

The Application of Game-Based Learning Model Accompanied by Wordwall on Students' Learning Independence in PAI BP Subject

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ABSTRACT

This study aims to determine the application of the Game Based Learning model accompanied by Wordwall media on student learning independence in Islamic Religious Education and Morality (PAI BP) subjects at SD Angkasa Padang. The background of this study is based on the low level of student learning independence in PAI BP learning, which tends to still depend on teachers. This study used a quantitative approach with a quasi-experimental method and a pretest-posttest control group design. The research subjects were fifth-grade students at SD Angkasa Padang, who were divided into an experimental class and a control class. The research instruments were a learning independence questionnaire and an observation sheet of student learning activities. The data were analyzed using a t-test to see the significant difference between the two groups. The results showed that the implementation of the Game-Based Learning model with the help of Wordwall had a positive effect on increasing student learning independence. Students became more active, motivated, and able to manage their learning time independently. Thus, the implementation of the Game-Based Learning model accompanied by Wordwall can be used as an alternative effective learning strategy to increase student learning independence in PAI BP lessons in elementary schools.

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1. Introduction

Effective learning in education does not only depend on the material delivered by educators, but also on the methods and approaches used by educators. In this modern era, technological developments and social changes demand innovation in the learning

process to make it more interesting, interactive, and relevant to the needs of students. Monotonous and unvaried approaches often result in low student interest in learning, which ultimately affects student learning outcomes.

Based on a preliminary survey conducted by the researcher in September 2024, it was found that the PAI and BP learning models still mostly use conventional models such as direct instruction, which is the direct delivery of material by educators and learning activities in simple discussion groups. This approach is considered to be unable to fully optimize student independence, so that learning outcomes have not reached the expected targets (Kadarisma, 2018).

An engaging learning model is very important in the learning process to avoid undesirable outcomes, such as boredom or a decline in learning independence. One learning model that is considered capable of offering engaging learning is the game-based learning model. This Game Based Learning model is also very good for cognitive development, such as student learning achievement. This statement is in line with Vigotsky's opinion (Santrock, 2002:273) in (Oktavia, 2022). He also believes that games in learning are an excellent setting for cognitive development (Oktavia, 2022).

Game-based learning is an innovation in education that combines learning with play (Coffey, 2009) explains that Game Based Learning utilizes games for serious purposes, thereby significantly supporting the learning process. Coffey also describes Game Based Learning as a learning model that incorporates subject matter into game activities, allowing students to interact with each other (Coffey, 2009).

The Game-Based Learning model described by Coffey above is derived from Piaget's cognitive development theory, which holds that children's intelligence is not only innate or merely the result of experience, but is formed from the actions that children take. Piaget also stated that play is an important part of children's cognitive development and contributes to the process. Play activities help children activate their mindsets in ways that can be applied in real life, for example through completing tasks in games (Pratiwi dkk., 2024a; Purwanto, 2020).

The Game-Based Learning model has become one of the recognized models effective in improving student learning independence (Pratama & Larasati, 2024). Game-Based Learning is a learning model that integrates game elements into the teaching and learning process to create an enjoyable learning experience (Nahampun dkk., 2024). Through this learning model, students not only learn to understand the material, but are also encouraged to think critically, solve problems, and collaborate with their peers.

One of the main advantages of Game Based Learning is its ability to build learners' independence. In a game-friendly environment, learners are encouraged to take initiative, explore new concepts, and develop their own learning strategies (Mulyani dkk., 2023). Thus, the application of this model not only improves understanding of the material, but also encourages the formation of independence, which is very important in character education.

The Game-Based Learning model in this study will be combined with the Wordwall website. Wordwall is a website that can be accessed via the internet and is equipped with many games and quizzes that educators can use to deliver lessons. This website is ideal for educators who want to develop an active and enjoyable learning model. In addition, the games on the Wordwall website can also be printed out to be played offline together (Khairunisa, 2021).

Wordwall is a digital learning platform that allows educators to create various educational games such as quizzes, crossword puzzles, and matching games. Wordwall provides a simple and user-friendly interface, allowing educators to quickly create interactive materials that are in line with the curriculum (Arini dkk., 2024). Wordwall's strength in creating interactive learning makes it very suitable for use in game-based learning models.

In PAI and BP lessons, Wordwall can be used to convey various concepts such as values of faith, worship, and morals through games. For example, educators can create quizzes about the pillars of Islam, crossword puzzles about the names of prophets, or matching games about manners and daily behavior. In this way, students not only learn, but also enjoy the learning process.

In addition, the use of Wordwall can encourage active engagement of students in the learning process. A study by (Tanthowi dkk., 2023) shows that students who learn using interactive media such as Wordwall have higher material retention rates compared to students who learn using conventional models. This is because Wordwall creates a collaborative, competitive, and enjoyable learning environment.

2. Literature Review

Islamic Religious Education is “education about the fundamentals of morality, ethics, and virtues, the character traits that must be possessed and made into good habits to bring about changes in physical and spiritual development, manifested in the form of real life, leading to the formation of a noble personality in accordance with the values of Islamic teachings” (Suryawati, 2016). The conclusion from the above definitions is that Islamic Religious Education (PAI) is a process of shaping morals, ethics, and noble character to develop physical and spiritual potential, create good habits, and build personality in accordance with Islamic values.

Morality is actually rooted in ethics or moral philosophy. Etymologically, the word ethics is closely related to morality. Ethics comes from the Greek word *ethos*, which means customs. Meanwhile, “moral” comes from the Latin word “*mos*,” which also means custom. In relation to character, ethics discusses a person's awareness to make rational moral considerations regarding the obligation to decide the best choice when facing real-life problems (Uhbiyati, 2005).

Islamic Religious Education and Moral Education in Elementary Schools have been following the Merdeka Curriculum since its implementation in 2021, previously using the kurikulum 2013 including Islamic Religious Education and Moral Education (Dhaifi,

2017), As an independent curriculum, it is hoped that students can develop according to their potential and abilities because with an independent curriculum, they will receive critical, high-quality, expressive, applicable, varied, and progressive learning. The implementation of this new curriculum requires cooperation, strong commitment, sincerity, and concrete implementation from all parties so that the Pancasila learner profile can be instilled in students. The implementation of the independent curriculum in PAI subjects is going well because the flow of the independent curriculum is very suitable for the character of PAI, which must be delivered in stages, starting with the most important things, namely Aqidah, Qur'an Hadith, Fiqh, Akhlak, and Tarikh (Rifa'i dkk., 2022).

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According to Arend (in Mulyono, 2018:89), choosing the term learning model is based on two important reasons. First, the term model has a broader meaning than approach, strategy, method, and technique. Second, models can serve as an important means of communication, whether the discussion is about teaching in the classroom or the practice of supervising children. A learning model is a conceptual framework that describes systematic (orderly) procedures in organizing learning activities (experiences) to achieve learning objectives (learning competencies). In other words, a learning model is a plan for learning activities so that teaching and learning activities can run well, be interesting, easy to understand, and follow a clear sequence (Octavia, 2020).

The function of the learning model is to serve as a guideline in the design and implementation of the learning process. Therefore, teachers must choose a learning model that is influenced by the nature of the material to be taught, the objectives to be achieved in the learning process, and the level of student ability. The components of a learning model are the parts that are contained within the learning model. The components of a learning model consist of: Syntax, Social System, Reaction Principle, Support System, and Instructional and Accompanying Impact (Zagoto, 2023).

The game method is a game that will make the classroom atmosphere less

monotonous and can reduce fatigue, especially when we are in the classroom. Therefore, the method of using games can be called Game-Based Learning (GBL) or learning based on games. With this approach, learning in the classroom will become more interesting and enjoyable. Especially when Game-Based Learning is not just about playing, but also about giving rewards so that students are more focused on learning. There are many different types of rewards, such as gifts for students who are able to complete tasks from educators (Hidayah & Pramesti, 2023).

According to (Coffey, 2009) Game-Based Learning (GBL) is a teaching and learning model that integrates educational material into a game or play. GBL connects educational material with technology (Indarti & Laraswati, 2021). Game-based learning is a learning activity designed specifically to use applications to support the achievement of learning objectives. This model is considered suitable for the digital generation. With game-based learning, students can experiment and face challenges through the game mechanism (Permana, 2022).

The GBL model has various benefits in learning, including: Increasing student independence and engagement. Improving students' ability to work together. Providing quick feedback on student progress. Improving students' problem-solving abilities, creativity, and skills. Encouraging students to take risks and experiment (Pratiwi dkk., 2024a; Winatha & Setiawan, 2020).

Every learning process has its strengths and weaknesses. The strengths of this method are: It trains independence and involves all students in learning. It can train students' abilities, such as literacy skills. It serves as a therapeutic medium to overcome cognitive difficulties. Students are stimulated to be active, think logically, be sportsmanlike, and feel happy and satisfied in learning. Learning materials are easier to understand and remember. Students' problem-solving skills improve. Learning effectiveness increases. Meanwhile, the disadvantages are as follows: Requires a relatively large amount of learning time. Requires additional tools and media for learning to be carried out properly (Oktavia, 2022).

The syntax of Game Based Learning (GBL) is the steps taken in the learning process using games. GBL syntax can include: Selecting games according to the topic. Explanation of concepts, educators provide explanations/initial concepts related to the games to be played. The objectives and challenges that must be completed. Rules: students understand and agree to the rules presented by the educator, who also provides space for students to express themselves. Playing the game: students play the game using Wordwall media with a predetermined theme of "I am a good child," including time limits and a schedule for playing. Summarizing knowledge, students summarize the knowledge, experiences, and things they have gained from the game they have played. Reflecting, students together with the researcher reflect on the learning outcomes that the students have gained (Hasanah dkk., 2024; Maharani dkk., 2024; Pratiwi dkk., 2024b).

Wordwall is a digital game platform presented through a website, offering several game options and questions. This platform can be used by educators as a tool to deliver lesson material and improve student understanding (Olisna dkk., 2022). The application

of the Wordwall model is considered an innovation in the context of education, with a focus on improving the effectiveness and quality of student learning. The application of Game Based Learning models such as Wordwall is expected to bring about changes in student learning outcomes. In addition, this model is considered a tool that can be used by students to deal with boredom that may arise as a result of continuous learning in the classroom (Olisna dkk., 2022).

Maslow (1993:16) in (Sobri, 2020) state that a person is considered independent if they possess the attitude and behavior to make their own decisions, manage themselves, take initiative, and be responsible in all matters. Sanan & Yamin (2010:83-84) in (Sobri, 2020) adding that independent children have several indicators, including (1) believing in their own abilities; (2) having intrinsic independence or the drive to act that comes from within the individual; (3) being creative and innovative; (4) being responsible or accepting the consequences of their actions; and (5) not depending on others (trying not to ask for help, remaining independent).

Learning independence is an attitude that a person has in the learning process that allows them to actively participate without depending on others (Dewi dkk., 2020). (Sugandi, 2013) explains that this attitude includes students' ability to take initiative, identify learning needs, set goals, and monitor, organize, and control the learning process. In addition, independent students can see challenges as opportunities, seek and use relevant learning resources, choose appropriate learning strategies, evaluate their learning outcomes, and maintain a positive self-concept. According to (Basir, 2010) Independent learning is a process in which students actively achieve goals without relying on others, including educators.

3. Method

This research is quantitative research that covers the stages of problem formulation, hypothesis proposal, empirical data collection, data analysis, and conclusion drawing through the application of formulas and statistical calculations (Adnan & Latief, 2020). An experiment is an activity that is deliberately designed and carried out by researchers to obtain evidence relevant to the proposed hypothesis. This research deliberately and systematically manipulates or treats certain variables, then observes and analyzes the impact of the treatment. Researchers use experimental methods because they aim to test the effect of a particular treatment on the variables being studied.

The research was conducted at SD Angkasa Lanud Sutan Sjahrir, located at Jl. Prof. Hamka No. 24 Tabing. SD Angkasa is an educational institution under the auspices of the Ardhya Garini Foundation (Yasarini). The research was conducted in the even semester in April 2025 of the 2024/2025 academic year. This school has successfully achieved national accreditation and is equipped with supporting facilities and infrastructure, including LCD screens in classrooms, internet facilities, and computer laboratories.

The sampling technique used was total sampling, a sampling technique with specific considerations (Sugiyono, 2013). The researchers selected two classes from all classes at SD Angkasa, namely class IV B (experimental class) and class IV A (control class). The

selected classes were recommended by PAI and BP subject teachers, taking into account the abilities and learning schedules of the students.

4. Results and Discussion

This study was conducted in class IV I and IV II at SD Angkasa Lanud Sutan Sjahrir Padang starting in April 2025, with four meetings in the experimental class and two meetings in the control class. The first and second meetings involved learning activities using the Game-Based Learning model accompanied by Wordwall in the experimental class and direct instruction in the control class. After that, the control class was immediately given a questionnaire and a learning outcome test. The last meeting involved a post-test in the experimental class, followed by a questionnaire on the students' learning independence. The post-test data was analyzed to serve as a benchmark to determine the effectiveness of the GBL model accompanied by Wordwall on the independence and learning outcomes of students in grade IV of Angkasa Lanud Sutan Sjahrir Padang Elementary School on the subject of "I am a pious child." The research was conducted twice a week for PAI and BP in class IV I and four times a week for class IV II. Each fourth-grade class received two hours of PAI and BP lessons per week, with a time allocation of 2 x 35 minutes. In classes IV I and II, PAI and BP lessons were conducted every Monday and Friday.

During the research implementation stage, four meetings were held for each experimental class. Meetings 1-2 taught material on greetings, helping others, and avoiding hypocritical behavior using the GBL model accompanied by Wordwall. The GBL learning steps consisted of essential questions, planning game rules and activity schedules, monitoring, game result assessment, and evaluation. The GBL-based learning steps began with formulating essential questions that guided the direction of learning, followed by designing game rules and objectives to be achieved. After that, the educator structured the learning schedule and activities so that the game ran smoothly. During the process, the educator monitored the involvement and progress of the students. Next, the students' learning outcomes are assessed in terms of knowledge, attitude, and skills. Finally, educators and students reflect and evaluate the effectiveness of the learning process and provide feedback for future improvements. In the third meeting of the experimental class after completing the learning material, the researcher gave a post-test to the students. The material tested was "I am a good child." This was followed by an assessment of the students' learning independence by giving them a questionnaire containing statements related to their independence in participating in PAI and BP lessons.

During the research implementation stage, two meetings were held for the control class. In the first and second meetings, the material "I am a good child" was taught using Direct Instruction learning. After the learning material was completed, a post-test was given to the students immediately during the second meeting. The material tested was "I am a pious child." After that, the students' learning independence was assessed by giving them a questionnaire containing statements related to their independence in

participating in PAI and BP learning. The average post-test scores for the experimental and control classes can be seen in the following table:

Class	N	Min	Max	Mean	Std.dev
Experimental Class	26	73	94	85.15	5.569
Control Class	27	68	91	79.55	6.554

Based on the table above, the average post-test questionnaire scores for the experimental class were higher than those for the control class. Independent learning is defined as the characteristics and abilities possessed by students to carry out active learning activities, which are driven by the motive to master a competency, and are built on the knowledge or competencies that have already been acquired. According to (Mujiman, 2011) "Independent learning can be defined as the characteristics and abilities possessed by students to engage in active learning activities, driven by the motivation to master a particular competency that they already possess." A student is said to have independent learning if they have the will to learn on their own (Aini & Taman, 2012).

Previous research conducted by This study used a quasi-experimental research design with a randomized control group only design, which aimed to determine (Rijal & Bachtiar, 2015) Independent learning is a must in today's learning process, as long as the lessons are geared towards the future of students, which can be clearly seen in families and communities. Wedemeyer explains that independent learning is a way of learning that gives students a greater degree of freedom, responsibility, and authority in planning and carrying out their learning activities (Chareuman, 2003). Next (Delyana, 2021) states that independent learning requires students to take initiative, be active, and engage in the learning process in order to improve their academic performance.

Basically, independence is an individual behavior that involves taking initiative, overcoming obstacles/problems, and having the confidence to engage in learning activities (Mulyawati & Christine, 2019) states that independent learning is influenced by several factors, namely factors within oneself (endogenous factors) and factors outside oneself (exogenous factors).

Endogenous (internal) factors. These factors are all influences that originate from within oneself, such as heredity and physical constitution since birth with all the attributes attached to it. Everything that is brought from birth is the basic provision for the individual's further growth and development. Various basic traits from the father and mother may be found in a person, such as talent, intellectual potential, and physical growth potential. Exogenous (external) factors. These factors are all circumstances or influences that originate from outside the individual, often referred to as environmental factors. The environment in which an individual lives greatly influences the development of their personality, both negatively and positively. A good family and community environment, especially in terms of values and lifestyle habits, will shape an individual's personality, including their independence.

According to Desmita, independence is the ability to freely control and regulate one's own thoughts, feelings, and actions, as well as striving to overcome feelings of shame and hesitation (Mulyadi & Syahid, 2020). From the research conducted, it can be seen that student independence has reached a good level of 96.15% and a poor level of 3.85%. This proves that by using the GBL model, children's independence will increase rapidly.

5. Conclusion

The learning independence of students in PAI and BP subjects who participated in GBL learning accompanied by word walls showed higher results compared to the Direct Instruction (DI) model. This can be seen from the average score of the experimental class of 85.15, while the control class obtained an average of 79.55.

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