

THE INFLUENCE OF USING 'CAPAT'-BASED EDUCATIONAL GAME MEDIA ON CRITICAL THINKING SKILLS AND LEARNING INTEREST OF STUDENTS IN CIVIC EDUCATION (PPKN) AT AR-ROHMANIYAH HIGH SCHOOL

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Abstract

The purpose of this study is to find out: (1) The effect of the use of educational game-based learning media "CAPAT" on students' critical thinking skills. (2) The effect of using educational game-based learning media "CAPAT" on learning interest in PPKn subjects of Arrohmaniyah High School. (3) The use of educational game-based learning media "CAPAT" for critical thinking skills and learning interest in PPKn subjects of Arrohmaniyah High School. The method yang digunakan dalam pengambilan data pada penelitian ini i.e. menggunakan metode "purposive sampling". The results obtained showed that: (1) There was a significant influence of variable X (Use of CAPAT Educational Games) on variable Y (critical thinking skills) in class XII of SMA Arrohmaniyah Tambelangan, Sampang Regency. The value of the Correlation Coefficient is 0.566, meaning that the influence of variable X (Use of CAPAT Educational Games) on variable Y (critical thinking ability) is 56.6%. (2) There is no significant influence of variable X (Use of CAPAT Educational Games) on variable Y (Student learning interest) in class XII of SMA Arrohmaniyah Tambelangan Sampang Regency, the influence of variable X (Use of CAPAT Educational Games) on variable Y (Student learning interest) is only 0.5%. (3) The CAPAT educational game method can increase students' interest in learning and their critical thinking skills in PPKn subjects at SMA Arrohmaniyah Tambelangan Sampang.

Keywords: Educational Game "CAPAT", Students' Critical Thinking, Interest in Learning

INTRODUCTION

Educational games are a type of learning media that is used to increase students' interest and learning abilities. Educational games can also help improve students' skills, knowledge and critical thinking abilities. One of the lessons that can use educational games

as a learning medium is Pancasila Education and Citizenship (PPKn) (Zulazhari et al., 2019). Randel (2019) stated that the use of games is very useful, the material is related to mathematics, physics and language skills (such as social studies, biology and logic) not except PPKn lessons which really need to also innovate in the learning process. Rapid technological developments and information ensure that this has a strong impact on various areas of life, including education. Right (Campillo-Ferrer et al., 2020).

Critical thinking is a process that involves mental operations such as reasoning, reasoning, evaluation and reasoning. The importance of critical thinking makes learning meaningful for students. Critical thinking is a reflexive rational way of thinking or based on relational rational thinking or making decisions rational feelings about what should be done and what should be believed. When critical thinking is not used as an indicator of the success of educational processes, it is influence students. When they are at university level, they often have difficulty seeing complex problems. The need for the ability of critical thinking that students have so that learning runs smoothly (Bachen et al., 2019).

Apart from thinking ability, skill is also a major factor in achieving student learning outcomes. The skill of learning can become a student in developing oneself and planning for the future as well as having a good learning process that Education is the main foundation for the formation of character and intellectual abilities of students. In the era of information and communication technology like today, learning approaches need to continue to develop according to the needs and interests of students. Educational game-based learning media is one of the interesting and relevant alternatives to be integrated in the learning process in schools. One of the subjects that has a central role in shaping the character and personality of students is Pancasila and Civic Education (PPKN). PPKN is not only concerned with understanding the basic concepts of the state and citizens' rights, but also teaches essential moral, social, and civic values (Hobbs et al., 2013).

In this context, the use of educational game-based learning media "CAPAT" is an innovation that attracts attention. Educational games have the potential to increase student engagement in the learning process, and can build a fun and interactive learning atmosphere. In addition, educational games can also stimulate the development of students' critical thinking skills, which are essential intellectual skills in the era of globalization (Hafeez, 2021).

Although there are many studies on the use of educational game-based learning media, specific research on the impact on students' critical thinking skills and learning

interest in PPKN subjects at the high school level is still limited, especially at Arrohmaniyah High School. Therefore, this study is directed to provide a deeper understanding of the potential and influence of the use of "CAPAT" learning media on the critical thinking skills and learning interests of PPKN students at Arrohmaniyah High School (Bachen et al., 2019).

Thus, the results of this research are expected to make a positive contribution to the development of learning methods at Arrohmaniyah High School and become a reference for other educational institutions in utilizing technology as a means of improving the quality of PPKN learning (Eränpalo, 2014).

METHODS

1. Research Methods

The method you are using to collect data at this time is using the method "purposive sampling".

2. Population and Research Sample

a. Research Population

In this case, the population used in this study was 415 students of Arrohmaniyah High School class X, XI, XII.

b. Research Sample

The sample to be taken from the population must be truly representative or representative (Siyoto, 2015). So the number of samples to be studied is 1 class (class XI) which will be used as a sample of 23 experimental class people and 10 people who are used as trials or control classes.

3. Technical Data Analysis

Validity Test

According to Triana (2015) berpendapat bahwa uji validitas adalah a pengukuran yang into titik measure as far as mana kemampuan yang akan diukur tersebut.

Uji validity merupakan yang testing is done to mengetahui validity suatu data.

The following are the criteria for determining the level of validity of a data:

Table 1 criteria for determining validity levels

Range	Category
1,00-1,99	Invalid
2,00-2,99	Less Valid
3,00-3,49	Valid
3,50-4,00	Highly Valid

Formula determines Validity test

$$r_{xy} = \frac{N\sum xy - (\sum x)(\sum y)}{\sqrt{(N\sum x^2 - (\sum x)^2)(N\sum y^2 - (\sum y)^2)}}$$

Information:

Rxy - Correlation coefficient

X - First variable

Y - second variable

n - the amount of data

The test was carried out using the IBM SPSS application computer device version 21.0 for windows, then the calculated value will later be seen from the *Corrected Item Total Correlation*, with the following conditions:

- a. If r count is positive and r count is >r table, then the item is valid.
- b. If r count is negative and calculate <r table, then the item is declared invalid.

2. Reliability Test

Reliability testing is testing to find out to what extent measurements from a test remain consistent after being carried out. over and over again against the same subject and under conditions. The high and low reliability is empirically demonstrated by a figure called the value of the reliability coefficient. High reliability is shown by an Rxx value approaching 1. General agreement on that reliability is considered sufficient if ≥ 0.700 .

$$r_{11} = \left(\frac{n}{n-1} \right) \left(1 - \frac{\sum \sigma_t^2}{\sigma_t^2} \right)$$

Where:

R11 = Reliability value

n= Many question items

Ot2= Total variance

$\sum \sum \sum 2$ = Total grain variance

The interpretation criteria regarding the correlation index (r) are as follows:

Table 2 Categories of Magnitude Reliability

No.	R value 11	Information
1	0.00 - 0.20	Very Low
2	0.21 - 0.40	Low
3	0.41- 0.60	Enough
4	0.61 - 0.80	Tall
5	0.81 - 1.00	Very High

Source: (Sugiyono, 2016)

In this research, to facilitate the calculation of reliability tests, researchers used the help of the SPSS 21.0 for Windows application.

3. Homogeneity Test

Testing or homogeneity testing aims to ensure that the collection of data that will be measured really comes from the population i homogeneous (same). Homogeneity calculations are done when researchers want to compare an attitude, intention, or behavior (variance) in two groups of people. A significant value (p) > 0.05 indicates that the data group comes from a population with the same variance (homogeneous eous). On the other hand, a significant value (p) < 0.05 indicates that the data group derives from a population with different variance (heterogeneous). So, make sure your result data is homogeneous with a significance value (p) > 0.05

4. Prerequisite Test

There are several requirements that must be met before the trial is carried out. The series of tests are as follows:

Normality Test

The normality test aims to determine whether the sample used comes from a normally distributed population or not. Tests were conducted using IBM SPSS v21.0 for Windows, with the following criteria:

- a. If the data spreads around the diagonal line and follows the direction of the diagonal line, then the regression model satisfies the normality assumption.
- b. If the data spreads far from the diagonal line or does not follow the direction of the diagonal line, then the regression model does not satisfy the assumption of normality.

5. MANOVA

Manova has pengertian sebagai suatu technique statistik yang digunakan for menghitung testing signifikansi mean difference simultaneously between kelompok for two atau lebih dependent variables. Manova is a generalization of anova for situations where there are several dependent variables. This study was conducted from December 2 to December 25, 2024.

RESULTS

1. Learning method of CAPAT Educational Game

the effect of the application of the CAPAT Education game method on critical thinking skills in PPKn learning can be seen in the results of statistical analysis below:

Table 3. ANOVA statistical calculations

Regression						
Variables Entered/Removed^a						
Model	Variables Entered	Variables Removed	Method			
1	CAPAT ^b		Enter			
a. Dependent Variable: KRITIS						
b. All requested variables entered.						
Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	,753 ^a	,566	,546	2,021		
a. Predictors: (Constant), CAPAT						
ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	112,006	1	112,006	27,435	,000 ^b
	Residual	85,733	21	4,083		
	Total	197,739	22			
a. Dependent Variable: KRITIS						
b. Predictors: (Constant), CAPAT						
Coefficients^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-32,743	20,674		-1,584	,128
	CAPAT	1,324	,253	,753	5,238	,000
a. Dependent Variable: KRITIS						

Based on the statistical calculation table of ANOVA diats, it is known that the calculated F value is 27.435 with a Significance value of 0.000. Significance value $0.000 < 0.005$, then there is a significant influence of variable X (Use of CAPAT Educational Games) on variable Y (critical thinking ability). Furthermore, from the table (Model Summary) above, it can also be concluded that the R value is calculated at 0.753, and the R Square value (Correlation Coefficient) is 0.566. So it can be concluded that the influence of variable X (Use of CAPAT Educational Games) on variable Y (Critical thinking ability) is 56.6%.

The results showed that there was a significant influence between the use of CAPAT Educational Games and critical thinking skills. In the ANOVA statistical calculation table, there is a calculated F value of 27.435 with a Significance value of 0.000. From the Significance value of $0.000 < 0.005$, it can be concluded that the influence of variable X (Use of CAPAT Educational Games) on variable Y (Critical thinking ability) is significant.

2. The influence of the CAPAT Method on students' learning interests

In this study to attract students' learning interest in PPKn subjects was carried out by the method of applying CAPAT educational games. We present the following statistical calculations.

Table 4. ANOVA statistical calculations

Regression						
Variables Entered/Removed ^a						
Model	Variables Entered	Variables Removed	Method			
1	X ^b		Enter			
a. Dependent Variable: MINAT						
b. All requested variables entered.						
Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.068 ^a	.005	-.120	2,833		
a. Predictors: (Constant), X						
ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.296	1	.296	.037	.852 ^b
	Residual	64,204	8	8,025		
	Total	64,500	9			
a. Dependent Variable: MINAT						
b. Predictors: (Constant), X						
Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	77,645	40,909		1,898	.094
	X	.099	.514	.068	.192	.852
a. Dependent Variable: MINAT						

Based on the ANOVA statistical calculation table above, it is known that the value of F value is calculated at 0.037 with a Signification value of 0.852. The significance value of $0.852 > 0.005$, then there is no significant influence of variable X (Use of CAPAT Educational Games) on variable Y (Student learning interest). Furthermore, from the table (Model Summary) above, it can also be concluded that the R value is calculated at 0.068, and the R Square value (Correlation Coefficient) is 0.005. So it can be concluded that the effect of variable X (Use of CAPAT Educational Games) on variable Y (Student learning interest) is 0.5%.

3. The Effect of the CAPAT Educational Game Method on Students' Thinking Skills and Learning Interests

In this study to attract students' learning interest in PPKn subjects was carried out by the method of applying CAPAT educational games. It is hoped that using the educational game method can quickly improve students' ability to think critically and increase students' interest in learning PPKn, especially at Arrohmadiyah Tambelangan Sampang High School (Kus Eddy Sartono et al., 2022).

The CAPAT educational game method is an innovative and interesting method to increase students' interest in learning in PPKn subjects. CAPAT educational games stand for Smart, Active, Sensitive, Adaptive, and Skillful. In this method, students are invited to be smart in understanding PPKn material, active in providing responses and participation, sensitive to social issues related to PPKn, adaptive in facing changes in social life, and skilled in applying PPKn values in everyday life (Soretire & Patrick, 2021).

DISCUSSION

1. Educational Games

One of the technology-based learning media is educational games. Educational games are games designed to stimulate the mind including improving the ability to focus and solve problems. The use of educational games as a learning medium makes the learning activities carried out less monotonous and can avoid students from feeling bored because students feel more involved in learning activities so that students become more active. As said by Dwiyono (2017), educational games can motivate students to learn actively and creatively through some of the challenges given. With the increasing activity of students in learning activities, it is expected that the use of educational games as a learning medium can trigger their enthusiasm to learn the subject matter. As said by Widiastuti & Setiawan (2018) in their research which states that educational games can make students interested in learning the material and provide more nuance (Bachen et al., 2015).

2. Critical Thinking

Critical thinking as a whole involves reasoning. Critical thinking is a process that involves mental operations such as induction deduction, calcification, evaluation, and reasoning. The importance of critical thinking skills so that learning is carried out meaningfully for students.

Stephan (2014) relates that if the ability to think critically is not used as an indicator of the success of the educational process, it will have an impact on student participants when at the university education level, students often have difficulty in identifying a complex problem. The need for critical thinking skills possessed by students so that learning runs smoothly.

Basically, critical thinking has a relationship with the learning process taking place, including preparing students to be able to solve problems. The relationship between critical thinking skills in learning is the need to prepare students to become tough solutions, mature decision makers, and people who never stop learning. The importance of critical thinking skills is integrated with the curriculum in order to be able to provide benefits in society. So far, students' critical thinking skills have not yet entered today's practical society. The development of modern times, education is a major important part for students. Education is a benchmark in developing critical thinking skills that make students able to grasp the phenomena that are happening. Critical thinking is an activity in making decisions (Sumners, 2019).

3. Learning Interest

According to Lee et al., (2016) interest in learning is a personal preference related to learning which means individuals prioritize one thing over others. Learning interest is related to affective functions and knowledge that will cause strong emotions such as positive feelings towards something, feelings of attachment, fascination and improving cognitive processes (Kpolovie, 2014). According to Slameto (2016), stated interest in learning is an interest that students have which can be expressed as a statement that shows that students prefer something more than something else, manifested through participation in an activity. Students who have an interest in a particular subject tend to pay greater attention to that particular subject.

Fun is central to the relationship between interests, values and knowledge, and student engagement is the opinion of Mary & John (2016). The relationship between interest and learning is very close, the more interested a student is in a particular topic, the more willing he wants to learn about that topic, (Rotgans & Schmidt, 2014). To generate interest in learning teachers must invest most of the effort, efforts that must be made such as setting clear task goals, using various topics and tasks, using visuals to provide entertainment and using simulations.

4. Game model 'CAPAT'

The game model 'CAPAT' (Search-Pair-Paste) is a game of pairing separated parts with their partners randomly and then searched to pair with the right partner. The game 'CAPAT' (Search-Pair-Paste) by the author is a development and innovation of the inquiry method. According to Asmani (2019:), basically, inquiry is a way of realizing what is experienced. Therefore, inquiry requires learners to think. This method engages them in intellectual activities and processes the learning experience into something meaningful in real life (Sumners, 2019).

Basically, the purpose of implementing this learning model is to please students in learning so that they feel happy and comfortable in following the learning process. With this happy and comfortable feeling, it is hoped that students can absorb the knowledge and knowledge conveyed by the teacher so that in the end they can perform well (Blevins et al., 2014).

The game model 'CAPAT' (Search-Pair-Paste) starts from the learning process that uses student worksheets (LKS) designed by themselves for the purposes of learning Civics subjects for many years, precisely since 2000. The concept of learning using LKS is named "MAS", which stands for Independent, Active, Relaxed (Pratiwi & Wuryandani, 2020).

The process of compiling this CAPAT (Search, Install, Paste) game is as follows;

- a. Review the material carefully so that several concepts, definitions, or statements can be found that are the core or essence of the material to be given to students.
- b. Draft questions in the form of statements and answers as many as 10 points referring to the Learning Objectives (TP) that will be delivered to students.

- c. Arrange the emptying of the columns of questions / statements and answers, alternating in such a way that there are empty or reverse columns of statements and their pairs vary and are not the same between one group and another.
- d. Make a sheet / piece of statements or their pairs which are parts that are blanked column statements or pairs of a unified concept, definition, or statement that is the core or essence of the material to be given to students.
- e. Create an answer key and assessment score that refers to the number of questions/statements, for example if the number of 10 questions/statements then points per question item 10, so $10 \times 10 = 10$
- f. The preparation of this game material requires a 'computer/laptop' as an engineering 'machine' and a 'design' to change or vary the various forms of variation desired. After being conceptualized and designed in such a way through a computer / laptop then printed / printed per sheet that is different for each group. Then printed / printed also sheets containing statements and complete pairs as needed and then cut / cut according to the design that has been determined for each group and as many as the number of groups. The pieces of paper containing the statement or its counterpart were the same for all groups, namely the number of statements and their partners, which is 10. The number 10 is to facilitate scoring/scoring, because the number 10 will make it easier to sum the results, which is the correct number multiplied by the weight of the value per question/statement. For example, true $10 \times 10 = 100$, and so on. The pieces of the statement or their pairs are put in envelopes along with the 'game' sheets that have been prepared for each group (Kahne et al., 2019).

The materials needed to compile and make CAPAT game tools or facilities (Search, Install, Paste) are:

- a. Computer / laptop
- b. Printer
- c. Paper
- d. Scissors/cutter
- e. Paper glue
- f. Mailing envelopes

To make it easier for students to do this work / game should and should also be provided with materials / subject matter, either textbooks, or materials that have been prepared by the teacher. For example, diktat, material resumes, and so on for each group (McDougall, 2019).

In the implementation of the game model (game) 'CAPAT' follows the following flow:

a. Initial Activity \pm 15 minutes

Before learning begins, the teacher pays attention to the state of the classroom / learning environment, prepares tools and learning materials, then the teacher says greetings, prays and absents students. Perception: Questions and answers about previously studied subject matter and upcoming subject matter.

b. Core Activities \pm 60 minutes

The teacher divides the students into several groups, each group consists of 2-4 students. The group is given names that have something to do with the seal of the lesson, for example the name of the hero, the name of the State institution, and so on.

The teacher provides the subject matter of what will be discussed and learned today. After the delivery of the subject matter, students are given the opportunity to ask questions, or the teacher gives questions as an effort to further increase students' understanding of the material presented (Mena Araya, 2020).

Next, the teacher gives an envelope that has been filled with pieces / cutouts of statements or their partners, sheet paper to stick answers, enough paper glue, and materials / study materials for each group.

After all groups get the envelopes, the teacher allows the group to discuss and do their assignments according to their respective assignment sheets.

The teacher gives a period of 20-30 minutes to find, pair, and paste the pieces / cutouts of the statement or their partners in envelopes to each group

Students in groups open envelopes then search, match or match, and paste the statement pieces or pairs in the blank column on the answer sheet paper provided.

After completing the time allotted to work, each group handed over to the teacher to be given a sequence number of their work, the group that finished first was given a sequence number of 1.2, and so on until all was completed.

Each group conveys the results of its group work to the teacher represented by one of the group members.

The teacher cross-exchanges group answer sheets to be assessed by other students/groups against the results of group work with answer keys, supervision, and direction from the teacher. The teacher verifies the results of the student/group assessment and submits the results/grades orally and in writing on the group answer sheet.

c. Final activity \pm 15 minutes

The teacher invites the students to reflect on the learning results of the subject matter that has been learned at today's meeting. Students are asked to disclose various learning experiences gained. The teacher closes the lesson by inviting students to pray and say greetings (Setiawan & Abdulkarim, 2020).

CONCLUSION

Based on experimental research that has been done, it can be concluded that:

First, the results of data analysis carried out with statistical calculations obtained a significance value of 0.000. This means that there is a significant influence of variable X (Use of CAPAT Educational Games) on variable Y (critical thinking skills) in class XII of SMA Arrohmaniyah Tambelangan, Sampang Regency. The value of the Correlation Coefficient is 0.566, meaning that the influence of variable X (Use of CAPAT Educational Games) on variable Y (critical thinking skills) is 56.6%.

Second, the results of data analysis carried out with statistical calculations obtained a significance value of 0.852. This means that there is no significant influence of variable X (Use of CAPAT Educational Games) on variable Y (Student learning interest) in class XII of SMA Arrohmaniyah Tambelangan, Sampang Regency, the influence of variable X (Use of CAPAT Educational Games) on variable Y (Student learning interest) is only 0.5%.

Third, the CAPAT educational game method can increase students' interest in learning and their critical thinking skills in PPKn subjects at SMA Arrohmaniyah Tambelangan Sampang. This method invites students to become Smart, Active, Sensitive, Adaptive, and Skilled in understanding PPKn material. The CAPAT educational game method is effective in increasing students' interest in learning and critical thinking skills compared to conventional learning methods.

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