



## Critical Thinking Skills Of MI Grade V Students Through The Application Of The Multiliteracy Learning Model

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### abstract

*This study aims to determine how students' critical thinking skills through multiliteracy learning model. The approach used in this research is quantitative by using quasi-experimental method and the design used is non equivalent pre-test pos-test control group design. The population in this study was grade V Madrasah Ibtidaiyah students totaling 76 students. The sample used was 53 students divided into experimental classes totaling 33 students and control classes totaling 20 students. Data collection techniques used were observation of the application of multiliteracy learning models and tests used to measure students' critical thinking skills. The test used in the form of a description test totaling 7 questions with the criteria for questions from Bloom's taxonomy C4 to C6. The instruments in this study have been validated and declared valid. The analysis used is quantitative analysis. The data processed was obtained using normality test and hypothesis testing to determine the effect of multiliteracy learning model on students' critical thinking skills using SPSS 22 for windows. From the results of the study, it is known that the multiliteracy learning model in grade V Madrasah Ibtidaiyah based on the student's critical thinking skills test obtained an experimental pre-test mean of 63.03 and for the control pre-test mean of 61.60. While the mean result of the experimental post-test was 79.06 and for the control post-test mean was 73.00. This shows an increase in critical thinking skills of fifth grade students of Madrasah Ibtidaiyah. There is a significant effect of multiliteracy learning model on critical thinking skills of grade V students of Madrasah Ibtidaiyah based on hypothesis testing obtained Sig value. 0.022 < 0.05 which means Ha is accepted, namely there is an effect of multiliteracy learning model on critical thinking skills of grade V students of Madrasah Ibtidaiyah*

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info artikel	abstrak
<p>Riwayat artikel: Diterima untuk direview: 22 06 2023 Diterima: 23 03 2024 Diterbitkan: 30-04-2024</p> <p>Kata kunci: Model Pembelajaran Multiliterasi, Keterampilan Berpikir Kritis, Siswa MI</p>	<p>Penelitian ini bertujuan untuk mengetahui bagaimana keterampilan berpikir kritis siswa melalui model pembelajaran multiliterasi. Pendekatan yang digunakan dalam penelitian ini adalah kuantitatif dengan menggunakan metode kuasi eksperimen dan desain yang digunakan adalah <i>non equivalent pre-test pos-test control group design</i>. Populasi dalam penelitian ini yaitu siswa kelas V Madrasah Ibtidaiyah yang berjumlah 76 siswa. Sampel yang digunakan adalah 53 siswa yang terbagi pada kelas eksperimen berjumlah 33 siswa dan kelas kontrol berjumlah 20 siswa. Teknik pengumpulan data yang digunakan yaitu observasi terhadap penerapan model pembelajaran multiliterasi dan tes digunakan untuk mengukur keterampilan berpikir kritis siswa. Tes yang digunakan berupa tes uraian yang berjumlah 7 soal dengan kriteria soal dari taksonomi bloom C4 sampai C6. Instrumen dalam penelitian ini sudah di validasi dan dinyatakan valid. Analisis yang digunakan adalah analisis kuantitatif. Data yang diolah diperoleh dengan menggunakan uji normalitas dan uji hipotesis untuk mengetahui pengaruh model pembelajaran multiliterasi terhadap keterampilan berpikir kritis siswa menggunakan SPSS 22 for windows. Dari hasil penelitian, diketahui bahwa model pembelajaran multiliterasi di kelas V Madrasah Ibtidaiyah berdasarkan tes keterampilan berpikir kritis siswa mendapatkan <i>mean pre-test</i> eksperimen sebesar 63,03 dan untuk <i>mean pre-test</i> kontrol sebesar 61,60. Sedangkan hasil <i>mean post-test</i> eksperimen sebesar 79,06 dan untuk <i>mean post-test</i> kontrol sebesar 73,00. Hal ini menunjukkan adanya peningkatan keterampilan berpikir kritis siswa kelas V Madrasah Ibtidaiyah. Terdapat pengaruh yang signifikan model pembelajaran multiliterasi terhadap keterampilan berpikir kritis siswa kelas V Madrasah Ibtidaiyah berdasarkan uji hipotesis didapat nilai <i>Sig. 0,022 &lt; 0,05</i> yang artinya <math>H_a</math> diterima yaitu terdapat pengaruh model pembelajaran multiliterasi terhadap keterampilan berpikir kritis siswa kelas V Madrasah Ibtidaiyah.</p>

## INTRODUCTION

One of the important skills in the 21st century is critical thinking skills. Students who are still lacking or do not have skills will face stiff competition. As stated by (Septikasari, 2018) that schools that become educational institutions as educational institutions, schools are required to apply various 21st century skills commonly referred to as the 4Cs, namely critical thinking and problem-solving skills (*critical thinking and problem solving skills*), communication skills (*communication skills*), creative thinking skills (*creative thinking skills*) and collaborative skills (*collaboration skills*). Therefore, the role of educators is highly required to develop skills in the 21st century for every student in participating in teaching and learning activities. In 21st century learning, a teacher is also required to be able to prepare all the learning tools that will be used.

According to (Pangaribowosakti, 2014) that critical thinking skills are skills that are very influential in the education system and life. Critical thinking is also a cognitive ability that every student should possess and develop. To find solutions to every existing problem, valid information is needed to make the right decision, get the right decision, and a critical thinking pattern is needed. Implicitly, critical thinking researches the implicit reasoning of what they hear, read and examine the way they think about themselves when writing, solving problems, making decisions or developing a project (Putri, 2016).

Critical thinking is very important for Madrasah Ibtidaiyah students because it not only involves being able to have strong oral and written communication, but also being adept at applying it rhetorically and sensitively to various situations and communities of discourse, using technology that is constantly changing effectively, wisely, and strategically. (Yayli, 2009).

However, based on the reality in the school environment, students' critical thinking skills are still low judging from the results of the research (Stuart & Stuart, 2019) that there are still many students who are reluctant to emulate arithmetic, because they already have an interpretation that arithmetic is a difficult subject. From the various events that were bridged in the learning activities, students seemed passive because they were just sitting and paying attention. From observations, the results were obtained that 7 students (20%) had high critical thinking skills, 13 students (37.14%) had moderate critical thinking skills, and 15 students (42.86%) had small critical thinking skills. The information was obtained from 35 4th grade students of SDN Tingkir Tengah 02. From this information, it can be grouped that the thinking skills of grade IV students of SDN Tingkir Tengah 02 are still low, and this condition will certainly have an impact on student learning outcomes.

In addition, it can also be seen from the research (Jupriyanto, 2018) that the low thinking skills during science subjects in grade IV can be observed in the results that minimally meet the KKM through the Final Semester Exam (UAS) score at the time of science subjects with an average level of UAS that does not reach the KKM that has been set, which is 65, however, the average income of class IV-A is only 63.7 while in class IV-B the average income is 64.6.

To overcome these problems, it is important to find solutions to foster students' critical thinking skills. The sorting of learning models by teachers, of course, is appropriate and creative so that learning is more interesting so that it can maximize students' critical thinking skills, because that way students will get the experiences they have done so that it will be easier for students to remember and absorb.

There are various innovative learning models that are able to encourage students to develop critical thinking skills, one of which is the multiliteracy learning model. The perception of multiliteracy is interpreted by McKee and Ogle (2005), namely that multiliteracy has a meaning that is initially only seen as an initial ability used in dictating, recording, studying, and talking activities and is carried out efficiently to increase communication and thinking skills. Departing from this understanding, then this skill is enlarged with the skills of criticizing, studying, and surveying facts in various sources from various fields of expertise (Abidin, 2015).

According to (Hong & Hua, 2020) that multiliteracy pedagogy expands the teaching and learning process by incorporating new things in the existing

environment. Using multiliteracy can develop a more critical self-construction. Multiliteracy describes speaking skills that are related by situations, habits and media. The meaning of his opinion is language skills, namely dictation skills, tapping skills, speaking skills, and study skills (Abidin, 2015). Multiliteracy shapes students to succeed in achieving critical thinking skills and have high interpretation.

The advantage of the multiliteracy learning model is that literacy is not restricted to the order of printed or explicit speech, but rather implies various forms of representation, rhythm, gestures, and images to "introduce students into the standard written form through transmission pedagogy" so that it can reproduce established forms of culture and language. In other words, although print and written literacy is important, it is only one type of literacy (Annet & Naranjo, 2014). Using multiliteracy training, madrasah ibtidaiyah (MI) students are expected to be able to master critical thinking and be able to practice it in daily activities for each child. In order to develop critical action, this should start at the ibtidaiyah madrasah (MI). As stated in the research (Dafit, 2017) That is, effective multiliteracy training will make elementary school students think critically. Multiliteracy learning can be interpreted to help students increase their critical thinking skills. Students who study using multiliteracy learning respond positively to the learning model that has an impact on their performance.

Research on the application of the multiliteracy learning model has been conducted by (Mayer, 2020) with the results of the study showing that there was a difference between the mathematical communication skills of students who used the multiliteracy learning model and those who used the conventional learning model. The mathematical communication skills of students who use the multiliteracy learning model get higher results than students who use the conventional learning model. In line with research (Agustina et al., 2019)

From some of the previous researches above, what contrasts with the research that the researcher wants to carry out is to investigate whether the implementation of the multiliteracy learning model has an effect on students' critical thinking skills in Indonesian learning. There is a difference between this study and the previous research, namely in this study, the focus of the research is critical thinking skills, so this research is important to eliminate research gaps.

Based on the various ideas that have been described above, the researcher plans to carry out a research entitled "Students' Critical Thinking Skills through the Application of the Multiliteracy Learning Model for Class V Madrasah Ibtidaiyah".

## RESEARCH METHODS

This study aims to see how students' critical thinking skills are by applying the multiliteracy learning model. The approach used by the researcher in this study is quantitative using quasi-experimental methods and the design used by the researcher is *non equivalent pre-test pos-test control group design*.

The population in this study is all students of class V of Madrasah Ibtidaiyah which totals 76 students. The sample used was 53 students divided into an experimental class of 33 students and a control class of 20 students.

This research was carried out through several stages. First stage be *Preparation*, including literature studies, preparation and validation of research instruments. Second

stage that is *implementation*, including the provision of pre-tests, the application of multiliteracy learning models in experimental classes, and observation of learning activities. Third stage be *Data analysis*, which is done through normality, homogeneity, and Mann-Whitney U tests to see the difference in results between the experimental and control classes.

The data collection technique used was observation of teachers and students when applying the multiliteracy learning model and tests totaling 7 questions of the type of description test with question criteria from bloom taxonomy C4 to C6. The observation data collection technique is carried out by looking directly at how the situation is in the field, for example, how teachers use the multiliteracy learning model in classroom learning activities. The test is used to obtain data on students' critical thinking skills. Where from this data it can be seen whether or not the multiliteracy learning model has an effect on the critical thinking skills of students in grade V of Madrasah Ibtidaiyah.

The data analysis technique used in this study uses statistical permission through normality tests, homogeneity tests and hypothesis tests using the *Mann-Whitney U* test assisted by the IBM SPSS Statistics 22 program.

## RESULTS AND DISCUSSION

### Implementation of Multiliteracy Learning in Developing Students' Critical Thinking Skills

The observation sheet used in this study is to find out how the learning process in the classroom and the implementation of the multiliteracy learning model carried out by teachers and students. The number of aspects observed on the sheet consisted of steps of the multiliteracy learning model. The following are the results of the observations:

**Table 1 Observation Results**

Teacher	Student
<ul style="list-style-type: none"><li>• The teacher asks students to express their opinions (Implementation 80%)</li><li>• The teacher directs students to be able to identify a problem contained in the historical narrative text (<i>problem statement</i>). (Implementation 87")</li><li>• The teacher asks students to read the text of the historical narrative (Implementation 80%)</li><li>• The teacher discusses what are the facts or opinions in the text of the historical narrative (Implementation 85%)</li><li>• Teachers and students test the truth of facts or opinions in the text of the</li></ul>	<ul style="list-style-type: none"><li>• Students can express their opinions on historical narrative texts (Implementation 80%)</li><li>• Students can identify a problem contained in the text of the historical narrative (<i>problem statement</i>). (Implementation 82")</li><li>• Students read the historical narrative text that has been given by the teacher (Implementation 72%)</li><li>• After reading the historical narrative text, then students discuss what are the facts or opinions in the historical narrative text (80% Implementation)</li><li>• Teachers and students test the truth of facts or opinions in the text of the</li></ul>

<p>historical narrative          (Implementation 82%)</p> <ul style="list-style-type: none"> <li>• Teacher asks students what history needs to be studied (Implementation 84%)</li> <li>• Teachers and students analyze history (Implementation 84%)</li> <li>• The teacher asks students to create a work (Zigzag book) (Implementation 82%)</li> </ul>	<p>historical narrative (Implementation 82%)</p> <ul style="list-style-type: none"> <li>• Students answered the teacher's question what history we need to study (Implementation 75%)</li> <li>• Then students analyze the history (Implementation 78%)</li> <li>• Students make works (Zigzag book) (Implementation 83%)</li> </ul>
<b>Average Appearance: 83%</b>	<b>Submit Installment-installment = 79%</b>

Based on the results of the teacher's observations above, it shows that the results of teachers' observations in applying the multiliteracy learning model carried out by the researcher are included in the very good group with a final score of 3.31 in the range of  $3, 25 \times 4$  and a percentage of 83% for teachers and 79% for students. In the multiliteracy learning process, not all students follow and pay attention to the learning delivered by the teacher, especially at the stage of reading historical narrative texts which are only carried out 72%, this is because students do not really read and understand the reading text. In addition, at the stage of answering the teacher's question what history needs to be studied, only 75% of it is carried out because not all students can answer and answer the teacher's questions correctly.

In the learning process, there is not 100% of the teacher's implementation in implementing the multiliteracy learning model, this condition is because in carrying out teacher learning only runs in accordance with the learning implementation plan (RPP) that has been provided by the researcher there is no more improvisation from the teacher so that the implementation of the multiliteracy learning model of multiliteracy learning can reach a 100% percentage. Based on the description in table 1, it can be concluded that teachers' activities by applying the multiliteracy learning model are able to be categorized very well. Because almost all activities carried out by teachers are in accordance with the steps of multiliteracy learning.

### **Critical Thinking Skills of Class V Students through the Implementation of Multiliteracy Learning Models**

The test used in this study is to see the critical thinking skills of grade V students of Madrasah Ibtidaiyah. The test was carried out on 33 students in class V-B who were in the experimental class and 20 students in class V-C who were in the control class using a description test totaling 7 questions. The number of aspects assessed in this test are 5 aspects of the critical thinking skill indicator according to (A. Angelo, 2009) that is analytical skills, synthesis skills, problem-solving skills, inferring skills and evaluation skills.

**Table 2 Statistic Deskriptif Pre-test**

		<i>Pre-test</i> <b>Experiment</b>	<i>Pre-Test</i> <b>Control</b>
N	Valid	33	20
	Missing	33	46
Mean		63.03	61.60
Std. Error of		2.738	3.583
Mean			
Median		61.00	57.00
Mode		52	52
Hours of		15.731	16.024
deviation			
Minimum		33	33
Maximum		95	100

Based on the results of the descriptive statistical analysis above, the results obtained *mean Pre-test* experiment of 63.03 and for *mean Pre-test* control of 61.60. This shows that there is an increase in the critical thinking skills of grade V students of the Ibtidaiyah madrasah.

**Table 3 Statistic Deskriptif Posts**

		<i>Post</i> <b>Experiments</b>	<i>Posts</i> <b>Control</b>
N	Valid	36	20
	Missing	30	46
Mean		79.06	73.00
Std. Error of		1.250	2.799
Mean			
Median		81.00	71.50
Mode		86	62a
Hours of		7.498	12.519
deviation			
Minimum		62	52
Maximum		90	100

Based on the results of statistical analysis in table 3, the results were obtained *mean post-test* experiment of 79.06 and for *mean post-test* control of 73.00. This shows that there is an improvement in critical thinking skills in class V of Madrasah Ibtidaiyah. Then a normality, homogeneity and hypothesis test was carried out to determine the effect of the implementation of the multiliteracy learning model on skills critical thinking skills of grade V students of Madrasah Ibtidaiyah.

**Table 4 Normality Test Results**

	Class	Kolmogorov-Smirnova		
		Statistic	df	Itself.
Result	Experience Loans	.183	33	.007
	Post Experiment s	.217	33	.000
	Pretest Kontrol	.225	20	.009
	Poste's control	.164	20	.165

Based on the results in table 4, it shows that the significant values of *the experimental pre-test and post-test* of 0.007 and 0.000  $< 0.05$  are abnormally distributed. Then the significance values of *the pre-test and post-test* of the control class were 0.09  $< 0.05$  and 0.165  $> 0.05$ . Based on this data, not all data is normally distributed, so the next step is to carry out a non-parametric hypothesis test using *Mann-Whitney U*.

**Table 5 Non-Parametric Test Results**  
**Test Statistics<sup>a</sup>**

	Learning Outcomes of Critical Thinking Skills
Mann-Whitney U	207.000
Wilcoxon W	417.000
With	-2.295
Asymp. Sig. (2-tailed)	.022

a. Grouping Variable: kelas

Based on the results of table 5, it can be analyzed that a significant value of 0.022  $< 0.05$  then there is a significant influence between variables. The result obtained is a Sig. (2-tailed) value  $<$  (significance level), in other words H0 is rejected and Ha is accepted. Thus, based on the results of the statistical test, it was concluded that a significant influence of the implementation of the multiliteracy learning model on students' critical thinking skills in grade V of Madrasah Ibtidaiyah was found.

Based on the explanation of the results and data analysis as well as review during the research, it appears that in the learning activities in the experimental class students seem to be more active and master the discourse in responding to the

problems given by the teacher compared to the control class, in the experimental class students master the material more and recognize a problem related to the material taught to the point that students are able to respond to the questions given compared to the control class. This situation is due to the fact that in the learning experiment class it is carried out using a multiliteracy model that requires the interpretation of the source of the literature, the ability to identify a problem, an attitude of responsibility, playing a role in learning activities and also being able to express opinions.

Based on research that has been carried out, the multiliteracy learning model has a significant influence on students' critical thinking skills. This arises from the multiliteracy learning procedure being able to generate perseverance and enthusiasm that affects the concrete relationship between students and teachers. During the learning process, students are asked to enthusiastically express ideas in the stage of identifying a problem that will maximize students' opinion skills, and students are guided to obtain and utilize existing learning resources for students to be able to produce works in accordance with the stages of the multiliteracy learning model that has been carried out that can encourage students' inspiration and critical thinking skills. This condition is strengthened by the opinion (Morocco, 2008) which states that the skills contained in multiliteracy learning are reading skills, writing skills, speaking skills, and information and communication media mastery skills.

Critical thinking has a purpose, is grounded, and is organized around goals. It is a view that plays a role in solving problems, formulating conclusions, calculating possibilities, and making decisions. Critical thinkers use these skills correctly, unsolicited, and generally with conscious intent, in a wide variety of situations. In other words, when people think critically, they survey the results of their thought process, consider how good a decision is, or identify how powerful a problem has been solved (Alsaleh, 2020).

(Jones & Ratcliff, 1993) Explains that critical thinking is a competent and consistent opinion that facilitates effective calculations because (1) it adheres to benchmarks, (2) it improves itself and (3) it is responsive to the situation. According to (Fuad et al., 2017) Says that critical thinking is a reasonable or logic-based introspective rule of thinking centered on determining what should be believed and implemented. Critical thinking is a process based on stages to analyze, examine, and evaluate arguments.

In the learning process, teachers also need to be proficient in applying existing learning resources so that students are able to grow good information and communication mastery skills that will encourage critical thinking skills. This condition requires teachers' diligence in fostering appropriate, standardized, and classy learning as well as the insistence on learning using the student multiliteracy learning model. Agree with (Pramujiono et al., 2020) which reveals that multiliteracy learning urges the goal that educators always support students to read and connect it with various other science libraries and realize the benefits of the text into a record to get facts (there is a response by students and teachers in the learning process).

This is also in agreement with (Abidin, 2018), that one of the goals of the use of the multiliteracy learning model is to improve students' critical thinking skills in the learning process. With a multiliteracy learning model that allows students to be able to analyze, solve problems and conclude in the learning process, students will have high

critical thinking skills in the learning process in the classroom. By using the multiliteracy learning model, it can ignite students' enthusiasm for learning to be pressed to learn in obtaining good learning results.

The multiliteracy learning model supports students to think critically, read, write, and speak (Abidin, 2015). This research is strengthened by the results of previous researchers, namely (Vebrianto, Sigit 2018) who intends to see the influence of the multiliteracy learning model on students' reading comprehension skills. The conclusion of this research is that there is a significant influence of the application of the multiliteracy learning model on the results of students' reading comprehension skills. Then Research from (Mayer, 2020) With the conclusion that there is a difference between the mathematical communication skills of students who use the multiliteracy learning model and those who use the conventional learning model. The mathematical communication ability of students using the multiliteracy learning model is greater than that of students who use the conventional learning model.

Based on the results of the discussion above, the researcher can conclude that the use of the multiliteracy learning model can make students' mindsets more critical and students also more active. That way student learning outcomes and students' critical thinking skills can be better.

## CONCLUSION

Based on the results of the analysis, it was concluded that students' critical thinking skills have improved, this situation can be seen in the *pre-test* score of 63.03 and the *post-test* of 79.06. Then from the results of the nilai Sig. hypothesis test of 0.022 < 0.05, a conclusion can be drawn that the multiliteracy learning model has a significant effect on students' critical thinking skills. The multiliteracy learning model has implications, namely it can increase student motivation in learning activities, encourage students to think critically, produce students who are passionate about learning activities and improve student learning outcomes. This research suggestion for future researchers is that it is important to further research how students are motivated by applying the multiliteracy learning model.

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