THE EFFECT OF USING LEARNING MEDIA-BASED WORDWALL EDUCATIONAL GAME ON 4TH GRADE STUDENT'S LEARNING INTEREST IN SOCIAL SCIENCE

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ARTICLE INFO	ABSTRACT
	This study aims to find out: (1) the description of the use of learning media based Wordwall educational game in social science content for 4th grade (2) the description of 4th grade student's learning interest in social science (3) the effect of using learning media based Wordwall educational game on 4th grade students' learning interest in social science. A quantitative approach was used in this research with Pre-experimental Design type of One-Group Pretest-Posttest Design. The independent variable in this study was the use of learning media based Wordwall educational game while the dependent variable was students' learning interest in social science. This research was conducted in the odd semester of the 2022/2023 academic year at SDN Inpres Barombong II, Tamalate District, Makassar City, class IV with a total of 28 students as sample. Data collection techniques used the observation of the use of learning media, questionnaires of learning interest, and documentation which were then analyzed statistically descriptive and inferential using parametric statistics, namely the Paired sample t-test by the help of Learning of Science and Research Innovation (LoSaRi) v.1.0. The conclusions of this study indicate that: (1) The description of the use of learning media based Wordwall educational game in social studies learning content in 4th grade categorized good in the first treatment and increased in the second treatment to be very good, (2) The description of the learning interests of 4th grade students in social science shows an increase after using learning media based Wordwall educational game, (3) there is an effect of using learning media based Wordwall educational game on 4th-grade students' learning interest in social science at SDN Inpres Barombong II, Tamalate District, Makassar City.

INTRODUCTION

Primary school education is a basic phase in drawing up students to face future challenges. Primary school as a formal educational institution is a prominent place to gain the basic skills. Therefore, it is crucial for teachers as the key holders of education in schools to pay attention to the quality of the learning process by reflecting on the standards listed in Government Regulation No.32 of 2013 Article 19 Paragraph 1 regarding the national standard of education that the learning process in the education unit is interactive, inspiring, fun, challenging, and motivating the students to actively participate, and providing sufficient space for initiatives, creativity, and independence according to the students' talents, interests, and physical and psychological development.

The learning process which follows the set standards would have a positive effect on the learning goals' achievement. In actualizing it, it's certainly not irrespective from the requirement of good preparation in learning devices. Teachers in the education unit compulsorily complete and systematize the learning tools to take place the learning process interactively, inspiratively, fun, challenging and motivating so that the students will participate actively, creatively, and independently according to their talents, interests, physical and psychological development (Kusumaningrngrum, Arifin, & Gunawan, 2017)

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Media is one of the learning tools that need to be looked at as one of the learning tools. Media purposely help students engage in active, creative, and fun learning activities (Upa & Damayanti, 2021). Teachers can use a variety of media as a tool that helps deliver material for the success of the learning process.

The success of the learning process can be demonstrated by increasing student learning interest. Learning interest is a factor that encourages students to study on the basis of desire, interest, and pleasure (Yunitasari & Hanifah, 2020) . Students who have a high interest in learning would have an interest in following the learning process and favor every activity carried out (Reski, 2021). A sense of interest and pleasure in learning will help students to achieve every learning competency.

Learning media which are able to help students engage in interactive, creative, and fun learning activities can be utulized as a means of increasing interest in learning. In today's digital era, teachers can take advantage of technological sophistication in designing it. Technology offers various easy-to-use strategies in the teaching process and acts as a stimulant in providing facilities and infrastructure to obtain a pleasant learning atmosphere (Tenau, Annisa, & Widyaningrum, 2019). In its utulization, teachers can use a familiar tool to elementary school students such as smartphones.

One of the types of learning media that teachers can use with smartphones is educational games. Educational games are games used in the interests of learning. Educational games use aesthetics and functionality to attract, educate, and foster students' interest in learning (Atherton, 2022). The use of educational games in the learning process creates a fun atmosphere that will give the students a feeling of liking for material, resulting in maximum learning achievement (Rohani et al., 2021).

Previous researches have shown that educational games can increase students' learning interest. Like the research conducted by Yolanda & Meilana (2021) which stated that there was an effect on the use of educational games on the 4th grade student's learning interest in Social Science. In addition, a study conducted by Fatma et al. (2022) stated that educational games have a positive effect on the learning interest of Civic Education of 5th grade students.

The use of educational games in this research focused on Wordwall. Wordwall in its use can be accessed online by teachers and students with a variety of game templates that provide students with fun, interesting, and challenging learning experiences (Mujahidin et al., 2021). The game has advantages such as being accessible, free and has several different game templates (Rahmi & Angraina, 2021). The various number of game templates available can provide an exciting experience that students are eager to learn because they are challenged to try harder to understand the material delivered from Wordwall's educational games.

Wordwall educational games can be utulized in a variety of subjects. Social Science is one of the subjects that aims to sharpen students' abilities to be mentally responsive and resiliently to face personal and social problems that occur in society (Kariadi, 2017). Social Science is profound even at the primary school level considering that this subject is the basis for students to understand the environment that is part of their daily lives (Clark & Hooser, 2018).

Based on the statment above, it can be seen that Social Science is important for primary school student. However, not all students have a positive perception of Social Science. They consider Social Science is tedious out of theconventional models, media and learning resources such as focusing only on learning books(Asmahasanah, Ibdalsyah, & Sa'diyah , 2018). The interactive learning process carried out through textbooks is only a knowledge dimension that is not balanced by fulfilling students' learning interests (Lutfi et al., 2020)

The above problem also occurred in one of the primary schools in Makassar. Based on pre-research observations conducted in SD Inpres Barombong 2 in January-February 2022, it was found that 4th-grade students were less passionate about receiving material of Social Science. Students lacked focus on learning because they feel saturated. Some of them were interfering with each other, daydreaming, and yawning many times. When discussion and question-and-answer methods were used, only a few students actively participated. In addition, some students are also often late in collecting assignments. Therefore, the use of Wordwall educational game-based learning media could be a solution for increasing students' learning interest in Social Science.

Based on the overall explanation above, researchers are interested in conducting research on at SD Inpres Barombong 2, Tamalate District, Makassar City to know the effect of using Wordwall educational game-based learning media on 4th grade students' learning interest in Social Science to re-confirm or prove whether it is true that there is an effect of using learning media based Wordwall educational game in 4th grade student's learning interest in Social Science

METHOD

The type of this research is quantitative approach with Pre-experimental Design type of One-Group Pretest-Posttest Design. The research design can be described as follows:

Table 1. Research design draft

Pretest	Treatment	Posttest
O_1	X	O_2

Source: Sugiyono (2018, p. 219)

Description:

O_1: Initial test (pretest) before the given of teatment

O_2: Final test (posttest) after the given of teatment

X: Learning process with the use of Wordwall educational game (treatment)

The population of this research are 4th grade students at SD Inpres Barombong II, Tamalate District, Makassar City, totaling 28 students. The total number of populations can be seen in the following table.

Table 2. Research population

Grade IV	Total
Male	12
Female	16
Total	28

The sampling technique used in this research is saturated sampling to determine a sample in which all members of the population are used as research samples. The researcher wants to make generalizations with very small errors and all members of the population are sampled.

The implementation of this research directly involved the researcher in collecting, processing and drawing conclusions from the obtained data. The data collection techniques in this research are described as follows.

Observation

This observation aims to obtain data related to how learning media based Wordwall educational game used on social science in grade 4, which includes observation sheets on the implementation of the use of learning media. The aspects observed were the activities of teachers and students. The observed aspects are categorized in the following table.

Questionnaire

Questionnaires are used to determine student learning interest in social studies learning content after being given treatment. Questionnaire ratings were measured using a 4-point Likert Scale which has a gradation from very positive to negative.

Documentation

Documentation are used in order to obtain the requisite data as a reference in order to get the list of 4th grade student names. This technique also aims to obtain data in the form of student questionnaire answer sheets, pictures of student learning activities, and other data relevant to research.

The data analysis technique in this research is in the form of descriptive analysis, which serves to describe or provide an overview of the object under study through sample or population data as it is without analyzing and making applicable conclusions. the prerequisite analysis test is normality test and the final analysis (hypothesis testing) is the analysis of the Paired Sample t-test. The test criteria if the probability value is greater than the significance level of 0.05 then H_0 is accepted and H_a is rejected.

RESULTS AND DISCUSSION

This research was conducted in a month with four meetings at school. In the first meeting, students were given learning interest questionnaire to find out the initial description of students' learning interest. In the second and third meetings, treatment was conducted, which is using Wordwall educational game in the social science learning process of 4th grade. Lastly, in the endmost meeting, students were once more given learning interest questionnaire to find out thow he final description of student learning interest in social science after the treatment. The whole process was carried out to find out whether there is distinction in students' learning interests before and after using Worwall educational game. The result of this research is described as follows.

The Description of The Use of The Wordwall Educational Game Based Learning Media in 4th Grade Social Science Learning Process

The use of Wordwall educational game in the social science learning process in grade 4 is the stage of treatment in this research. The treatment was carried out twice by being observed through filling out observation sheets of teacher and student activities. Achievement of the implementation of media use is obtained by dividing the achieved indicator score by the maximum score multiplied by 100%. The result of observation can be seen in the following table below.

Table 3. Observation result of the use of the Wordwall Educational Game

Description	Treatment 1		Treatment 2	
	Teacher	**Student**	**Teacher**	**Student**
Earning score/ Max. score	18/21	14/21	19/21	18/21
Percentage	85.7%	66,6%	90.4%	85,7%
Category	Good		Very well	

Based on the observation table above, it can be seen that the percentage of successful use of the Wordwall educational game was categorized as good in the first treatment with a score of 18 on the teacher observation sheet and a score of 14 on the student observation sheet with a maximum score of 21 which shows a percentage of 85.7% and 66. 6%. Meanwhile, the results of the second treatment observation obtained a score of 19 on the teacher observation sheet and a score of 18 on the student observation sheet from a maximum score of 21 with a percentage of 90.4% and 85.7% which enhancing to be categorized as very good.

The Description of Student's Learning Interest

The experimental group applied the quantum teaching model in the learning process while the control group acted as a comparison group because in the learning process the control group was not given treatment in the form of applying the quantum teaching model. The description of the pre-non-test results of the experimental group students can be seen in the following table:

Table 4. Description of Student's learning interest before and after treatment

Descriptive statistics	Statistical Value	
	Before	**After**
Nobs	28	28
Mean	46.25	70.89
Range	42	51
Lowest value	30	43
Highest value	72	94

Based on the table above, it can be seen that there are 28 students as the research sample. The average score before and after the use of Wordwal educational game showed that there is an increase in 4th-grade student's learning interest of social science in a difference of 24.64. This can be observed from the acquisition of an average score before the treatment is 46.25, while the score after the treatment is 70.89. Based on the acquisition of these scores,

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the level of student interest in learning before the treatment is categorized as moderate and increases to high after the treatment. The detailed data of students' learning interest categorization are described in the following table.

Table 5. The Description of student's learning interest

Value Interval	Kategori	Before		After	
		Frequency	Percentage	Frequency	Percentage
81-100	Very High	-	-	5	17,9%
61-80	High	4	14,3%	16	57,1%
41-60	Moderate	15	53,5%	7	25%
21-40	Low	9	32,1%	-	-
0-20	Very Low	-	-	-	-
Total		**28**	**100%**	**28**	**100%**

Based on the table above, it can be seen that the description of the learning interest of 4th-grade students in social science learning before the treatment is dominated by students with learning interest in the moderate category, namely 15 students with a percentage of 53.5%, while after the treatment it was dominated by students with high category learning interest as many as 16 students with a percentage of 57.1%. Before the treatment, none of the students with learning interest were in the very high category, whereas after the treatment there were 5 students in that category. Meanwhile, there was an increase in 9 students with low learning interest category before the treatment because none of the students with low learning interest category after the treatment.

The Effect of Using Wordwall educational game-based learning media on Student's Learning Interest in Social Science

The results of the inferential statistical analysis aim to answer the hypotheses that have been formulated, namely to determine whether there is any effect of Wordwall educational game on 4th grade student's learning interest. The hypothesis is tested through the Paired Sample t-Test with normality test as a prerequisite for data analysis. The data collected must be tested with a normality test to find out whether the data is normally distributed or not. The normality test in this study was carried out with the Shapiro Wilk test with the help of Learning of Science and Research Innovation (LoSaRi) v.1.0. The data is distributed normal when the Sig value is more than 0.05 (Sig> 0.05). Conversely, if the significance value is less than 0.05 (Sig <0.05) then the data is declared not normally distributed so that data testing cannot continue on the test hypothesis. Data from the results of the normality test of the questionnaire scores of students' learning interest before and after the use of Wordwall educational game can be seen in the following table.

Table 5. Normality test

Data	Significance	Description
Before the treatment	0,064	0,064>0,05=Normal
After the treatment	0,090	0,090>0,05=Normal

Based on the table above, the results of the normality test of the students' social science in learning interest questionnaire data are declared to be normally distributed. This is shown from the Sig value of the data before and after the treatment in the normality test which is greater than 0.05. Data from the questionnaire of students' interest in learning before the treatment obtained a Sig value of 0.064 and after the treatment of 0.090. Thus, the prerequisites for testing the hypothesis have been fulfilled.

The hypothesis test was carried out to find out the distinction in the results of the learning interest questionnaire data of 4th grade students in social science before and after the use of Wordwall educational game. Data were analyzed using the Paired Sample t-Test with the help of Learning of Science and Research Innovation (LoSaRi) v.1.0. The data requirement is said to be significant if the probability value is less than 0.05. The result of hypothesis test can be seen in the following table.

Table 6. Test Results of Paired Sample t-Test

Data	Probability Value	Description
Before the reatment After the treatment	0,000	0,000<0,05= there's distinction

Based on the table 6, it can be seen that the probability value is less than 0.05 (0.000 <0.05). Therefore, it can be stated that there is distinction in students' learning interests before and after using Wordwall educational game. The interest in learning is seen from several indicators which are pleasure, interest, engagement, and attention in learning.

Discussion

The Description of The Use of The Wordwall Educational Game Based Learning Media in 4th Grade Social Science Learning Process

The learning process using Wordwall educational game-based learning media in social science of 4 grade was carried out in two meetings with the material "types of economic activity in the surrounding environment" at the first meeting and "types of work based on the products produced" at the second meeting. The description of the use of Wordwall educational game based on the results of observations was categorized as good at the first meeting and increasing at the second meeting to be very good. This is evidenced by the percentage results of the implementation of media use based on the categorization table.

The Wordwall educational grouply utulized by students in social science learning process. Students actively discuss to classify and analyze economic activities around them at the first meeting and jobs that produce goods and services at the second meeting. At each meeting students use two game templates. The use of various templates provides a different experience for students in each meeting so that students become more enthusiastic in the learning process. This is in accordance with the advantages stated by Permana & Kasriman, (2022) that the advantage of Wordwall is having a variety of templates to avoid the students from boredom and always give excitement for wanting to try it.

Students in playing the Wordwall educational game were seen actively discussing in solving the challenges in the game. After students discuss with their group mates, the teacher invites students to discuss the material with the help of the Wordwall educational game which is shown through a projector. Students actively ask and answer in the discussion process with the teacher. In the first treatment there were still students who were passive in discussing material with the teacher so that in the second treatment the teacher tried to make passive students more active by asking questions with Wordwall educational game. Students summarize the material contained in the game by looking at the correct answers and writing them in notebooks as the endmost of the sequence of the learning process with Wordwall.

The use of the Wordwall educational game at the first meeting is categorized as good which is not the highest category because there are some impedes such as network interference that students experienced causing the game to stop which is in accordance with the weaknesses stated by Alfurqan & Zalilah (2022) that the shortcomings of Wordwall are that the game will be interrupted when the internet network is unstable or experiencing interference. Another imped faced on the use of Wordwall educational game is that students are quite difficult to manage. It'is because they are very enthusiastic to play it immediately. The learning process using educational games requires good classroom management. This suits with the weakness of the educational game Wordwall which was stated by Putri, Saleh, & Jufri et al (2021) that the enthusiasm of students will overwhelm the teacher in controlling students. Besides, students didn't have enough time out of the teacher's lack of ability to manage time in the use of educational games in the first treatment. In result, only group representatives collected the summary results. This is in accordance with the weaknesses stated by Mujahidin et al (2021) that the weakness of Wordwall in the learning process is that it takes up a lot of time. By this weakness, teachers need to have good time management in using games in the learning process.

The second treatment is stated to be in the very good category which is the highest category considering that the constraints that occur in the first treatment are not so visible in the second treatment. The whole learning process using wordwall educational game ran to the end and provided a new experience for 4th-grade students in social

science at SD Inpres Barombong II, Tamalate District, Makassar City which makes them experienced joy, actively participated, involved, and interested in learning process.

The Description of Student's Learning Interest

Learning interest is a desire or a willling of students without any orders or coercion in obtaining information from a lesson. Interest makes students have a strong tendency to learn. The description of 4th-grade students' learning interest in social science can be seen from the results of the descriptive analysis of the interest questionnaire data before and after the use of Wordwall educational game in the learning process. The categorization of student learning interest scores in the descriptive analysis consists of 5 categories namely very high, high, moderate, low and very low. The results show that students' interest in learning before the treatment is in the moderate category as seen from the average value of 46.2. Meanwhile, the results of the questionnaire after the treatment showed that students' learning interest was in the high category with an average score of 70.8. Thus, it can be concluded that there is an increase of 4th-grade students learning interest in social science after using Wordwall educational game.

The description of students' interest in learning is seen from the results of the research instrument questionnaire with four indicators of interest in learning, namely pleasure, interest, involvement, and attention in learning. The first indicator, pleasure, is an indicator that gets the highest increase of all indicators. The feeling of pleasure arises becausean element that the students favor which is a game integrated into the learning process. This provides a pleasant atmosphere and a sense of relaxation for students so that there is no sense of being forced to participate in the learning process. This is in line with what was stated by Shiddiq (2021) that Wordwall can create an interesting and fun learning process that makes students feel enthusiastic and not easily bored.

The next indicator is attraction in learning. Using the Wordwall educational game makes students attracted in understanding the material out of having motivated by the challenges from the game. Kim et.al (2018) argues that educational games are a medium that builds activities and processes to solve problems related to learning and education by using or implementing game mechanisms. Therefore, besides being entertaining, games have challenging elements that make them very attractive to students as there is satisfaction in them. The Wordwall educational game has features that support giving challenges to students because it has various templates and game levels that can be set. The only way to be able to complete the challenges of the Wordwall educational game is to understand the material in the game so that students are interested in understanding it. Meanwhile, when given the task of summarizing the material, the enthusiasm of the students that came from the previous game process was still there so they still felt enthusiastic in doing it.

The challenge from game in Wordwall educational game also encourages student involvement in the learning process which is another indicator of learning interest. Students who are formed in small groups become more active in discussing with their group mates in solving problem in the game. The Wordwall educational game supports the student discussion process because the timer can be set so that students have sufficient time to discuss. In addition, the process of discussing the material in the game with the teacher makes students actively ask questions and take notes so they can complete challenges in the next game. Therefore, using the Wordwall educational game creates an interactive learning process that is student-centered so that it leads to an increase in student learning interest. This is in line with the opinion of Zirawaga, Olusanya & Maduku (2017) that the use of educational games in education plays an important role in involving students by encouraging active participation of students in class.

The last indicator is attention. The factor of Wordwall educational game that affects students' attention especially for fostering student's learning interest is that the appearance of the media is very attractive like general game designs with interesting combinations of colors, moving animation and sounds. This is in accordance with the advantages of the educational game Wordwall stated by Olisna et al. (2022) that the educational game Wordwall can provide a sense of comfort to students in the learning process because it has a combination of music that increases enthusiasm and visuals or images presented in full color which tend to favored by elementary school students so that the focus of students in learning increases.

The Effect of Using Wordwall educational game-based learning media on Student's Learning Interest in Social Science

Learning media is one of the external factors that can affect students' learning interest. As stated by Nurrita, (2018) learning media can increase student motivation and interest in learning, cosequently they can think and

analyze the subject matter provided by the teacher expertly with pleasant learning situations wherefore students are capable to understand the subject matter easily.

The Wordwall educational game is a type of learning media that can be used to affect the students learning interest, especially in terms of enhancement. This is appearent from the hypothesis test with inferential statistics through Paired Sample t-Test. The basis for decision making is done by comparing the probability value of 0.05. From the test results with the help of Learning of Science and Research Innovation (LoSaRi) v.1.0., a significant value was obtained from the results of student's learning interest questionnaire data before and after the use of Wordwall educational game was 0.000 <0.05, in consequence, H0 was rejected and Ha was accepted. By the result of the hypothesis test, it can be concluded that there is an effect of the use of learning media based based Wordwall educational game on 4th-grade learning intetest in social science at SD Inpres Barombong II, Tamalate District, Makassar City.

The results of the research hypothesis test are in line with the results of research conducted by Launin, Nugroho, & Setiawan (2022) that there is an effect of Wordwall educational game on the learning interest of 4th-grade students with a significance value of 0.000 <0.05. In addition, the results of research conducted by Savira & Gunawan (2022) show that there is an effect of Wordwall educational game on enhancing 4th-grade student's learning outcomes with a significance value of 0.000 <0.05. All indicators on interest in learning are influenced by the use of learning media based on the educational game Wordwall. Another thing that is thought to increase interest in learning is learning using educational games was the first experience for students so they were very enthusiastic, happy and interested in the social science learning process.

CONCLUSION

The description of the use of Wordwall educational game-based learning media in the social science learning process of 4th grade categorized as good at the first meeting with a score of 85.7% on the teacher's observation sheet and 66.6% on the student observation sheet then increased at the second meeting in very good category with a score of 90.4% on the teacher observation sheet and 85.7% on the student observation sheet. The level of interest in learning for fourth grade students in social studies learning content after being the treatment was higher with an average of 70.89 compared to before the treatment, which was 46.25. After testing the hypothesis and analyzing it, it can be stated that there is an effect of learning Wordwall educational game on 4th grade student's learning interest in Social Sciencesof 4th grade at SD Inpres Barombong II, Tamalate District, Makassar City with the acquisition of significant values from the results of the questionnaire answers to students' learning interest before and after the treatment of 0.000 <0.05 so that H0 is rejected and Ha is accepted.

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