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The Influence of Learning Media with Drill and Practice Model on Critical Thinking Skill of 5th Grade Student in Madrasah Ibtidaiyah

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Abstract: *This research is motivated by the lack of higher-order thinking skills possessed by fifth-graders of Madrasah Ibtidaiyah, one of which is students' critical thinking skills. Some students were not enthusiastic in the learning process and tended to be passive. When observed, some students felt unenthusiastic in learning because the learning process itself looked boring. Efforts made by researchers are to make the learning process fun and meaningful by using learning media with drill and practice models. The research conducted aims to identify the critical thinking skills of fifth-grade students of Madrasah Ibtidaiyah before and after using learning media with the drill and practice model and the influence of learning media with the drill and practice model on the critical thinking skills of fifth-graders of Madrasah Ibtidaiyah. This type of research is a quasi-experimental study with a one-group pretest-posttest design. Data collection techniques using test questions, questionnaires, observation, interviews, and documentation. Data analysis used descriptive data analysis by determining the percentage increase. The results of this study indicate that the percentage score for the pretest variable of critical thinking skills is 53% and the post-test is 73% and there is a significant influence between learning media and drill and practice models on critical thinking skills students with a percentage of 42%. Thus, the drill and practice learning model can be an alternative to improving higher-order thinking skills, one of which is students' critical thinking skills.*

Keywords: *Learning Media, Model Drill and Practice, Critical Thinking*

INTRODUCTION

Currently we are in the Education Era of the Industrial Revolution 4.0 or it can be called 21st Century Education. The development of science and technology demands changes in the learning process in basic education, both MI/SD. Advances in science and technology have influenced the use of teaching aids in schools and other educational institutions. One of the educational challenges is to build skills, including information and communication technology literacy skills, critical thinking skills, problem solving skills, and effective communication skills. These skills are characteristic of a knowledgeable society (Juano & Pardjono, 2016). In addition, problem solving and critical thinking skills are also classified as higher order thinking skills. Higher-order thinking skills can be used to formulate assessment tasks for subsequent studies (Mohamed & Lebar, 2017). Students who have higher-order thinking skills will have the ability to connect various concepts, interpret, solve problems, communicate, reason, and make the right decisions (Supeno dkk., 2019).

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Based on Permendikbud No.22 of 2016, the 2013 curriculum requires teachers to implement learning that leads students to have 4C competencies, namely communication, creative thinking, critical thinking and collaboration (Rusmansyah dkk., 2020). The skills possessed by students can be increased, so the teacher must create learning that is comfortable, fun and meaningful. Comfortable learning can be realized with learning facilities (school facilities and infrastructure), fun learning can be realized by using a scientific approach, learning through humour and effective learning methods, while meaningful learning can be realized through organizing themes, lesson content, and learning materials (Widodo, 2016).

Changes in learning patterns are urgently needed to carry out updates in a conventional learning system which is considered obsolete and irrelevant to the dynamics of the increasingly rapid development of the times, this is triggered by developments in science and technology which reveal that information and communication technology in learning acts as a liaison (Yusrizal, Intan Safiah, 2017). Most teaching and learning processes pay little attention to critical thinking skills. The low level of students' critical thinking skills is due to the fact that the learning process applied by the teacher is not oriented towards empowering higher-order thinking, only emphasizing conceptual understanding. This causes students' critical thinking to be less developed in solving problems and applying the concepts they have learned in real life.

In reality, student retention or student comprehension in the process of critical thinking skills and students' communication skills is strongly influenced by the models and methods of learning activities which are of course carried out by the teacher. If the teacher uses learning models and methods that are somewhat boring, then improving student skills will not produce results. In addition, the current learning process emphasizes the online-offline learning process by implementing health protocols, so the use of learning media that is increasingly limited can reduce students' interest in carrying out a meaningful learning process. This can be seen from the results of a preliminary study conducted at MI Nurul Ulum Bantul at the end of March 2021, which shows that the learning media and learning models used by teachers are still monotonous and quite boring due to restrictions on study hours as a result of the pandemic resulting in a lack of increased skills given to students with critical thinking skills. During the teaching and learning process, these activities are still teacher-centered (teacher-centered) not student-centered (student-centered) and thematic learning should be carried out student-centred so that learning becomes meaningless. Efforts that can be made to overcome these problems are by applying active and innovative learning models, one of which is the drill learning model. The drill method is a learning method that emphasizes the process of training the problem solving with the aim that students have higher dexterity or skills than what is learned (Ginanjar dkk., 2022). The drill method or exercise is also called the training method, which is a method that emphasizes the inculcation of habits through certain exercises (Muhibudin, 2021). Drill and Practice Model is a model in learning by training students to the subject matter that has been given. Through the Drills model, certain habits will be instilled in the form of exercise, with continuous exercise, it will be embedded and then it will become a habit (Kurniawan, 2015) Based on the background above, it encouraged researchers to conduct research with the title "The Influence of Learning Media with the Drill and Practice Model on the Critical Thinking Ability of Class 5 MI Nurul Ulum Bantul.

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METHODS

The research method used is a quantitative research method. Sampling used in this study is using non-probability sampling technique. In this study the independent variable is the use of learning media with the drill and practice model, while the dependent variable is students' critical thinking skills. The research design uses a pre-experimental design (non-design) with the type of research One Group Pretest-Posttest Design. In this research design, the test was carried out twice, namely before and after the treatment was given. The One Group Pretest-Posttest Design research design includes three steps, namely carrying out a pretest to measure the dependent variable; implementation of treatment or experiment; and implementation of the post-test to measure the results or impact on the dependent variable (Gall dkk., 2010; Setyosari, 2016). In this study, the test that was carried out before getting treatment was called the pretest. The pretest was given to the experimental class. After the pretest is carried out, the next step is to provide treatment in the form of learning Theme 1 Sub-theme 1 Learning 1 regarding the Organs of Movement of Animals and Humans using Learning Media with the Drill and Practice Model. Furthermore, in the final stage, namely giving a post-test. The reason for using this type of research is because researchers want to know and test in detail and what it is about learning media with drill and practice models in critical thinking skills and communication skills for 5th grade MI Nurul Ulum students. Based on the results of observations, distribution of test questions, distribution of questionnaires/questions and documentation. The data analysis technique used is the Prerequisite Test, namely: Test of Difficulty Level and Distinguishing Power of Test Instrument Items, Normality Test, Homogeneity Test, Linearity Test, and Coefficient of Determination Test; Linear Regression Analysis; and Hypothesis Testing includes: Paired Sample T-Test and T-Test.

RESULT AND DISCUSSION

1. Use of Learning Media with Drill and Practice Models

To find out how to use learning media with the drill and practice model at MI Nurul Ulum Bantul, data collection was carried out using observation sheets about learning media with the drill and practice model. The observation sheet consists of 20 statement items with the answer choices SB (very good), B (good), C (enough), K (poor) and SK (very poor). The results show that the average answer for SB (very good) is 60%. That is, the learning media with the drill and practice model can be used and in accordance with the research instrument indicators. Thus, learning media with the drill and practice model can be applied to grade 5 students with Theme 1 Sub-theme 1 Learning 1 Madrasah Ibtidaiyah. Teachers and students can use this learning media with the help of technology. That way, learning will be fun and meaningful for both students and teachers. The graphs from the observations of learning media with the drill and practice model are as follows:

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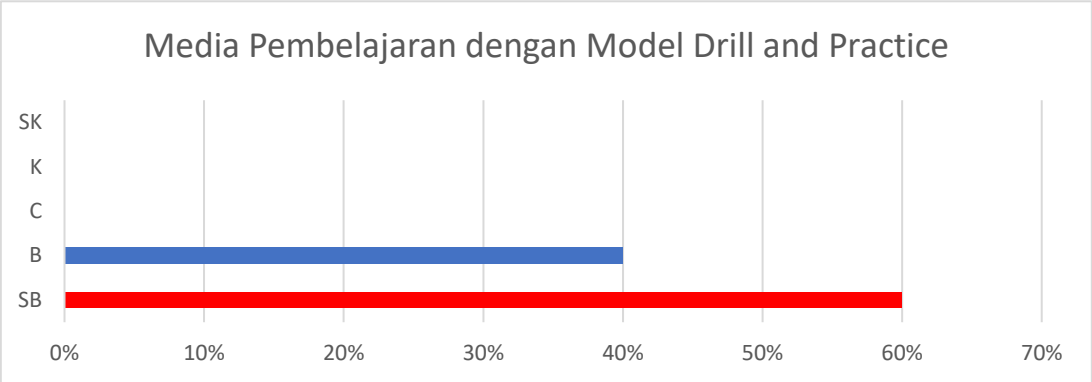

Figure 1. Recapitulation of Observation Results of Learning Media with the Drill and Practice Model

Those findings back up, the study said while the results are statistically significant and positive, the findings raise the question of whether time spent on CAI drill and practice will enhance overall mathematics achievement in educationally significant ways. For example, given that half of the possible points on the New Jersey eighth-grade mathematics test come from questions that require open-ended problem solving, middle level educators in the state, and in states with similar tests, may consider whether CAI drill and practice activities deserve the amount of time given by the school in this study (Tienken & Wilson, 2007).

2. Ability to Think Critically Before and After Using Learning Media with the Drill and Practice Model

To find out how critical thinking skills are implemented in grade 5 students at Madrasah Ibtidaiyah, what is done is to test using a questionnaire where in this questionnaire sheet is given to participants as students, especially grade 5 with a total of 20 statement items. The questionnaire was answered by students with a total of 21 students. Filling out the questionnaire was carried out in 2 stages, namely pretest and posttest. Students filled out a questionnaire before the treatment and after the treatment was carried out.

a. Results Before Using Learning Media with the Drill and Practice Model

The results of filling out the questionnaire obtained the percentage of students' Critical Thinking Ability pretest scores of 53%, which means that this category is in the sufficient category, which is between 41% -60%. As for the picture of the percentage level of the pretest score of the variable critical thinking skills of grade 5 students, namely as follows:

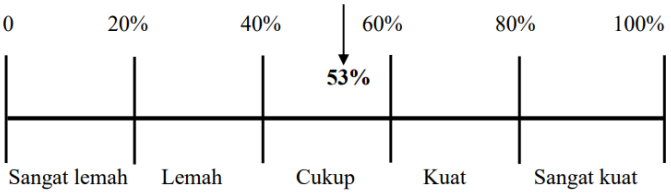

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Figure 2. Percentage Level of Students' Critical Thinking Ability Variable Scores Pretest

The results are still not optimal is not surprising because to teach simultaneously for both creative and critical thinking requires focusing on terms in practical, everyday contexts; keeping their central meanings in mind (Paul & Elder, 2006). This reframing of critical thinking requires that students take an active role in questioning and challenging music, education, and the ways in which they may take critical action to pursue change. Examples of critical thinking questions, activities, and curricula are offered, and resources are included for further reading (Shaw, 2014).

b. Results After Using Learning Media with the Drill and Practice Model

The results of filling out the questionnaire obtained the percentage of students' Critical Thinking Ability posttest scores of 73%, which means that this category is included in the strong category, which is between 61% -80%. As for the picture of the percentage level of the posttest score variable of the critical thinking ability of grade 5 students, namely as follows:

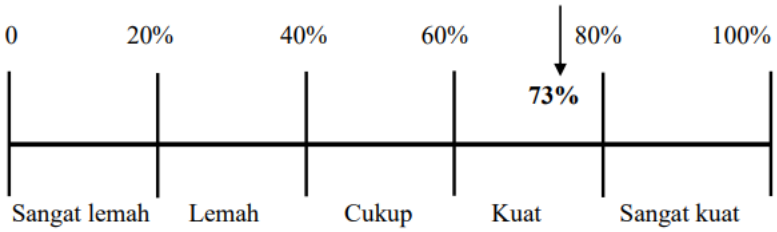

Figure 3. Percentage Level of Students' Critical Thinking Ability Variable Scores Pretest

These findings indicate that critical thinking skills are improving well which can be due to the students' initial knowledge or basic concepts regarding the material getting stronger after learning drill and practice. Drill and practice can be applied to students who have learned the concept (basic ability) with the aim of strengthening the concept that has been learned, where students are ready to recall or apply the knowledge they already have (Nurlaili & Sari, 2020).

3. The Effect of Learning Media with Drill and Practice Models on Critical Thinking Skills

a. Linearity Test

The results of the linearity test between the Learning Media Variables and the Drill and Practice Model on the Critical Thinking Ability Variables are as follows:

Table 1. Linearity Test Results of Learning Media with the Drill and Practice Model (Variable X) on Critical Thinking Ability (Variable Y)

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Kemampuan Berpikir Kritis * Media Pembelajaran dengan Model Drill and Practice	Between Groups	(Combined)	8122.652	27	300.839	1.552	.195
		Linearity	4570.090	1	4570.090	23.579	.000
		Deviation from Linearity	3552.562	26	136.637	.705	**.787**
	Within Groups		2713.467	14	193.819		
	Total		10836.119	41			

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b. Determination Test (R square)

The results of the determination test between the Learning Media Variables and the Drill and Practice Model on the Critical Thinking Ability Variables are as follows:

Table 2. Results of Determination Coefficient Test between Learning Media Variables and Drill and Practice Models on Critical Thinking Ability Variables

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.649[a]	**.422**	.407	12.516
a. Predictors: (Constant), Media Pembelajaran dengan Model Drill and Practice				

c. Simple Linear Regression Test

The results of a simple linear regression test between Learning Media Variables and Drill and Practice Models on Critical Thinking Ability Variables are as follows:

Table 3. Simple Linear Regression Test Results between Learning Media Variables and Drill and Practice Models on Critical Thinking Ability Variables

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	19.864	8.169		2.432	.020
	Media Pembelajaran dengan Model Drill and Practice	.625	.116	.649	5.401	.000
a. Dependent Variable: Kemampuan Berpikir Kritis						

d. Paired Sample T-test

Paired sample t-test is used to determine whether there is a difference in the mean of two paired samples. The results of the paired sample T-Test between pre-test and post-test scores on Learning Media with the Drill and Practice Model and Critical Thinking Ability can be seen in the following table:

Table 4. Paired Sample T-Test Test of Learning Media with the Drill and Practice Model (Variable X)

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 Media Pembelajaran dengan Model Drill and Practice - Posttest Media Pembelajaran dengan Model Drill and Practice	-26.95238	9.60456	2.09589	-31.32433	-22.58044	-12.860	20	**.000**

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Then it can be concluded that the value of Sig. (2-tailed) of 0.000 <0.005, it can be concluded that there is a significant difference between the initial variable (pretest) and the final variable (posttest). This shows that there is a significant effect on the difference in the treatment given to each pretest-posttest.

Table 5. Paired Sample T-Test Critical Thinking Ability (Variable Y)

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 Kemampuan Berpikir Kritis - Posttest Kemampuan Berpikir Kritis	-20.90476	18.52540	4.04257	-29.33742	-12.47210	-5.171	20	**.000**

So, it can be concluded in table 5 that the value of Sig. (2-tailed) of 0.000 <0.005, it can be concluded that there is a significant difference between the initial variable (pretest) and the final variable (posttest). This shows that there is a significant effect on the difference in the treatment given to each pretest-posttest. The drill-and-practice can be in the form of simple games that aim to enhance students' foundational skills. The game provided differentiated learning and recorded the students' performance. Significant improvement of literacy skill was found in the groups in which the game was used (Bai, 2019).

CONCLUSIONS

Every day, as humans, we need other humans. And of course, it will lead to two-way communication and more. These activities will occur repeatedly during the life process. Communication in learning, there is a long process between teachers and students, teachers and parents, students and students, and so on (Maswan & Muslimin, 2017). As a professional teacher in the era of the industrial revolution 4.0, of course there are many ways for students to be able to apply their skills, especially in critical thinking skills. Teachers must be able to follow developments, not to be missed. As the saying goes "Educate your child according to the day". Therefore, teachers must be able to prepare themselves in equipping students. Thus, students have sufficient sources of life in facing the future (Muzfirah, 2021). To produce good learning media, it needs to be done by following the correct procedures in the development process. Five dimensions in testing the use of interactive multimedia are: the dimensions of learnability, performance effectiveness, flexibility, error tolerance & system integrity, and user satisfaction. As for the principles of selecting learning media are: the selected media must be in accordance with the objectives and subject matter; teachers must know the characteristics and each learning

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media; the selection of learning media must be oriented to students who are learning; and the selection of media must consider the cost of procurement, the availability of media materials, the quality of the media, and the physical environment in which students study (Sabri, 2020). Learning media with the drill and practice model is one of the media and learning models that is so important for improving student skills. Implementation of offline learning by adhering to health protocols and of course reducing or narrowing time in the teaching and learning process greatly affects student motivation so that student skill improvements do not develop or increase. One of the skills students must have during this pandemic is the ability to think critically. Students at the MI/SD level, especially in the upper grades, namely grades 4, 5 and 6, must have critical thinking skills both in learning and in everyday life. The use of learning media in teaching and learning activities in the classroom is an alternative to reducing the habit of using the drilling system to convey lagging competencies (Riwanto & Wulandari, 2018). However, there are many things that need to be considered so that learning media, especially the drill and practice model, can be effective when used. Empirical data in the field shows that the teacher uses learning media and learning models so that the teacher is able to provide learning, motivation and can develop students' skills, especially in their critical thinking skills. Every student has different abilities both in academic and non-academic fields. As a teacher, it's good to know each student's advantages. So, when the learning process takes place, the teacher is able to use various media and learning models so that the learning objectives can be achieved properly. The use of learning media with the drill and practice model besides being an alternative in reducing the use of the drilling system, can also improve students' skills both in critical thinking skills and communication skills. As according to Walker, meaningful learning is when students feel happy, happy and focused when a teacher is able to explain learning well and fun. Without realizing it, skills that students may not have will emerge along with meaningful learning (Walker, 2017).

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