspect of interaction and feedback with very feasible criteria. The results of the limited group trial reached a percentage of 96% with very feasible criteria. Based on

Author Name and Year	Review Title	Research Results
		the feasibility test that has been carried out, it can be concluded that the android-based educational game is feasible and can be implemented in the learning process. (Hasanah et al., 2021)
Nadia Lutfi Choirunnisa, Retno Dwi Febriani (2021)	Digital-based Snakes and Ladders Game to Optimise Practice of Fraction Problems for Elementary School Students	The results showed that snakes and ladders game-based learning media on the topic of addition and subtraction fractions in grade V SD was declared valid and had very good criteria on all criteria. Media trials obtained student questionnaire results with a percentage level of 92.56% (Very Good) and teacher questionnaire results with a percentage level of 92.5% (Very Good). digital-based snakes and ladders game learning media is feasible to use to optimise practice questions, especially on the topic of fractions. (Nadia Lutfi Choirunnisa, 2021)
Amalia, Zarya, (2024)	Optimising Quizlet Digital Media as a Medium	BIPA learning is learning specifically designed for foreign speakers who want to learn Indonesian. There are four language skills that must be learnt by BIPA learners, namely listening, speaking, reading and writing skills. Teaching these language skills requires a language learning strategy, which includes the media needed to achieve the learning objectives, the materials taught, and the teaching methods. The selection of the right learning media has a great influence on learners' understanding of the material being learnt. Interactive learning media is one of the learning media that can be used to improve learners' understanding. Interactive learning media can be in the form of game-based applications that are easily accessible.(Amalia, 2024)
Annisa, Nur Ayu Ageng (2022)	Improving Learning Effectiveness Through Android-Based Educational Game Applications	Based on the average results of the pre-test and post-test students showed an increase of 30%. It can be concluded that there is an increase in student learning outcomes using learning media in the form of android-based game applications in

Author Name and Year	Review Title	Research Results
		geography subjects for Indonesian cultural diversity material. Then, the results of the analysis using the N-Gain score of 0.73 with a high category. It can be concluded that the product of the developed learning media has a fairly effective impact on improving student learning outcomes (Annisa & Ageng, 2022).
Safaruddin, Muhiddin P, Ismail, Sahribulan, Dian Dwi Putri Ulan Sari P. (2022)	Optimising Quizizz as Learning Gamification to Support Technology Adaptation for Teachers at Smp Negeri 21 Bulukumba	Training on the use of the Quizizz application as gamification in learning to support technology adaptation for teachers of SMP Negeri 21 Bulukumba was carried out well. The participants were very enthusiastic about participating in the activity There is an increase in teacher knowledge and skills in preparing application-based evaluation instruments with the concept of games (Safaruddin, Muhiddin P, Ismail, Sahribulan, 2022).
Asdar, Swandi Ahmad, Sudirman (2022)	Optimising the Application of Educational Technology through the Solar-based Energy Independent School Program on Sabangko Island	The implementation of the community service incentive program with the title "Optimising the Application of Educational Technology through the Solar-Based Energy Independent School Program on Sabangko Island" has been carried out well. Some of the results of this programme include (1) several UPT SPF SDN 41 Sabangko teachers and the surrounding community have been able to install PLTS as a source of electrical energy in the implementation of learning, (2) several teachers have been able to use various educational facilities in learning that use electrical energy such as LCD / Projector and laptop (PC), (3) student responses to learning by using digital learning media in the form of games and learning animations are in the good category. Some suggestions need to be made so that the implementation of community service activities in this program can be maximised for the following year, including (1) the duration of the program work should be made

Author Name and Year	Review Title	Research Results
		longer (3 months) so that work from planning, program implementation and reporting can be maximised. (2) the form of implementation of MBKM is made in detail such as the requirements for students involved, the number of credits that can be converted and learning hours in the implementation of MBKM activities also need to be conveyed in the programme guide.(Asdar, Swandi Ahmad, 2022)

Discussion

The use of game-based learning media, such as the digital snakes and ladders game, is effective in increasing student engagement and improving understanding of the subject matter, especially on the topic of fractions. This shows that interactive and fun learning approaches through games can provide significant benefits in the learning process. Lesson planning that allows students to be actively involved in the learning process can enhance their learning experience. By providing opportunities for students to actively participate, teachers can help students construct new knowledge better. Students of SMP Bodhisattva Bandar Lampung have diverse characteristics, including in terms of the influence of social environment, emotional development, and formal operational cognitive stage. Understanding students' characteristics is important in designing learning that suits their needs and development. The utilisation of technology as learning media can assist teachers in developing more innovative and creative learning. By utilising technology wisely, teachers can create more interesting and relevant learning experiences for students, as well as improve their cognitive, affective and psychomotor skills.

The utilisation of game-based learning media can provide many benefits in optimising the learning process at Bodhisattva Junior High School Bandar Lampung. With good planning, adequate training, and infrastructure support, games can be an effective tool to improve student engagement, motivation, and learning outcomes. Thus, the study shows that the use of game-based learning media, lesson planning that actively involves students, understanding students' characteristics, and the utilisation of technology in learning can make a positive contribution in optimising the learning process at Bodhisattva Junior High School Bandar Lampung. Based on relevant studies, researchers found that the utilisation of learning media can have an impact on the student learning process, especially in achieving student learning objectives.

Conclusion

The utilisation of game-based learning media at Bodhisattva Junior High School Bandar Lampung has proven to be an effective strategy to optimise the learning process. Game-based learning media makes the learning process more interesting and fun, thus increasing students' motivation and engagement in learning. Games allow for active

interaction with the subject matter and can be tailored to each student's learning ability and pace, allowing for more personalised and effective learning.

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