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The Effectiveness Of Thematic Learning Models Based On Diversity Integrated With Information And Communication Technology (Ict) As Learning Support In The Pandemic Era Covid 19

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Abstract: This article explores the utility of the ICT-based thematic learning model as learning support during the pandemic of Covid-19. The approach employed is quasi-experimental. As for the sample provided in this study, students from two fourth grade classes, namely class IV-A, have as many as 21 students as the experimental class as the control class and class IV-B with 21 students. The method used to gather data has been a test. The data research approach used T-test analysis. Results showed that the average post-test score of the learning outcomes of students in the experimental class (IV-B) was 74.48, while the post-test means that the student control class (IV-A) score was 68.62. Based on this discrepancy, there is a substantial difference in the learning results on the post-test score between the experimental class and the control class. Results of the "t-test" statistical data analysis, i.e., the value of t-count (5.680)>t table (1.724), are shown. It proves a suitable hypothesis.

Keywords: *Thematic Learning, ICT, Technology, Corona Virus, Kebhinekaan*

Preliminary

The spread of the Covid-19 virus has made significant changes in various aspects of life, be it social, economic, educational, and political. The world of education is the aspect most affected by the spread of this virus. Learning cannot be done directly but must be done remotely using Information and Communication Technology (ICT).

The world of education must move quickly to adapt to the situation of the spread of Covid-19. If they are not ready, they will have a massive impact on human resources in Indonesia. For this reason, constructive breakthroughs are needed so that the education process can continue to run effectively during this pandemic.

All aspects that support human life are very dependent on technology (Yazdi, 2012). If you cannot run technology to support work, then during this pandemic, of course, the results achieved will be far from expected.

Educational institutions are starting to enable distance learning using ICT media, where the interaction between teachers and students takes place without face to face directly but through virtual. Researchers,

professionals, and practitioners are starting to develop media to support technology-assisted distance learning. One of them is a gender-based thematic learning model and the integrated diversity of ICT. This learning model is expected to support learning during the pandemic (Mardhatillah et al., 2019).

The thematic learning model based on gender and diversity integrated with ICT has gone through various research and development processes following the development research methodology. According to Dick and Carrey, adapted to ADDIE, resulting in a "valid" learning model for elementary school students in Aceh province. The use of appropriate learning models will impact the quality of learning and lead to improving student learning outcomes (Kasmini & Mardhatillah, 2020).

The thematic learning model is a learning model recommended by the 2013 curriculum. In practice, this learning model combines many subjects into a theme so that learning is more efficient and effective (Ariyani & Wangit, 2016).

This article will describe the test of the thematic learning model's effectiveness based on gender and the integrated diversity value of ICT. This application and testing were carried out during the pandemic to see the learning model's point in learning.

METHOD

The research uses a quantitative approach. This research style uses a quasi-experimental research design. Quasi-experiments are scientific research. The researcher manipulates and controls one or more independent variables and observes the dependent variable to identify differences with the independent variable. (Rachmawati et al., 2017).

The procedure of this research begins with the researcher giving treatment to the group that applies the thematic learning model based on ICT's gender and integrated wisdom values (E = Experiment), and the untreated group uses the contextual learning model (K = Control). The design used is a pretest-post-test design control class, using two classes, namely experimental study, and control class.

Table 1. Pretest Format - Posttest Control Group Design

Group	Pretest	Independent Variable	Post-test
KE	O_1	Y_1	O_2
KK	O_1	Y_2	O_2

Keterangan:

KE = Experiment Class
KK = Control Class
O_1 = Initial comprehension test
O_2 = Final comprehension test
Y_1 = Teaching uses thematic models treatment integrated with ICT based on diversity
Y_2 = Teaching using conventional methods

The research was carried out in the fourth grade in two elementary schools in West Aceh District. According to the lesson schedule, it was the second semester of the 2020/2021 academic year on the day.

RESULT AND DISCUSSION

1. Pretest results for Experiment Class and Control Class

Table 2 below presents data on comparing students' scores on the initial test between the experimental class and the control class.

Table 2 Comparison of Pretest Scores

		Experiment Class Pretest	Control Class Pretest
N	Valid	21	21
	Missing	0	0
Mean		64,14	64,24
Median		67,00	67,00
Std. Deviation		9,232	8,966
Minimum		42	43
Maximum		76	80
Sum		1347	1349

Based on the classification in the table above, student grades are based on the results found; namely, the number of students, mean (average), median (middle value), standard deviation (standard deviation), lowest (minimum) value, highest value (maximum), and the number of scores. Based on the table above, in the control class of 21 students, the lowest score was 43, and the highest score was 80. Besides, the average score was 64.24, the standard deviation was 8.966, and the total score obtained from the control class was 1349.

Table 3. Distribution of Control Class Pre-test Results

Control Class Pretest Score

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	43	1	4,8	4,8	4,8
	48	1	4,8	4,8	9,5
	54	2	9,5	9,5	19,0
	55	1	4,8	4,8	23,8
	59	1	4,8	4,8	28,6
	63	1	4,8	4,8	33,3
	65	1	4,8	4,8	38,1
	66	1	4,8	4,8	42,9
	67	4	19,0	19,0	61,9
	69	1	4,8	4,8	66,7

	70	2	9,5	9,5	76,2
	71	3	14,3	14,3	90,5
	72	1	4,8	4,8	95,2
	80	1	4,8	4,8	100,0
	Total	21	100,0	100,0	

In the distribution table of control class pretest results above, what is meant by the value is the order of the students' scores in the control class, frequency is the number of students who get the grade, and percent (%) is the number of percentages in the class. The results of table 4.3 show that the lowest score obtained from the control class is 43 (there is one person = 4.8%). The highest score in the control class is 80 (there is one person = 4.8%).

The pretest students' results in the experimental class totaling 21 students obtained the lowest student score of 43, and the highest student score 80. The average student score was 64.24; the standard deviation was 8.966, the median value (middle value) was 67, while the total score obtained is 1349.

Table 4. Distribution of Experimental Class Pre-test Results

Experiment Class Pretest Score

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	42	1	4,8	4,8	4,8
	43	1	4,8	4,8	9,5
	52	1	4,8	4,8	14,3
	54	1	4,8	4,8	19,0
	59	1	4,8	4,8	23,8
	63	1	4,8	4,8	28,6
	65	2	9,5	9,5	38,1
	66	1	4,8	4,8	42,9
	67	4	19,0	19,0	61,9
	69	3	14,3	14,3	76,2
	70	1	4,8	4,8	81,0
	71	1	4,8	4,8	85,7
	72	1	4,8	4,8	90,5
	74	1	4,8	4,8	95,2
	76	1	4,8	4,8	100,0
	Total	21	100,0	100,0	

The pretest distribution table results showed that the lowest score obtained from the experimental class

was 42 (there was one person = 4.8%). The score of 67 was four people (19%), while the highest student score was in the experimental class, namely 75 (there is one person = 4.8%).

2. ***Experimental and Control Test Results on the Posttest***

Posttest assessments for the control class and experimental class were carried out to know the students' final grades after using the applied learning model. In the control class, the Contextual Teaching and Learning (CTL) learning model was implemented, while the experimental class carried out a thematic learning model based on diversity integrated with ICT. The following data on the results of the postest calculation can be seen in the following table:

Table 5. Comparison of Post Test Value Results

		Posttest Experiment Class	Posttest Control Class
N	Valid	21	21
	Missing	0	0
Mean		74,48	68,62
Median		74,00	69,00
Mode		79	69
Std. Deviation		5,853	3,500
Minimum		65	63
Maximum		83	77
Sum		1564	1441

Based on the 21 students' table, the lowest score in the control class was 63, and the highest score was 77. The students' average score was 68.62; the standard deviation was 3.500; the median (middle value) was 69, while the total score obtained was 1441.

Table 6. Distribution of Control Class Post-test Results

Posttest Control Class Score

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	63	1	4,8	4,8	4,8
	64	2	9,5	9,5	14,3
	65	1	4,8	4,8	19,0
	66	2	9,5	9,5	28,6
	67	2	9,5	9,5	38,1
	68	2	9,5	9,5	47,6
	69	4	19,0	19,0	66,7
	70	2	9,5	9,5	76,2

	71	1	4,8	4,8	81,0
	73	3	14,3	14,3	95,2
	77	1	4,8	4,8	100,0
	Total	21	100,0	100,0	

In the control class posttest results from the distribution table above, what is meant by the value is the order of the students' scores in the control class, frequency is the number of students who get the grade, and percent (%) is the number of percentages in the class. The results of table 4.7 indicate that the lowest score obtained from the control class is 63 (there is one person = 4.8%). The highest score in the control class is 77 (1 person = 4.8%).

The posttest data calculation results in the experimental class, the lowest student score was 65, and the highest student score was 83. The average student score was 74.48; the standard deviation was 5.853. The median was 74, while the total score obtained was 1564.

Table 7. Distribution of Experimental Class Posttest Results

Experiment Class Posttest Score

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	65	1	4,8	4,8	4,8
	67	2	9,5	9,5	14,3
	68	1	4,8	4,8	19,0
	69	1	4,8	4,8	23,8
	70	2	9,5	9,5	33,3
	71	2	9,5	9,5	42,9
	73	1	4,8	4,8	47,6
	74	1	4,8	4,8	52,4
	77	2	9,5	9,5	61,9
	78	1	4,8	4,8	66,7
	79	3	14,3	14,3	81,0
	82	2	9,5	9,5	90,5
	83	2	9,5	9,5	100,0
	Total	21	100,0	100,0	

The results from table 7 above show that the lowest score obtained from the experimental class is 65 (there is one person = 4.8%), while the highest student score obtained in the experimental class is 83 (there are two people = 9.5%).

3. **Normality Test Results**

The normality test uses the Kolmogorov-Smirnov test through the SPSS.20 application program. The results of the normality test are presented in table 8 below:

Table 8: Normality Test

One-Sample Kolmogorov-Smirnov Test

		Pr etes Kelas Eksperimen	Pretes Kelas Kontrol
N		21	21
Normal Parameters[a,b]	Mean	64,14	64,24
	Std. Deviation	9,232	8,966
Most Extreme Differences	Absolute	,251	,201
	Positive	,102	,146
	Negative	-,251	-,201
Kolmogorov-Smirnov Z		1,151	,919
Asymp. Sig. (2-tailed)		,141	,367

a. Test distribution is Normal.
b. Calculated from data.

Based on the table above, it is known that the students' posttest scores in the experimental class and the control class are normally distributed. The p-value for the experimental class is 0.141, and the p-value for the control class is 0.367. Data is normally distributed if the p-value is> 0.05. The p-value of the two sample classes is large than 0.05 so that the data in the control class and the experimental class can be interpreted as normally distributed.

4.1.1 Hypothesis Test Results

Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Postes Eksperimen - Postes Kontrol	5,857	4,725	1,031	3,706	8,008	5,680	20	,000

The results of the t-test were analyzed through SPSS.20 application can be seen in the following table:

Tabel 9: Uji Hipotesis

Based on the table above, the average score of the experimental class is 74.48, and the control class is 68.62. Estimating the mean difference test of student learning outcomes using the t-test obtained the t-count price (5.680)>t table (1.724), and the meaning value is less than 0.05 (p=5.680>1.724). If t-count > t table at 5 percent meaning level with df = 20, it could be said that Ha is accepted, and if t count < table is declared rejected and Ho accepted. So it can be inferred that Ha, which reads "there is an impact of using a gender-based thematic learning model and the integrated diversity of ICT media on student learning outcomes in grade IV SD Negeri Kota Meulaboh.

The results of the research on the effect of the thematic learning model based on gender and the value of habit in the fourth-grade elementary school students were obtained by comparing the mean scores of the initial test and the final test scores of the students in class IV-B (experimental class) in Figure 4.4 below:

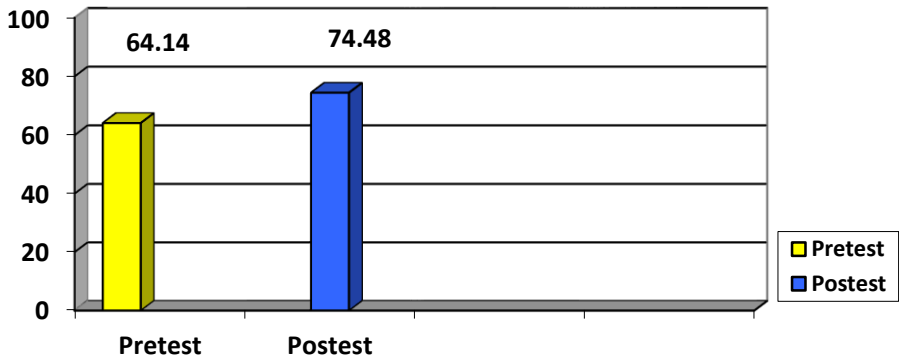

Figure 1. Differences in the Learning Outcomes of the Pretest and Posttest in the Experimental Class

In the initial test, the graphic explains students who studied with the CTL learning model obtained an average score of 64.14. While the average final test score of students who studied using a thematic learning model, gender-based and diversity values integrated with ICT media obtained an average score of 74.48.

Student learning outcomes, indicated by the t-test post-test, received average student learning outcomes in the 74.48 experimental class and 68.62 control class average student learning outcomes. So it can be concluded that the difference in the experimental class and control class's average score of student learning outcomes is 5.86. From the table above, the t count is 3.339. Df 20 's t table at 5 percent, meaning the amount is 1,724. So the value of t-count > t table (5,680>1,724) can be concluded that the amount of student learning outcomes in the experimental class is significantly different.

The thematic learning model based on gender and the integrated cultural values of ICT media applied in the experimental class make students more active and motivated in the learning process because there is an interaction between one student and another. Through the ICT application, students become more enthusiastic about learning because students can get feedback directly from the application (Multisim et al., 2014)

The integration of ICT media in a thematic learning model based on gender and the value of diversity is very suitable. It is recommended for teachers in teaching, especially in West Aceh Regency, especially during the COVID 19 pandemic, where students can study independently at home or in other places..

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