Al-Ishlah: Jurnal Pendidikan
Vol.14, 4 (December, 2022), pp. 7303-7318
ISSN: 2087-9490 EISSN: 2597-940X, DOI: 10.35445/alishlah.v14i4.2054

Application of Inquiry Learning Model Assisted Interactive Media on Material Shape and Energy Change to Improve Critical Thinking Skills of Elementary School Students

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ARTICLE INFO

Keywords:

Critical Thinking Skill
Form and change of energy
Inquiry Learning Model;
Interactive Media

Article history:

Received 2022-05-19
Revised 2022-09-11
Accepted 2022-12-31

ABSTRACT

An ability to think critically is to comprehend, apply, and analyse the truth of a given problem. There is a need for an efficient pedagogical framework that can help students develop critical thinking abilities while studying science. The goal of this research was to analyse the efficacy of an interactive media-assisted inquiry learning methodology applied to the topic of form and energy change in developing students' critical thinking skills. This study involved two fourth-grade classes at a Pekanbaru elementary school and took offline over two months (February and March 2022). There were 16 female and 9 male students in the experimental class and 14 female and 11 male students in the control class, respectively, who made up the research sample. In all, fifty students took part in the research. Information gleaned from before and after an experiment. The research approach is Quasi-experimental, utilising the Nonequivalent Control Group Design as the research shape. The t-test, a method for testing hypotheses, was used to assess the data. As can be seen from the data, the significance level for hypothesis testing was 0.032 (2-tailed). When this number is less than 0.05, H0 is rejected, and Ha is approved. Students' ability to think critically has improved as a result of using the media-assisted inquiry learning approach applied to the transformations of matter and energy, as shown by the results of this study.

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1. INTRODUCTION

Natural Science is a branch of science that systematically tries to understand every natural event. This means that science is more than just a collection of facts; it also includes ideas, rules, and a process of discovery (Rahayuni et al., 2016). When a problem-solving activity is built into science

learning, it makes science more complicated and makes it important to be able to think critically, logically, and creatively. So that students can learn something new and gain a better understanding of their surroundings (Qistia et al., 2019). Based on what has been said, students are encouraged to take an active role in how learning is done. To get students to participate, they need to learn through direct experience so that they can see a pattern in their learning (Jupriyanto, 2018). At the same time, the teacher is just a guide in the learning process. The students are expected to understand the subject and develop critical thinking skills on their own. The quality of education can be judged by how well teachers do their jobs. Teachers are in charge of education because they work directly with students on a set schedule. (Hermita et al., 2018).

In 2003, Indonesia ranked 35th out of 46 countries in the Trends in International Mathematics and Science Study (TIMSS), with an average score of 411 compared to the average international score of 467. As of 2007, Indonesia averaged a TIMSS score of 397, placing it 36th among the 49 countries that participated in the research. In the 2011 TIMSS assessment, Indonesia averaged a score of 386, placing it in the bottom half of the participating nations. The top half of the countries had scores in the 500s. According to the most recent data (TIMSS 2015), Indonesia ranks 44th among 49 countries (Siregar, 2019). As of the same year, scores of 379 and 396 on the International Student Assessment (PISA) test put Indonesia in 72nd place out of 79 countries studied (Munaji, 2020). The results of the poll suggest that Indonesians are not particularly strong in STEM subjects.

This happens because of several factors such as (1) students lack focus and are easily bored in following the learning, (2) low memory of students, (3) lack of confidence level of students to ask questions, (4) critical thinking ability of Primary School students is still low because it has not been handled systematically (Fuadi et al., 2020; Yuyu, 2017) this is because in critical thinking skills include a thought consisting of curiosity, the ability to evaluate problems, and the ability to analyze (Azriani et al., 2019). Critical thinking skills can help students find and solve problems and not easily accept new ideas unless they have proven their truth. Improving students 'critical thinking skills is supported by technological developments because educators can be more creative in creating learning media that encourage learners' critical thinking skills (Talizaro, 2018). Critical thinking skills are deep thinking skills where a person is able to understand, apply, and evaluate the truth of an existing problem (Kurniaman et al., 2019). As a result, more work is required to help pupils whose critical thinking skills have not been developed through Science Education. Applying a learning model could be an alternative approach to solving these issues. A learning model is a strategy for imparting information in a way that is most likely to be understood and retained by the audience (Fathurrohman, 2015).

Learning is made more engaging by the discovery and implementation of new ideas, and this innovation is the application of suitable models of learning (Azriani et al., 2019). The inquiry-based learning model is one option worth considering. In the inquiry learning model, students are encouraged to solve teacher-posed challenges by conducting their own research (Setyaningsih et al., 2016). Model inquiry learning is a set of instructional practises designed to encourage students to conduct research and draw conclusions (Mashuri, 2016). When using the inquiry learning paradigm, students are engaged in every step of the learning process, from forming questions to conducting research to forming conclusions, which makes the entire process more pleasant (Nurmi et al., n.d.). In addition, the inquiry learning model can make learners find and use a variety of information and ideas to improve their knowledge of a problem or problem (Widiastuti & Santosa, 2014). In other words, the inquiry learning model is a learning model that involves learners fully in the learning process, can investigate existing problems and find their solution to the problem (Majid, 2014). Based on previous research conducted by Rosanti concluded that the inquiry learning model affects critical thinking skills (Rosanti, 2017).

Inquiry-based learning has been studied (Wahyuni & Darsono, 2016). It's important to note that this study utilised an R&D strategy. Since the experimental class improved their learning outcomes (Gain Score) more than the control class, the researchers conclude that using the inquiry learning paradigm effectively teaches social studies in middle school. In contrast to the study by (Dewanto et

al., 2021), which focused on creating an inquiry-based learning model for Class V of elementary school scientific topics using interactive multimedia, this study did not involve any students. This research aims to develop a multimedia-assisted inquiry curriculum for fifth-grade science classes that will encourage students to think critically. The research method is a hybrid of the research and development paradigm, the learning approach of Borg and Gall, and the learning design model of Dick and Carey. According to the findings of this research, students' critical thinking abilities can be improved through the use of interactive multimedia-assisted inquiry learning.

In addition, the learning process also requires a medium that becomes a tool in channelling messages or learning information in order to achieve learning goals. Teachers as educators must have skills in developing learning media, especially technology-based (Qistina et al., 2019). Media-based information and communication technologies (ICT) is an interactive and attractive media, in addition to including an innovation in the development of learning media that makes this computer media look attractive (Qistina et al., 2019). Previous research on the development of interactive multimedia in the form of flipbook Media was conducted by (Hamdu, 2017). This interactive multimedia development takes the theme of my STEM-based residence area in elementary school and is designed according to Design-Based Research (DBR) research methods, namely identifying and analyzing problems, developing solutions based on theoretical benchmarks, existing design principles and technological innovations, conducting repeated processes to test and improve solutions by practitioners and reflections to produce design principles. This study concluded that the development of interactive multimedia flipbooks in learning could positively impact students, especially teachers and prospective teachers, in designing learning to be more interesting and improve student learning achievement.

Studying science in primary school is a great way to help students build critical thinking abilities, and research by (Dewanto et al., 2021) into the creation of e-books for interactive multimedia-assisted inquiry learning in grade 5 science courses intends to provide just that. Research shows that students in Class V can benefit from an inquiry learning paradigm that incorporates interactive technology to enhance students' critical thinking skills. This is evidenced by the fact that both pre-and post-test scores improved. Given the aforementioned context, the researcher intends to conduct an experiment to ascertain the extent to which fourth-grade students' critical thinking skills improve after being exposed to an inquiry learning model supported by interactive media on material forms and energy changes at a Pekanbaru elementary school.

2. METHOD

In this study, researchers used experimental research methods that are part of quantitative research methods. The research design used is quasi-experimental Research using the form of a Nonequivalent Control Group Design. This design has a control group but can not fully control the outside variables that affect the execution of the experiment. This study used two groups, namely the control group, namely the group that is not given treatment or only follows conventional learning and the experimental group, which is given treatment using the interactive media-assisted learning inquiry model. Both groups will get pretest to know the initial condition of students and post-test to know the condition of students after being treated. Here is a picture of Nonequivalent Control Group Design (Sugiyono, 2008)

O_1	X	O_2
O_3		O_4

Figure 1: research design

Where:

O1: experimental class Pretest
O2:posttest experimental class
O3: Pretest control class
O4: Posttest class control
X : The treatment given is the application of inquiry learning model assisted by Interactive media

This study was conducted offline for (2 months starting from February to March 2022, on two classes of and fourth-grade students at SDN 164 Pekanbaru. The number of students who became a sample of the study consisted of 16 women, 9 men for the experimental class and 14 women, 11 men for the control class. So that the total students involved in this study is 50 students. Data collection techniques are the most important step in research because the main purpose of research is to collect data (Sugiyono, 2008). As for some data collection techniques in this study are as follows:

a. Test

The tests used in this study are 15 items of description questions made by researchers and validated by the supervisor. This description is a test used to measure students' critical thinking skills at the beginning of learning (pretest) and at the end of learning (posttest). The indicator of critical thinking skills used is (1) Elementary Clarification (giving a simple explanation), that students clarify by asking and answering questions and are able to focus or formulate questions. (2) The Basic for the Decision (determining the basis for decision-making) is that students can consider the truth of the source and can make observations and assess the observation report. (3) Inference (draw conclusions) that students can make and determine value judgments. (4) Advances Clarification: students are able to define and consider each assumption. (5) Supposition and Integration (estimating and combining) that students are able to combine information or combine in decision-making and are able to consider reasons or alternative solutions. Here's an example of critical thinking skills

7. Pulang dari sekolah Dani dijemput oleh ayah, di tengah perjalanan ayah mampir ke Pertamina. Seingat Dani, ibu guru pernah berkata bahwa bensin/solar dapat membantu mobil bergerak. Sesampai di rumah, Dani hampir saja menginjak robot mainan adek yang dapat bergerak. Kalau mobil ayah bergerak karena ada bensin/ solar lalu apakah robot mainan adek bergerak karena menggunakan bensin? Selain mobil ayah dan robot mainan adek, apa aja contoh benda yang bisa bergerak yang kamu ketahui dan mengapa mereka bisa bergerak?

Figure 2. example of *critical thinking skill*

Reliability is a tool to measure the nature of a measuring instrument, whether the measuring instrument is accurate, stable or consistent in measuring what you want to measure. The reliability test will be conducted using Rasch modelling with the following criteria: (Erfan et al., 2020).

Table 1 Reliability Test criteria

Reliability Value	Interpretation
>0,84	Special
0,91-0,94	Well done
0,81-0,90	Good
0,67-0,80	Simply
<0,67	Weak

After conducting reliability test using Rasch modelling obtained the following results:

Table 2 Reliability test with Model Rasch

Reliability value	Interpretation
0,92	Well done

Based on the table above, it can be concluded that the reliability value of critical thinking skills made by researchers is 0.92 with good interpretation or criteria.

b. Documentation

This documentation technique is done to collect the names of Class IV students, data on students' learning process, and photos of research implementation in the field that will be used as evidence of research implementation. Research instruments are tools used by researchers in data collection in the research process. Research instruments relate to the methods used in the research process. In this study, the instrument used is a test instrument. The test instrument is a research instrument that contains questions or questions in the form of a description (essay), which measures the level of critical thinking skills of learners who get treatment and who only carry out conventional learning.

The data analysis techniques in this study are:

1. Descriptive Analysis

The data obtained in this study are the values of the critical thinking skill test of students of the experimental class and control class in the initial test (pre test) and final Test (post test). To facilitate the processing of data using the help of the SPSS 22.0 program for Windows. The steps for data processing are to find the maximum value, minimum value, average and standard deviation of experimental class and control class by using SPSS 22.0 for Windows program.

2. Testing normality to experiment class and control class

A normality test is done to determine whether the data from each sample group is normally distributed. Normal Data is an absolute requirement before we perform parametric statistical analysis (paired sample t-test and independent-sample t test). There are two types of normality tests in parametric statistics: the Kolmogorov-Smirnov test and the Shapiro Wilk test. On this occasion, researchers conducted normality test using Shapiro-Wilk test with significance level of 0.05 using SPSS 22.0 for Windows program. The decision-making guidelines regarding normality test, according to Uyanto (2006: 36) are as follows:

a. if the value of significance > 0.05, then the distribution of the data score is normally distributed
b. if the significance value is < 0.05 then the spread of the data score is not normally distributed.

If the research data is normally distributed, it can use parametric statistics (paired sample t test and independent-sample t test) to analyze the research data. Meanwhile, if the research data does not contribute normally, it can use non-parametric statistics (Wilcoxon test and man whitney test).

3. Test Paired sample t-test

The paired sample t test is used to determine whether there is an average difference between two paired samples. The requirements in the paired sample t-test are normally distributed data. Homogeneous data variance test is not a requirement in paired sample t-test Test. The paired sample t-test in this study is used to answer whether there is an increase in critical thinking skills of students of Grade IV elementary school after the application of interactive media on material forms and energy changes. Test paired sample t-test is done on experimental class pretest data with experimental class post-test (interactive media). Then the pre test data of the control class with the post-test data of the control class (conventional learning). Researchers test paired sample t-test using SPSS 22.0 for windows program.

a. if the value of significance < 0.05, then there is a difference in the average critical thinking skills of learners
b. If the significant value > 0.05, then there is no difference in the average critical thinking skills of learners

4. Perform homogeneity test to both experimental class and control class

The homogeneity test is performed to determine whether a variant (diversity) of data from two or more prepared groups is homogeneous (equal) or heterogeneous (unequal). The homogeneity test is one of the conditions (not an absolute requirement)in the independent sample t test. In this study, homogeneity test is used to determine whether the variant of experimental class posttest data (interactive media) and control class posttest data (conventional learning) have homogeneous or not. The homogeneity test was carried out using the SPSS 22.0 program for windows. The significance level is 0.05. Homogeneity testing criteria as follows:

a. if significant or probability value > 0.05 then the data comes from a population that has the same variant (homogeneous).
b. if significant or probability value < 0.05 then the data comes from a population that has unequal (inhomogeneous) variants.

5. Independent test sample t test

The independent sample t test is used to determine whether there are differences in the improvement of learners' critical thinking skills between learners who use interactive media and those who do conventional learning. Independent Test t-test is data that must be distributed nominally and homogeneously (not absolutely). Independent sample T test was conducted on experimental class posttest data (model inquiry learning) with control class posttest data (conventional learning) using SPSS 22.0 program for windows. Form of statistical hypothesis (test of two parties) according to Sugiyono (2015: 120) as follows:

Description:
H_o: the critical thinking skills of the learners of the experiment class and the control class did not differ significantly.
H_a: the critical thinking skills of the learners of the experiment class and the control class differ significantly.
The test criteria, according to Uyanto (2006: 114) are as follows:

a. if a significant value > 0.05, then H_o is accepted and H_a is rejected.
b. if the significant value is < 0.05 then H_o is rejected and H_a is accepted.

3. FINDINGS AND DISCUSSION

Early Observations

The research has made direct observations of several teachers at the research site, an elementary school in Pekanbaru, on Friday, December 17, 2021. Fourth-grade teacher, which can be seen from the learning model, Learning media or evaluation questions. (1) Problem-Based Learning Model (PBL) while the application of the inquiry learning model was very rare (2) before Indonesia was hit by the Covid-19 outbreak, classroom learning still used technology-based media displayed through infocus. This application is an application that allows you to learn English quickly and easily. Teachers rarely use the media because of the limited time to deliver the subject matter. (3) critical thinking skills of fourth-grade students, especially in science learning in this school, is still not achieved, this can be seen from the way students answer questions, and the creativity of students is still low.

Description Of The Study

This research was conducted at an elementary school in Pekanbaru in fourth-grade students of the 2021/2022 academic year. The number of students who became a sample of the study consisted of 16 women, 9 men for the experimental class and 14 women, 11 men for the control class. So that the total number of students involved in this study is 50 people. The learning process carried out is limited face-to-face learning (PTM), where students in one class are divided into two (2) sessions, each session entering the school 3 times a week. The materials offered are about form and energy change. The study taught the material in the experimental class and control class as many as 6 meetings.

Pretest and postest tested to students in the experimental class and control class consists of a test of students' critical thinking skills. Based on the results of statistical analysis, the average value, average value, average value, average value, and average value. The results of description analysis using SPSS in this study are presented in Table 1.

Table 3. Analysis Result Description

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Pretest Experiment	25	19	48	32.44	8.832
Posttest Experiment	25	25	54	39.88	8.843
Pretest control	25	20	36	27.24	4.585
Posttest control	25	25	47	34.68	5.829
Valid N (listwise)	25				

Based on Table 1, it can be seen that the average experimental class and control class increased, where the average experimental class at the time of pretest was 32.44 increased to 39.88 rated posttest. Likewise, the control class increased from an average pretest value of 27.24 increasing to 34.68 rated posttest. The average in the experimental class was higher than the average in the control class. The Excel Program in Figure 3 can help students to develop critical thinking skills and critical thinking skills to develop critical thinking skills

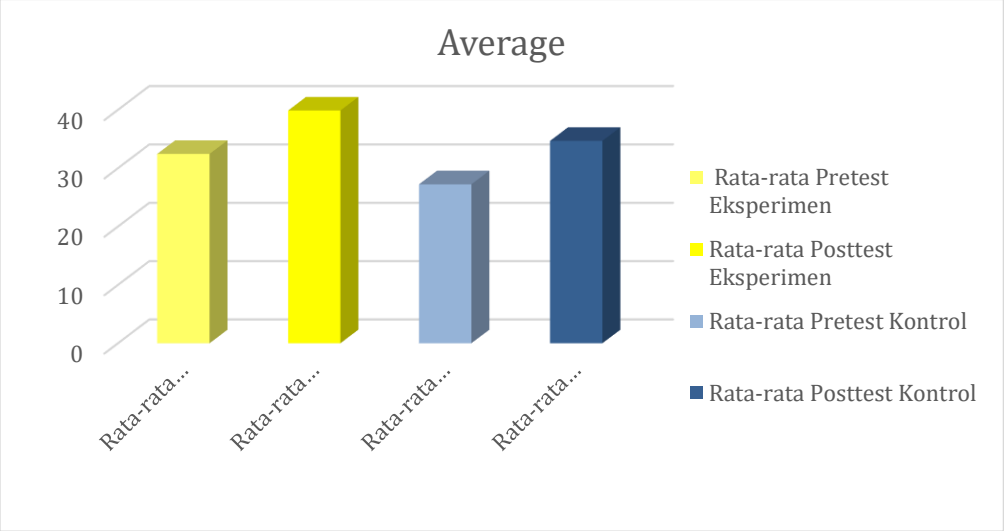

Figure 3. average pretest and posttest critical thinking skills of students in experiment class and control class

Implementation of Learning

The stages of the model of inquiry learning assisted by Interactive media in the experimental class on material forms and energy changes are as follows:

1. Orientation or opening activities

   At the orientation stage, the teacher will open the learning by saying Greetings and asking the class leader to lead the prayer (see Figure 4). After that, the teacher will check the attendance of students and convey the purpose of learning on this day.

Figure 4 prayer readings

In Figure 5, the teacher gives some questions related to the material to be studied today, after which the teacher invites students to form groups of 3-4 people per group

Figure 5 ***questions and answers related to today's material***

2. Formulate The Problem

   At this stage, the teacher gives an explanation related to the shape and change of energy in the surrounding environment and invites students to find problems related to the material in the surrounding environment and then write the problem in the LKPD. Each group will work on the LKPD by discussing it.

Figure 6 stages of problem orientation

In Figure 6, students pay attention to the teacher explaining the material and presenting problems related to everyday life. Then the teacher shares the LKPD, which contains the problems that have been described earlier and students must find alternative solutions used to solve these problems through information in books or Interactive media Genialy (see Figure 7)

Figure 7 student working on LKPD I, II

3. Put Forward A Hypothesis

At this stage students are invited to give temporary answers in the form of allegations related to the solution of the problems found

Figure 8 ***stages of proposing a hypothesis***

In Figure 8 one of the students is writing a hypothesis or temporary answer as a solution to the problem found earlier and assisted by other group Friends.

4. Collecting Information

At this stage, students seek information to find accurate solutions in solving problems found earlier

Figure 9 stages of collecting information

In Figure 9, students in groups are looking for information either from books or from genially interactive media displayed by teachers through laptops to find accurate information related to solutions to problems found earlier.

5. Testing The Hypothesis

   At this stage, students will test the hypothesis made earlier after getting some information from books or Interactive media genially.

Figure 10 stages of testing the hypothesis

In Figure 10 students compared the hypothesis made before getting the information with the actual answer after getting the information. The correct answer will be written in LKPD.

6. Making Conclusions

   At this stage students are invited to be able to make conclusions from problems and solutions that they get after going through several stages**.**

Figure 11 stages of making conclusion

In Figure 11, students make conclusions from the problems and solutions they get. The results of the discussion by each group will be read by the representatives of the group and listened to by other groups.

Prerequisite Test

1. Normality Test

Testing normality to the experimental and control classes to determine whether the data from each sample group is normally distributed. The results of the normality test conducted on the experimental class and control class are as follows:

Table 4. Normality Test

Class		*Shapiro-Wilk*		
		Statistic	df	Sig.
Critical thinking skills of students	*Pretest* Experiment	0,936	25	**0,118**
	Posttest Experiment	0,943	25	**0,178**
	Pretest control	0,951	25	**0,270**
	Posttest control	0,953	25	**0,294**

Based on Table 4, researchers took the results for the normality test using Shapiro-Wilk test with the significance level described in the table below.

Table 5. Normality test result with Shapiro-Wilk

Class		**Significance**	**Conclusion**
Experiment	*Pretest*	0,118	Normal
	Posttest	0,178	Normal
class		**Significance**	**Conclusion**
control	*Pretest*	0,270	Normal
	Posttest	0,294	Normal

Based on Table 3 can be concluded that the data from each class of normal distribution because the results of the normality test data pretest and posttest experimental class and control Class obtained the results of significance with each >0.05.

2. Test Paired Sample T test

The paired sample t test is performed to determine whether there is an average difference between two paired samples. On this occasion, researchers will test paired sample t-test using SPSS 22. Then the following results are obtained.

Table 6 test results paired sample t-test critical thinking skill

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	Pretest Eksperimen - Posttest Eksperimen	-7.440	9.579	1.916	-11.394	-3.486	-3.884	24	.001
Pair 2	Pretest Kontrol - Posttest Kontrol	-7.440	6.272	1.254	-10.029	-4.851	-5.931	24	.000

Based on Table 4, it can be seen that there are differences in the average critical thinking skills of students after the application of the interactive media-assisted inquiry learning model in the experimental class. This can be seen from the significance value of the pre test and post test data of the experimental class is 0.001 which is < 0.05. In the control class there is a difference in the average critical thinking skills of students after the application of conventional learning model because the value of data significance pre test and post test experimental class is 0.000 where the value > 0.05. So it can be concluded that there is an increase in critical thinking skills of students in the experimental class and control class.

3. Homogeneity Test

Perform homogeneity tests on both the experimental class and the control class to determine whether a variance (diversity) of data from two or more groups is homogeneous (the same) or heterogeneous (not the same). Homogeneity test is one of the conditions (not an absolute requirement)in the independent sample t-test. In this study, homogeneity test is used to determine whether the variance of experimental class posttest data (interactive media) and control class posttest data (conventional learning) is homogeneous or not. The results of the homogeneity test conducted on the experimental class and control class are as follows:

Table 7. Homogeneity Test

Levena Statistics	**Result**	**df1**	**df2**	**Sig.**
3,471	*Posttest*	1	48	0,069

Based on Table 5, the significance value of the posttest data is 0.069 which results > from 0.05. So it can be concluded that the posttest data variants of the experimental class and the control class are equal or homogeneous.

4. Independent Samples Test

After the normality test and homogeneity test, it is concluded that the data is normal. Then the hypothesis test is carried out using T test or independent sample t test on pretest and posttest values using SPSS 22, then the test results are obtained as follows:

Table 8. Test results independent sample t test critical thinking skill

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Hasil Critical Thinking Skill	Equal variances assumed	3.471	.069	2.205	48	.032	.05575	.02529	.00491	.10659
	Equal variances not assumed			2.205	44.121	.033	.05575	.02529	.00480	.10671

Based on Table 8, it can be seen that the application of the inquiry learning model assisted by Interactive media to improve the critical thinking skills of students obtained results of significance 0.032. So that the results obtained significance < 0.05, then H0 rejected and Ha accepted, where Ha is critical thinking skills of experimental class students and control class is significantly different. After processing the pretest and posttest data on the experimental class and control class through several stages, from normality test, paired sample t test, homogeneity test to independent sample t test. So it can be concluded that there is an increase in critical thinking skills of students after the application of the inquiry learning model assisted by Interactive media with the acquisition of the results of significance of 0.032 < 0.05 then Ha is accepted and H0 rejected. The results of posttest showed that the average critical thinking skill of students was 39.88 for the experimental class and 34.68 for the control class. It can be concluded that classes that apply the interactive media-assisted inquiry learning model on material forms and energy changes have a higher average level of critical thinking skills of students.

It conforms to the findings of Dewanto et al., 2021, which seek to enhance students' critical thinking abilities in Fifth Grade through multimedia-assisted inquiry learning. Based on his comparison of pre- and post-test scores, Dewanto concludes that fifth graders' critical thinking has improved. Further, studies have shown that students' critical thinking and process skills improve when taught using an inquiry-based methodology (Usdalifat et al., 2016). His findings suggest that teaching science via an inquiry-based approach improves students' capacity for critical reflection. Students' process skills in the natural sciences are also influenced by the inquiry approach. Multiple studies have found that using an inquiry learning paradigm that makes use of interactive media leads to improvements in students' critical thinking abilities. The Inquiry Learning Model aims to

encourage students to think critically about the challenges they are presented with in class and to develop their own strategies for gathering relevant knowledge to apply that strategy. Therefore, the concept of inquiry learning supported by interactive media can be used to foster critical thinking in today's pupils.

4. CONCLUSION

The significance level reached from testing the hypothesis was 0.032 (2-tailed). The p-value of 0.05 was then calculated, rejecting H0 and accepting Ha. As a result, it can be deduced that Class IV students' critical thinking skills improved thanks to the implementation of an inquiry learning paradigm aided by interactive media. Study after study has shown that teaching and learning with an interactive media-assisted inquiry learning model improve students' capacity for critical thinking. The average number of students who improved as a result of receiving therapy with learning through an interactive media-assisted inquiry model is evidence of this. Researchers in this study chose a confidence interval of 1.54–4.01 and a confidence level of 95%. In light of their findings, the researchers propose changes to the educational system, one of which is (a) encouraging teachers to use interactive media based on a model of inquiry learning to help students master the topic. (b) Science education should foster students' capacity for critical analysis and reflection. (c) Other researchers need to examine the inquiry learning paradigm's efficacy with various content areas, but especially with science content.

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