Online Learning Using The Zenius App At Madrasah Ibtidaiyah Negeri 8 (MIN) Central Aceh

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Abstract. Zenius is an application developed for distance learning. This application has several advantages, including the availability of subject matter and learning videos. This study aimed to determine the effectiveness of using the Zenius application in online learning at MIN 8 Central Aceh. The research method used in this study is a level 2 development research method, according to Sugiono, namely researching to test existing products. Data collection is done using observation, interviews, and tests. Observations and interviews were conducted at the literature study stage as the first step in level 2 development research. At the same time, the tests used were pretest and posttest—data analysis techniques using quantitative analysis. The results showed that from the limited Trial, the pretest and posttest scores increased with a high significance of 16.67%, 0%, and low, 83.33%. Then it can be said to be effective. In the usage trial, it is known that there is an increase in the pretest and posttest scores with a high significance level of 30%, moderate 0%, and low 70%; it is stated that the use of the Zenius application in learning is effective. The broad class trial found an increase in the pretest and posttest scores with a high significance of 35.53%, moderate 0%, and low 64, 47%. It is stated that the application used in online learning is practical.

Keywords: Learning, Online, Application, Zenius

1 Introduction

Corona virus infection is a disease caused by a coronavirus and causes the main symptoms of respiratory problems. This disease is in the spotlight because of its emergence at the end of 2019 for the first time in Wuhan, China. For the first time, the location of its appearance has made the COVID-19 Covid-19. Symptoms of Covid-19 range from the flu to severe diseases such as Middle East Respiratory Syndrome or what is known as MERS-CoV and Severe Acute Respiratory Syndrome or SARS-CoV.[1] A new type of coronavirus causes Covid-19. This virus is a new type of virus, so this disease was unknown until the Covid-19 outbreak in Wuhan, China, in December 2019. Cases of Covid-19 disease appeared and infected humans for the first time in Wuhan, China. Covid-19 can be spread easily through coughing or breath released by a person with Covid-19.

ISTED 2021, July 17-18, Purwokerto, Indonesia

DOI 10.4108/eai.17-7-2021.2312154

Splashes of coughs and breaths by Covid-19 sufferers that fall onto the surface of an object can transmit the disease through the thing.[1]. If a person touches an object or inhales the splash then touches his nose, eyes, or mouth, he can contract Covid-19.

The world health organization, the World Health Organization (WHO), urges people to maintain a distance of more than 1 meter from other people to minimize the transmission of Covid-19. The information of Covid-19 is so fast that the World Health Organization (WHO) designated this coronavirus or Covid-19 as a pandemic on March 11, 2020. This global epidemic status or pandemic indicates that the spread of Covid-19 is taking place very quickly. Almost no country in the world can avoid the coronavirus (Mona, 2020), so that governments in various countries have implemented lockdowns or quarantines in the form of separating someone who has been exposed to COVID-19, including Indonesia, as stated by Suwarno, Indonesia, as one of the countries exposed to COVID-19 also implemented a similar policy. Since the first case of COVID-19 was confirmed on March 2, 2020, in Depok, West Java, the number of positive cases continues to grow quite quickly.[2]

The Indonesian government has implemented the Large-Scale Social Restrictions (PSBB) rules to control the spread of Covid-19. This is done hoping that the virus does not spread more widely and healing efforts can run optimally. In this social restriction effort, the Indonesian government has limited activities outside the home, such as educational activities carried out online (online) through online learning since March 2020, referring to the circular letter of the Minister of Education and Culture Number 4 of 2020. Online learning is carried out by utilizing internet technology with The goal is to reduce crowds to prevent the spread of the Covid-19 virus. Online learning is carried out with a distance learning system, namely between teachers and students, not in one room or one place.

Online learning is a new learning model in Indonesia. So many problems occur in the field, as stated by Zain that the limited material received by students makes learning not optimal.[3]. Other problems Students are not able to understand the content of the material that has been presented through online media by the teacher; the internet network is sometimes disrupted, the lack of use of online learning media so that the teacher cannot convey some subject matter that requires specific learning tools and media the maximum.[4] In terms of readiness, as stated by Jauhari, the problem that arises is that the preparation of teachers in making learning tools is a little more complicated; in online learning, teachers are required to master Information Technology (IT) considering that learning is not done face-to-face.[5]. Furthermore, Jauhari revealed that teachers are tired of doing online learning considering a large number of students, different schedules are made so that many teachers are not ready to do online learning, especially to prepare online learning media based on information technology using android applications.[5], In addition, the factor of unpreparedness of educators is because they are not familiar with online learning and have not been able to use existing platforms or applications used in online learning. This is a particular problem for those who do not understand using IT. (Rudi Haryadi, 2021)

From the description above, it can be understood that there are still teachers who are not ready to do online learning, have difficulty making learning tools, preparing materials, and so on, which is happening in many areas. The same thing happened in MIN 8 Central Aceh. Departing from these problems, the author is interested in researching the use of the Zenius application in online learning; Zenius is a free platform that can be accessed by all teachers in Indonesia, launched for the first time to coincide with National Education Day 2020. Zenius is a free Learning

Management System created by teachers for teachers. Zenius claims that this platform can be used by teachers throughout Indonesia for free, by teachers of all subjects, at all levels of education to facilitate the management of learning activities. Zenius Application Development is a form of Zenus' mission to improve Indonesian educational competence globally. This edutech startup also intends to create a more thoughtful, brighter, and more fun Indonesia. Because the application has available learning materials, the teacher can start classes to overcome the material's difficulties. This study aimed to determine the effectiveness of using the Zenius application in online learning at MIN 8 Bebesen Central Aceh.

2 Research Methods

This research uses the level 2 development research method; according to Sugiono, level 2 development research is development research that aims to test existing products (Sugiyono, 2017), here the position of the researcher is only to try, did not research to test the effectiveness of current products. . Level 2 research and development steps include several stages. First, using a particular product, here the product in question is the Zenius application for online learning. Second, literature studies; in this step, the researchers conducted field observations and Interviews related to online learning at MIN 8 Central Aceh. The third Trial, trials were conducted in small groups, use trials, and broad trials. Small group trials were carried out on students in small groups (sample selected at random). The practice of use by carrying out learning using the Zenius application classically in one class of students. Extensive trials by carrying out education using the Zenius application classically in three categories. Fourth, make a test report. analyze the test results, and make conclusions. (Rudi Haryadi, 2021). The data collection technique uses the tets approach to determine the effectiveness of using the Zenius application in online learning. The data analysis used is quantitative analysis to evaluate the effectiveness of using the Zenius application.

3 Results and Discussion

Results of the literature study

At the literature study stage in this level 2 development research, the researchers made observations at the research location, namely at MIN 8 Central Aceh; MIN 8 Central Aceh is one of the basic level Madrasah under the auspices of the Ministry of Religion of Central Aceh which actively implements online learning through the manager application. Group, the whatshap group, google classroom, and zoom cloud meeting, since March 26, 2020. However, according to the Head of MIN 8 Central Aceh, Irfan, S.Pd.I, although Madrasah is actively implementing online learning, it turns out there are several obstacles, including the lack of teacher readiness to prepare online learning tools. So that it impacts decreasing the absorption of subject matter to students, all students

can take part in the online learning system. Responding to this, the researcher then offers to use the application that Zenius has developed in online learning.

Zenius provides online learning channels for elementary to high school students. Zenius App has three advantages, which are complete, practical, and affordable. Exclusive means that subject matter is available from grade 1 Elementary School to 12 Senior High School according to the education unit level curriculum, 2013 curriculum, and 2013 revised curriculum. There are 80,000 videos and hundreds of thousands of questions from all classes and lessons.

Limited trial results

In a limited trial, online learning was carried out using the Zenius application for six students in class 3; the tiny trial stage was carried out by conducting an initial test or pretest before conducting online learning, then online learning was carried out using the Zenius application for one week, after learning using the application genius then carried out a final test, or posttest. The results of the pretest and posttest are presented in the following table:

Table 1. Limited pretest and posttest scores

No	Student	Value	
		pretest	posttest
1	A	54	77
2	B	62	87
3	C	71	94
4	D	51	81
5	E	53	82
6	F	47	76

Descriptive Statistical Analysis

Descriptives

			Statistic	Std. Error
Nilai Pretest	Mean		56.3333	3.55590
	95% Confidence Interval for Mean	Lower Bound	47.1926	
		Upper Bound	65.4741	
	5% Trimmed Mean		56.0370	
	Median		53.5000	
	Variance		75.867	
	Std. Deviation		8.71015	
	Minimum		47.00	
	Maximum		71.00	
	Range		24.00	
	Interquartile Range		14.25	
	Skewness		1.054	.845
	Kurtosis		.543	1.741
Nilai Posttest	Mean		82.8333	2.74975
	95% Confidence Interval for Mean	Lower Bound	75.7649	
		Upper Bound	89.9018	
	5% Trimmed Mean		82.5926	
	Median		81.5000	
	Variance		45.367	
	Std. Deviation		6.73548	
	Minimum		76.00	
	Maximum		94.00	
	Range		18.00	
	Interquartile Range		12.00	
	Skewness		.923	.845
	Kurtosis		.280	1.741

Category improvement	Category N-Gain	Many students	Percentage

High	N-Gain>0,7	1	16.67%
Low	0,3=< N-Gain=<0,7	5	83.33%
Medium	N-Gain<0,3	0	0.00%
			100.00%

Data Normality Prerequisite Test

From the pretest and posttest data, the normality of the data will be tested. Normality test or prerequisite test is used to test whether the variables are normally distributed or not to perform the t-test. If the data is not normally distributed, then the researcher must modify it first, but if it is usually distributed, then immediately perform the core test or t-test. The following is the calculation of the data normality test using SPSS.

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Nilai Pretest	.272	6	.186	.913	6	.455
Nilai Posttest	.216	6	.200*	.923	6	.527

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Value of Sig. (P-Value) in both data groups > 0.05, it can be concluded that the scores on both tests (pretest and posttest) are typically distributed.

T-test (paired samples t-test)

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Nilai Pretest & Nilai Posttest	6	.945	.004

Value of Sig. (P-Value) = 0.004 <0.05, it can be concluded that the two groups of data are correlated

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	Nilai Pretest - Nilai Posttest	-26.50000	3.20936	1.31022	-29.86802	-23.13198	-20.226	5	.000

Sig. (2-tailed) / p-value < 0.05, it can be concluded that there is a significant difference in value between before and after treatment in a limited trial

Trial use

In the trial use, online learning was carried out using the Zenius application to 30 class 4 students; the Trial was carried out by conducting a pretest before doing online education, then online learning using the Zenius application was carried out for one week, after learning using the Zenius application was then carried out a final test. Or posttest. The results of the pretest and posttest are presented in the following table:

Table 2. The value of the pretest and posttest of the usage trial

NO	STUDENTS NAME	PRETEST	POSTTEST
1	Achmad Abi Thofani	50.00	78
2	Achmad Ragil Surya Firnandha	44.00	79
3	Agung Wicaksono Abdullah Putra	42.00	78
4	Akhmad Mukhyiddin Arga Pratama	42.00	81
5	Arif Kuswardana	34.00	76
6	Aulia Dwi Rahmawati	34.00	76
7	Aura Dewi Budi Lestari	36.00	84
8	Chayla Ezra May Anjani	38.00	78
9	Daniel Oktavianto	34.00	78
10	Diwantaka Kusuma Putra	28.00	78
11	Farel Agustian Crisjianto	46.00	78
12	Forza Hakim Saputra	42.00	78
13	Heni Kumala Pertiwi	34.00	82
14	Imroatul Azizah	44.00	84
15	Titania Kusherawati	52.00	86
16	Jeni Veronica Anggun Zahraini	40.00	84
17	Madani Firmansyah	38.00	85
18	Muhamad Aldian Syaputra	38.00	76
19	Muhammad Alvin	58.00	84
20	Muhammad Bagas Setyawan	42.00	85
21	Muhammad Iqbal Ikhwanto	34.00	85
22	Mukhammad Junaidi Irgi Dwitama	42.00	81
23	Risk Rismawati	36.00	87
24	Rehan Bagus Saputra	46.00	75

25	Rehani Nur Ramadani	40.00	76
26	Rendyansah Yoga Adi Pratama	42.00	76
27	Salsabila Hilda Agustin	56.00	76
28	Saverio Noviansyah	48.00	76
29	Umrotus Sholikhah	44.00	79
30	Vanesa Adelia Putri	58.00	82

Descriptive Statistical Analysis

Descriptives

			Statistic	Std. Error
Nilai Pretest	Mean		42.0667	1.35437
	95% Confidence Interval for Mean	Lower Bound	39.2967	
		Upper Bound	44.8367	
	5% Trimmed Mean		41.8519	
	Median		42.0000	
	Variance		55.030	
	Std. Deviation		7.41821	
	Minimum		28.00	
	Maximum		58.00	
	Range		30.00	
	Interquartile Range		10.00	
	Skewness		.593	.427
	Kurtosis		.108	.833
Nilai Posttest	Mean		80.0333	.67888
	95% Confidence Interval for Mean	Lower Bound	78.6449	
		Upper Bound	81.4218	
	5% Trimmed Mean		79.9259	
	Median		78.5000	
	Variance		13.826	
	Std. Deviation		3.71839	
	Minimum		75.00	
	Maximum		87.00	
	Range		12.00	
	Interquartile Range		8.00	
	Skewness		.386	.427
	Kurtosis		-1.321	.833

Category improvement	Category N-Gain	Many students	Percentage
High	N-Gain>0,7	9	30.00%
Low	0,3=< N-Gain=<0,7	21	70.00%
Medium	N-Gain<0,3	0	0.00%
			100.00%

Data Normality Prerequisite Test

From the pretest and posttest data, the normality of the data will be tested. Normality test or prerequisite test is used to test whether the variables are normally distributed or not to perform the t-test. If the data is not normally distributed, then the researcher must modify it first, but if it is usually distributed, then immediately perform the core test or t-test. The following is the calculation of the data normality test using SPSS.

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Nilai Pretest	.137	30	.158	.946	30	.130
Nilai Posttest	.208	30	.002	.892	30	.005

a. Lilliefors Significance Correction

Value of Sig. (P-Value) at the posttest value = 0.002 <0.05, it can be concluded that the posttest value is not normally distributed. So the difference test does not use the t-test, but the different test with nonparametric statistics.

T-test (paired samples t-test)

Test Statistics[a]

	Nilai Posttest - Nilai Pretest
Z	-4.784[b]
Asymp. Sig. (2-tailed)	.000

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

asymp. Sig. (2-tailed)/p-value < 0.05, it can be concluded that there is a significant difference between the values before and after the treatment in the one-class Trial. The broad class trial was carried out in class 5 as many as three categories, with 76 students. The Trial was carried out by conducting a pretest before doing online learning. Online learning was carried out using the Zenius

application for one week; after learning, the Zenius application was carried out with a final test or posttest.

NO	STUDENT NAME	PRE TES	POST TEST
1	Aditiya Bima Pratama	40.00	78
2	Ahmad Annas Ashari	48.00	79
3	Ahmad Fardhan Nitasal	34.00	78
4	Amelia Dwi Rahma	40.00	81
5	Dhafa Ananda Wahyu Ramadhan	30.00	76
6	Dwi Ramadhani	50.00	76
7	Eli Nirmala	44.00	84
8	Ella Nafsiyah	42.00	78
9	Ilham Harsena Ibrahim	42.00	78
10	Islamie Bi Kafa	34.00	78
11	Jofita Dwi Sariyah Ningsih	34.00	78
12	Mohamad Athala Andriyan Muzakky	36.00	78
13	Mohammad Hendra Setiawan	38.00	82
14	Muhammad Imam Ghozali	34.00	84
15	Muhammad Junior Putra Pratama	28.00	86
16	Muhammad Rico Sugianto	46.00	84
17	Muhammad Rosidil Muchlisin	42.00	85
18	Nadia Salsabiil	34.00	76
19	Putri Khoiriyah	44.00	84
20	Revalina Marshanda	52.00	85
21	Salsa Nabila Lestari Fajri	40.00	85
22	Tanaya Eka Arum Sholichin	38.00	81
23	Yoga Dwi Pratama	38.00	87
24	Zahra Angel Arabella	58.00	75
25	Zunita Dwi Ariyanti	42.00	76
1	Mukhammad Afin Nurhidayat	34.00	76
2	Ahmad Khusamuddin	42.00	76
3	Avarel Muhamad Jamiludin	36.00	76
4	Bangkit Taukhid Wahabain	46.00	79

5	Bima Ramadhani	40.00	82
6	Devina Rahma	42.00	76
7	Elok Fawzul Ishlahiyyah	56.00	77
8	Fiana Dwi Lestari	48.00	76
9	Frischa Arisha Putri	44.00	95
10	Hariati Indriani	28.00	78
11	Kquin Nara	42.00	78
12	Manda Nurcahyani	38.00	93
13	Mokhammad Fais	38.00	78
14	Muhammad Arya	50.00	77
15	Muhammad Fatkhur Roziqin	50.00	80
16	Muhammad Ivan Putra Aditya	46.00	78
17	Muhammad Johan Ramadani	48.00	76
18	Nadia Indah Lestari	42.00	97
19	Nur Adinda	44.00	97
20	Rahma Ramadhani	48.00	85
21	Rangga Adim Winata	30.00	95
22	Reihan Divan Aditya	44.00	93
23	Surya Farhandika Handoyo	40.00	78
24	Teddy Vinc Sachviano	40.00	75
25	Ufiyatul Fitria	62.00	87
1	Achmad Adeleandro	50.00	88
2	Ade Indri Fitriana	32.00	82
3	Ahmad Diki Abdillah	34.00	85
4	Angga Febri Saputra	32.00	84
5	Azahra Riza Ramadina	36.00	88
6	Bagus Muhammad Fatoni	52.00	76
7	Defrian Sigit Widodo	50.00	86
8	Dina Dwi Hidayah	34.00	76
9	Elang Rigan Tandyo Ramadhan	32.00	83
10	Fadel Arya Ghiyats	54.00	89
11	Fatmareza Nadin Auliyanadita	44.00	76

12	Ferdiansyah Pramudya	54.00	88
13	Gilang Sak Bana	46.00	76
14	Intan Nur 'Aini	52.00	77
15	Jerry Manggali Putra	42.00	77
16	Khaliyah Ardana Putri	56.00	87
17	Merri Tri Viana	28.00	94
18	Mohammad Ilham Farizky	60.00	81
19	Muhammad Ilham	52.00	82
20	Muhammad Samsul Arifin	44.00	76
21	Mukhammad Riki Ferdiansyah	38.00	76
22	Nurlita Putri Dwi Ramadhanis	44.00	76
23	Rahmat Wisnu Adi Pradana	38.00	76
24	Tama Assa Maulana	44.00	79
25	Vernanda Aprilian Hardiansyah	36.00	78
26	Yunia Diana Ayu	32.00	76

Descriptive Statistical Analysis

Descriptives

			Statistic	Std. Error
Nilai Pretest	Mean		42.1316	.90715
	95% Confidence Interval for Mean	Lower Bound	40.3244	
		Upper Bound	43.9387	
	5% Trimmed Mean		41.9474	
	Median		42.0000	
	Variance		62.542	
	Std. Deviation		7.90838	
	Minimum		28.00	
	Maximum		62.00	
	Range		34.00	
	Interquartile Range		12.00	
	Skewness		.322	.276
	Kurtosis		-.371	.545
Nilai Posttest	Mean		81.3421	.67475
	95% Confidence Interval for Mean	Lower Bound	79.9979	
		Upper Bound	82.6863	
	5% Trimmed Mean		80.8509	
	Median		78.5000	
	Variance		34.601	
	Std. Deviation		5.88230	
	Minimum		75.00	
	Maximum		97.00	
	Range		22.00	
	Interquartile Range		9.00	
	Skewness		1.085	.276
	Kurtosis		.360	.545

Category improvement	Category N-Gain	Many students	Percentage
High	N-Gain>0,7	27	35.53%
Low	0,3=< N-Gain=<0,7	49	64.47%
Medium	N-Gain<0,3	0	0.00%
			100.00%

Prerequisite Test Data Normality

From the pretest and posttest data, the normality of the data will be tested. Normality test or prerequisite test is used to test whether the variables are normally distributed or not to perform the t-test. If the data is not normally distributed, then the researcher must modify it first, but if it is usually distributed, then immediately perform the core test or t-test. The following is the calculation of the data normality test using SPSS.

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Nilai Pretest	.091	76	.194	.978	76	.223
Nilai Posttest	.215	76	.000	.853	76	.000

a. Lilliefors Significance Correction

Value of Sig. (P-Value) at the posttest value <0.05, it can be concluded that the posttest value is not normally distributed. So that the difference test does not use the t-test but the different test with nonparametric statistics.

Uji nonparametric two related samples (Wilcoxon Signed Ranks Test)

Test Statistics[a]

	Nilai Posttest - Nilai Pretest
Z	-7.577[b]
Asymp. Sig. (2-tailed)	.000

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

asymp. Sig. (2-tailed)/p-value < 0.05, it can be concluded that there is a significant difference between the values before and after the treatment in the broad class trial.

4 Conclusion

from the explanation above, it can be concluded that The results showed that from the limited Trial, the pretest and posttest scores increased with a high significance of 16.67%, 0%, and low, 83.33%. Then it can be said to be effective. In the usage trial, it is known that there is an increase in the pretest and posttest scores with a high significance level of 30%, moderate 0%, and low 70%; it is stated that the use of the Zenius application in learning is effective. The broad class trial found an increase in the pretest and posttest scores with a high significance of 35.53%, moderate 0%, and low 64, 47%. it is stated that the application used in online learning is a practical.

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