



APPLICATION OF LEARNING TO STUDENTS USING THE PQ (QUIZ GAME) METHOD

Mawar Maharani
Sulastriana J.Sapondan
Shafira Khairunissa Podungge
Dwi Erninda Puspita
Abdul Rahmat

Elementary School Teacher Education Department, State University of Gorontalo
e-mail : mawar_s1pgsd@mahasiswa.ung.ac.id
abdulrahmat@ung.ac.id

Article history:		Abstract:
Received:	26 th October 2022	Selection of learning methods in a learning process can affect student learning outcomes and the atmosphere in the teaching and learning process. Through a game, students can experience teaching and learning activities in a relaxed and fun way. In addition, games can also assist in developing students' skills through the playing process, such as game sequences, verbal, visual, kinetic skills, and other game-based activities. We carried out the quiz game method at SD 2 in West City to find out the use of quiz games and improve students' ability to count as well as increase students' enthusiasm for learning and develop basic knowledge of mathematics, so that children are mentally ready to take part in further mathematics learning. We did this project at SD 2, West City, using a qualitative research method with a descriptive design. Conclusion: there are some students who are not fluent in calculations and subtraction. Perhaps this is due to the lack of students' understanding of the concept of learning. Suggestion: teachers can use easy and fun learning methods or interesting learning media so that they can foster interest in students to be even more enthusiastic about learning.
Accepted:	26 th November 2022	
Published:	30 th December 2022	
Keywords: Learning, interest and creativity in PQ (Quiz Game)		

INTRODUCTION

As stated in Law no. 20 of 2003 concerning the National Education System that educators and education staff have an obligation to: (a) create an educational atmosphere that is fun, creative, dynamic and dialogic; (b) have a professional commitment to improve the quality of education; and (c) set an example and maintain the good name of the institution, profession and position in accordance with the trust given to them.

Quiz Game is a form of game or thought in which players (as individuals or in teams) attempt to answer questions correctly. The game comes from the English word which has the basic meaning of the game. Game theory is a way of learning that is used in analyzing a number of players and individuals who show rational strategies. Game theory was first discovered by a group of mathematicians in 1944. The theory was put forward by Jhon Von and Oscar Morgenstren (1944) which contains a set of rules that build a competitive situation from 2 or several groups by choosing a strategy that is built to maximize one's own victory or

minimize opponent victory. The rules determine the possible actions for each player, the amount of information each player receives as the player progresses, and the amount of wins or losses in various situations.

Games have become a part of modern human life today. Stress often hits humans when they are too busy with their work, that's when games can be the main alternative to relieve stress. Games usually provide their own entertainment for people who play them. The game itself is no longer just a means to play but we can benefit a lot from the game, but unfortunately most of the games circulating in society today are not helping us in broadening our knowledge. For this reason, researchers designed games that were full of education, which were very important. Besides being able to entertain, games can also be an alternative to broaden knowledge. On this basis, it is planned to take advantage of the rapid pace of today's technology in the field of games about science. According to Ernest Adams and Andrew Rollings (2008) in the book Fundamentals of game design, games are a



type of playing activity with players trying to achieve the goals of the game by taking actions according to the rules of the game.

Game Theory (Game) was first put forward by a French mathematician Emile Borel (1921). Then it was further developed by John V.N and Oscar Mogenstern as a tool for formulating competitive economic behavior which contains "The game consists of a set of rules that build a competitive situation from two to several people or groups by choosing a strategy that is built to maximize individual victory or for minimize your opponent's wins.

Educational game design is a game that has been designed to teach players about a particular topic, expand concepts, strengthen development, understand a historical or cultural event, or help them learn skills as they play (Widodo, 2011).

Through a game, students can experience teaching and learning activities in a relaxed and fun way. In addition, games can also assist in developing students' skills through the playing process, such as game sequences, verbal, visual, kinetic skills, and other game-based activities (Boyle, 2011).

Learning Media According to Supriatna, D., (2009). Introduction to Learning Media. Pages 3 and 4, learning media is a tool that functions to convey learning messages. The use of media in learning can help children in providing meaningful experiences for students. The use of media in learning can make it easier for students to understand something abstract to be more concrete.

According to Jasson (2009:2) "Game is a system or program in which one or more players make decisions through control of objects in the game for a particular purpose".

Meanwhile, according to Wardhani, et al (2013: 473) "Games (games) in general are recreational activities with the aim of having fun, filling free time, or light exercise. The game is usually done alone or together.

Selection of learning methods in a learning process can affect student learning outcomes and the atmosphere in the teaching and learning process. Therefore we need an effective learning method. According to Sugiyono (1978) a learning method that can be said to be effective if the method is easy to implement, can produce a conducive learning atmosphere and can improve student learning outcomes.

There are many models offered by CAI, for quiz games one of them is the drill and practice model (practice and practice). This method is very interesting to develop, especially applied in the form of games or

games. According to Virvou, game technology can motivate learning and involve players, so that the learning process is more enjoyable. On the other hand, playing games is an activity that is familiar to most students. Not even a few students who play games is a hobby.

According to Samuel Henry (2011), he is a game developer from Indonesia, in his book entitled A Practical Guide to Making 3D4 Games, game elements are very important, even without these elements the value of our games can be reduced. Even for large commercial scale. These game elements are an absolute must for small-scale games or freeware, so these elements are sometimes not all in a game.

In a book by Adams (2014), defines games as follows: "GAMES are a type of play activity, conducted in the context of a pretended reality, in which the participant(s) try to achieve at least one arbitrary, non-trivial goal by act according to the rules". That is, a game is a type of play activity, carried out in the context of a false reality (reality simulation), in which the player tries to achieve at least one specific goal by acting according to the rules.

Game is an activity that you do for fun that has rules, and that you can win or lose (Rundell, 2007) which can be interpreted as an activity that is done for fun that has rules so that someone loses and someone wins.

According to Luca Botturi and Christian Loh (Setiawan, 2015) games in learning can be used to explain concepts and reinforce learning. In contrast to games for entertainment, games for learning have a goal of achieving certain learning. In addition, games can also be used as a medium to train students' skills in solving problems, finding solutions, thinking quickly and competing.

Games are structured activities that are usually done for fun. game / game is something that is played with certain rules so that there are wins and there are loses, usually done for refreshing purposes according to Anggra (Rozi, 2010: 6 in Dewi, 2012).

Unity3D software is a game engine or software used to make video games. Unity3D itself was developed by Unity Technologies. After experiencing a development period of 4 years, in 2005 Unity was first launched. Unlike now, at that time, Unity had very few features when compared to Unity3D. A game engine that can run natively on both the Windows platform and Mac OS X, this allows "seamless collaboration between Windows and OSX user developers (Rahman, 2017).

According to Agustinus Nilwan (2007) in his book "Professional Animation and Game Programming" published by Elex Media Komputindo, games are



computer games made with game techniques that currently have various types or what are known as genres. This educational genre game aims to stimulate children's learning interest in learning material while playing. So that with feelings of pleasure it is hoped that children can more easily understand the subject matter presented. This genre actually refers more to the content and objectives of the game, not the actual genre and method of animation. If you want to explore the use of animation, you must understand game creation. Or if you want to make games, you must understand animation techniques and methods, because the two are interrelated.

A game is a system in which the players involved in a conflict are created, determined by rules, which produce a measurable outcome. (Katie Salen and Eric Zimmerman: 2003).

A game or game is something that can be played with certain rules so that someone wins and someone loses, usually in a non-serious context or with the aim of refreshing. (Dawang Muchtar, 2005).

According to David Parlett, a game is something that has an "end and a means to achieve it": meaning there is a goal, an outcome and a set of rules to achieve both.

the physical condition of the Kota Barat 2 SD school is divided into 2 separate buildings, in which the first building has several study rooms namely grades 3, 5 and 6 along with the operator's room, the second building is located at the back of this building there is a study room consisting of grades 1, 2 and 4 along with the teacher's room and the Principal's room. Next we observed the condition of the students' potential, overall the students' academic ability was good. The potential of students is developed according to their talents and abilities, both from an academic and non-academic perspective. Talents and hobbies of students are channeled through extracurricular activities.

Teachers have not optimally made quizzes in games as a learning strategy. And the children have not applied or carried out learning with the quiz game method. We carried out the quiz game method in SD 2, West City. To find out the use of quiz games and improve students' ability to count as well as increase students' enthusiasm for learning and develop basic knowledge of mathematics, so that children are mentally ready to take part in further mathematics learning, through various forms of tools and activities. have fun playing. As well as increasing interaction between groups in the activities we carry out. So that students can count in different situations, and with a more relaxed state in receiving material because it is accompanied by a playing method.

METHOD

We did this project at SD 2 Kota Barat, this project used qualitative research with a descriptive design. Good results will be achieved with a plan that is structured and planned. In a study, these results can approach the desired state if the research is supported by a plan that is quite structured and has clear stages of work. Likewise with this project, efforts to get the desired results are very important to prepare the structure and stages in advance. The sequence of troubleshooting steps that we will do in this project is as follows:

- 1). Conducting field research (observation) to obtain information available at SD No. 2 Kota Barat to be needed in carrying out the project
- 2). Purchase the materials needed for the project.
- 3). Designing the concept of implementing the project to be carried out.
- 4). Get down to the field.

Our target is more students / I because in this project we prefer to target study participants, which are in accordance with the title raised and in accordance with our profession. There are 12 students out of 15 students who take part in in-class learning.

In the first game we choose the game in the form of groups. We divided students into 2 groups consisting of 6 people in 1 group. In this game we use media in the form of balloons and speakers where the balloons are given to each group as well as speakers that aim as guides or tools to start or end the game. The way to play this game is for each group to form a circle, then start this, namely for each group to form a circle, then start playing music through the speakers and the balloons are ready to be passed around the circle from student to student. when the music stops at one of the students, that student will get a question about addition and subtraction. The second game is "Guess the Word". In this game we use the media in the form of speakers. How to play this game is by playing alphabet music, and if the music stops, students will guess the name of the animal according to the last letter of the alphabet mentioned from the music that has been played.

RESULTS

The implementation of learning activities using the PQ method at SD 2 Kota Barat has been carried out and is running smoothly. This activity begins with: We made observations of the activity site on Monday, October 2, 2022



picture 1

Introduction to Students. after entering the class we introduced our names first, after that it was followed by the introduction of each student in the class.



Picture 2

Explanation to Students Regarding the Activities to be Implemented. After our introductions we continued with an explanation of the project we would be doing. In the first game we used music media as accompaniment, balloons as a determinant for who will answer the Quiz, and boards as learning media. And the second game is "Guess the Word" based on the Alphabet Letters.



Picture 3

Student Response. The students were very enthusiastic when they saw the media we used, such as balloons, especially accompanied by music that added to the excitement of the class. Students are braver because when they lose the game they are required to go forward to solve the questions that have been provided in our project.



Picture 4

Thank God, we did this project at SD 2 Kota Barat, this project used qualitative research with a descriptive design. The following is a group photo of class 2B and the homeroom teacher.



Picture 5

DISCUSSION

According to Ernest Adams and Andrew Rollings in the book *Fundamentals of game design*, a game is a type of playing activity with players trying to achieve the goals of the game by taking actions according to the rules of the game. We students use the game "Guess the Name of the Animal/Object" and "Counting While Playing" as a learning method. On October 2, 2022, we made an observation by observing which classes we could use for carrying out our project assignments. In addition, you also made visits to school principals and teachers "to ask for official permission to be allowed to carry out our project. And notify when we were able to go down to practice the learning method we had compiled. On October 3, we from group 1 consisting of; Mawar Maharani, Sulasriana J. Sapondan, Shafira Khairunnisa Podungge and Dwi Erninda Puspita, who had visited SDN 2 Kota Barat after previously obtained approval from the school principal. After introductions we continued with an explanation of the project we would be doing. In the first game, we did a counting learning activity in which we formed two groups. and the second game "guess the name of the animal/object" we explained to the participants teach how to play on game, namely by using music media as a determinant for answering quizzes from us.

Selection of learning methods in a learning process can affect student learning outcomes and the atmosphere in the teaching and learning process. Therefore we need an effective learning method. According to Sugiyono, a learning method that can be said to be effective if the method is easy to implement, can produce a conducive learning atmosphere and can improve learning outcomes. Therefore, we from group 1 chose to use the application of learning using the quiz game method. Through a game, students can experience teaching and learning activities in a relaxed and fun way. In addition, games can also assist in developing students' skills through the playing process,

such as game sequences, verbal, visual, kinetic skills, and other game-based activities (Boyle, 2011).

At the time of learning, some students seemed to have mastered the material of addition and subtraction, but some students did not really understand the material. There were some students who looked embarrassed and scared when asked or asked to answer questions and we did our best to make them more relaxed so that it would be easier for them to understand what we were going to convey. The teachers also support these activities by providing teaching hours. The principal also wants to help by giving permission and monitoring the activities that we make.

In implementing the PQ method we also found several supporting and inhibiting factors including:

Obstacle factor :

1. we found facts in the field that from class 2B there were some children who were difficult to manage,
2. Soul interaction is lacking
3. lack of understanding of addition and subtraction
4. lack of concentration
5. lack of courage of some students

Supporting factors :

1. The students were very enthusiastic about participating in the activity
2. the creation of a harmonious relationship between us and students
3. The principal and teachers really support the activities that are made
4. Friendly parents of students.

CONCLUSION

The conclusion we can draw is that there are some students who are not fluent in calculations and subtraction. Perhaps this is due to the lack of students' understanding of the concept of learning.

SUGGESTION

Our advice is that teachers can use easy and fun learning methods or interesting learning media so that they can foster interest in students to be even more enthusiastic about learning.

ACKNOWLEDGMENTS

We convey saying accept love to lecturer support eye studying Prof. Dr. Abdul Rahmat , S.Sos.I., M.Pd lecturer at State University of Gorontalo Orchid: <https://orcid.org/0000-0002-1681-4450> who have guide during the drafting process of this article .



REFERENCE

1. Wardani , L. (2014). *Pembuatan Game Quiz Siapa Pintar Menggunakan Adobe Flash*. Yogyakarta: Pustaka
2. Isammudin , I., Praganta , J., & Aris , D. A. (2021). Pembuatan game quiz 2d pahlawan masa depan pada platform pc. *Ilmu komputer dan sistem informasi* . Jakarta: Bumi Aksara
3. Amiludin, S., Akbar , R. M., & Sunarmi , N. (2018). Perancangan Game Quiz Tryout Jenjang Sekolah Dasar Berbasis Android . Jakarta: Bumi Aksara
4. Ardiningsi , D. (2019). Pengembangan Game Quiz Interaktif Sebagai Instrumen Evaluasi Infomastif Pada Mata Kuliah Teori Musikl. *Inovasi Teknologi Pendidikan* , 12 (3) 92-103.
5. Guid, G. B. (2015). *Game Edukasi Matematika Untuk Anak Sekolah Dasar Berbasis Android* . Jakarta: Bumi Aksara
6. Adiwisastra , M. F. (2015). Perancangan Game Quiz Interatif Sebagai Multimedia Pembelajaran Drill And Practice Untuk Meningkatkan Hasil Belajar Siswa. *Informatika*. 12 (3) 92-103.
7. Sari , D. P., Putra , R. W., & Syazali , M. (2018). Pengaruh Metode Quiz Interaktif Terhadap Kemampuan Pemecahan Masalah Matematis Mata Kuliah Trigonometri . *Pendidikan Matematika*, 63-72.
8. Babuta , A. I., & Abdul, R. (2019). Peningkatan Kompetensi Pedagogik Guru Melalui Pelaksanaan Super Visi Klinis Dengan Teknik Kelompok . *AL-tanzim : Manajemen Pendidikan Islam* , 1-28.
9. Rahmat , A. (2014). *Pengantar Pendidikan : Teori, Konsep, Dan Aplikasi* . Gorontalo:Ideas Publishing .
10. Pratama , W. (2014). *Game Adventur Misteri Kotak Pandora* . Jakarta: Bumi Aksara
11. Hananto , p. D. (2018). *Rancang Bangun Aplikasi Profiling Data Sekolah Wilayah Surabaya Dan Sidoarjo Pt.Telekomunikasi Seluler* . Jakarta: Bumi Aksara