

Implementation of Online Learning Applications in SD Bina Kreasi Mandiri Bekasi: Infrastructure Effect Analysis

Netti Natarida Marpaung

Sekolah Tinggi Ilmu Ekonomi Tribuana, Indonesia

natarida.nm@gmail.com

Abstract

Online learning activities are very useful in the era of the Covid-19 pandemic where face-to-face teaching and learning activities cannot be carried out. So online learning is very useful today, teachers or students are required to learn a lot using technology. The purpose of this study was to determine how much influence and linkage of infrastructure to the application of online learning (Online) in SD Swasta Bina Kreasi Mandiri Bekasi. Data was collected through samples by means of random sampling from the population, and sampling to represent the entire population was carried out through interviews, observations, and questionnaires. The method used in this research is descriptive analysis method. The results of the t test have a significant effect less than 0.05, namely ($0.00 < 0.05$), so it can be concluded that infrastructure affects the effectiveness of online learning at SD Bina Kreasi Mandiri, thus the hypothesis is accepted with strong significance.

Keywords

infrastructure; online learning; covid-19



I. Introduction

National Education is the implementation of the Undang-Undang Dasar (UUD) 1945, Constitution of the Republic of Indonesia Article 31 paragraph 1 states that every citizen has the right to obtain education, and paragraph (2) explains the obligation of the state to organize a national education system. In this reform era, the national education system is legally covered by Law (UU) Number 20 of 2003 concerning the National Education System (Sisdiknas) (Emmanuel Sujatmoko, 2010).

In today's information age, knowledge is very important because it is a source needed to create human resources who have high skills and the principles that are adhered to are also related to the application of knowledge in technology. The impact of the information age on education in Indonesia can be considered good because it provides a positive change from the previous era. Distance and time now are not a barrier to be able to increase knowledge. Technology in the development of education that takes place in this information age should be one of the innovations in learning methods applied in schools, teacher paradigm changes are the only source of information and knowledge in the classroom can be changed by the application of information technology in ongoing learning (Rohmah, 2016).

Given the importance of education, schools are formal educational institutions that play an important role in the educational process through the ongoing learning process, schools can choose the right process or method used in learning to be able to achieve educational goals (Marpaung, 2021)

The novel coronavirus disease 2019 (COVID-19) emerged at the end of December 2019 in Wuhan city of China (Sahu, 2020). The existence of the Corona virus which is endemic almost evenly throughout the world, it is recorded that there are approximately 215 countries including Indonesia, which is the reason for the determination of the Corona

Virus as a Global Pandemic by WHO. The Corona Virus Pandemic, which is more familiarly known as COVID-19 (Corona Virus Disease 2019) has an impact on all sectors including education (Sadikin & Hamidah, 2020). The onset of the novel coronavirus made everything from world economies to social rituals (Schulten, 2020) devastated.

It takes the right learning media that must be adapted to the situation and condition of the learning material so that it can be used optimally. There are many media or technology-based learning platforms that long before the Covid-19 pandemic, have been used but may not be optimal, considering that the learning process takes place conventionally (Sadikin & Hamidah, 2020). Suspending “Classes Without Stopping Learning” aims to fight against the spread of the epidemic by suspending offline teaching at schools and turning to online education (Zhang et al., 2020).

SD Bina Kreasi Mandiri Bekasi is one of the elementary schools that is widely known by the public with good achievements and facilities (Sekolah.data.kemendikbud). During the Covid-19 pandemic, the school is required to implement online learning methods such as online, which is used for the teaching and learning process. This is due to the application of Social Distancing in which everyone must keep their distance (Nugroho, 2018). Besides online teaching mode is providing the feeling of psychological safety to learning community in COVID-19 afflicting period (Mishra et al., 2020).

The outbreak of this virus has an impact of a nation and Globally (Ningrum *et al*, 2020). The presence of Covid-19 as a pandemic certainly has an economic, social and psychological impact on society (Saleh and Mujahiddin, 2020). Covid 19 pandemic caused all efforts not to be as maximal as expected (Sihombing and Nasib, 2020).

Since schools are a gathering place for students, an online learning method is held. With this learning method, there are many obstacles that allow these activities to not run well, for example, poor connections, insufficient quotas, lack of funds for purchasing quotas, not having supporting facilities such as cellphones or laptops, lack of understanding of the material, etc. With this, it is stated that the current learning method is less effective and efficient because the students are not guided, the material being taught is not easy for students to understand, because the teachers only give assignments but do not explain in detail like when they meet face to face such as school guidance.

The purpose of this study is in accordance with the formulation of the problem above, namely:

1. To find out the comparison of the application of Web-based online with Face to Face learning (face to face) in increasing the learning activity of students at SD Bina Kreasi Mandiri Bekasi.
2. To compare the application of Web-based online with Face to Face learning in improving student learning outcomes at SD Bina Kreasi Mandiri Bekasi.
3. Knowing the differences in student learning activities who apply Web-based online with the application of Face to Face learning (face to face).

II. Review of Literature

School as a system has components that are interrelated and influence each other in achieving organizational goals. School inputs include: students, educators, finance, as well as instrumental and environmental, other inputs must be utilized as effectively as possible in the learning transformation process (Marpang, 2021).

In an emergency, learning activities cannot run normally as usual, however, students must still receive education and learning services (Adijaya & Santosa, 2018). During the Covid-19 emergency, the SD Bina Kreasi Mandiri Bekasi has carried out learning

activities in the midst of an emergency in accordance with the conditions and creativity of each SD Swasta Bina Kreasi Mandiri Bekasi where students learn from home with guidance from teachers and parents.

Facing the 2020/2021 school year which is still in an emergency period, of course, SD Swasta Bina Kreasi Mandiri Bekasi needs guidelines in carrying out the learning process, namely the Emergency Curriculum which is an education unit level curriculum that is compiled and implemented by the education unit during an emergency period by paying attention to the signs and regulations. Applicable regulations as well as the limited conditions of each educational unit during an emergency (Arumsari, 2017). The emergency period in question is not only during an emergency period of the Corona Virus Disease (Covid-19) outbreak, but also applies during an emergency period due to natural disasters, riots and so on.

The Supplement to the Emergency Covid 19 Curriculum for the Private SD Bina Kreasi Mandiri Bekasi was developed in accordance with the external and internal environmental conditions of the madrasah which include infrastructure, teachers, students, mapping of the zone where students and teachers live during the COVID-19 pandemic emergency. Bekasi refers to the appropriate regulations and guidelines, and takes into account the considerations of the SD committee and is developed based on the foundation and principles (Imron, 2019).

Hypothesis

A hypothesis is a statement about one or more populations that needs to be proven valid through hypothesis testing procedures. Hypothesis testing is a process of making comparisons between sample values (derived from research data) and hypothesis values in population data (Sutopo, Yeri; Slamet, 2017). The hypothesis statement is divided into two, namely the initial hypothesis (H_0) and the alternative hypothesis (H_1).

The hypothesis in this study is in the form of statements and tests carried out to determine the relationship and not related. The null hypothesis (H_0) is stated in a negative sentence, the alternative hypothesis (H_1) is a hypothesis which states that there is a relationship or influence between variables and other variables.

a. Hypothesis 1

H_0 : There is no influence between the Infrastructure variable and Online Learning (Online).

H_a : There is an influence between the Infrastructure variable and Online Learning (Online).

b. Hypothesis 2

H_0 : There is no relationship between the Infrastructure variable and Online Learning (Online).

H_a : There is a relationship between the Infrastructure variable and Online Learning (Online).

III. Research Method

The descriptive method is a method used to describe or analyze a research result but is not used to make broader conclusions (Sugiyono, 2015). In this study, the author uses a descriptive method of research, namely a method that describes the phenomenon of the problem of the object under study.

3.1 Data Collection Techniques

When viewed from the setting, data can be collected in a natural setting, in a laboratory using experimental methods, at home with various respondents, at a seminar, discussion, on the road and so on. When viewed from the data source. The data collection technique used by the author is in accordance with the description of (Sugiyono, 2016), namely:

- a. Interview, which is used as a preliminary study to find problems that must be researched and to find out more in-depth things from respondents, this may be done if the number of respondents is small. Interviews conducted by the author at the beginning of the pre-study were included in unstructured interviews where the authors did not use interview guidelines that had been systematically and completely arranged as data collectors, carried out directly (face to face) and indirectly (by telephone). After knowing the existing problems, the writer conducted a structured interview.
- b. Questionnaire (Questionnaire), which provides a set of questions or written questions to respondents to answer.
- c. Observation, which is a complex process composed of various biological and psychological processes. Two of the most important are the processes of observation and memory.

3.2 Research Place and Research Time

The place of research is SD Private Bina Kreasi Mandiri Bekasi. Sources of data in this study are primary data in the form of interviews, direct observations and questionnaires distributed to elementary school students who are represented by their respective parents at SD Swasta Bina Kreasi Mandiri Bekasi within the time of distributing questionnaires starting from March 13, 2021 until the date of July 15, 2021 in approximately 16 weeks with a random random sampling system via a google form given to students.

3.3 Population and Sample

Population can be interpreted as a generalization area consisting of objects/subjects that have certain qualities and characteristics determined by research to be studied and then drawn conclusions (Sugiyono, 2018: 130). The number of observations or members of a population is called the population size. For example, there are 1000 students on a campus, you will classify them according to gender so it can be said that you want to draw conclusions about the population, but cost is usually a barrier factor for observing all members of the population.

According to (Sugiyono, 2016) said that "The sample is part or the number and characteristics possessed by the population". If the population is large, and it is impossible for the researcher to study everything in the population, for example due to limited funds, manpower and time, the researcher will take a sample from that population. What is learned from the sample, the conclusions will be applied to the population. For this reason, samples taken from the population must be truly representative.

The analytical tools used in this research are:

3.4 Test Instrument

The test instrument used in this study uses a questionnaire that can provide data that forms readiness at the individual level. Questionnaire is a data collection technique that is done by giving a set of questions or written statements to respondents to answer. Questionnaires are an efficient data collection technique when the researcher knows with

certainty the variables to be measured and knows what to expect from the respondents. In addition, the questionnaire is also suitable for use when the number of respondents is in person or sent by post or the internet. Sugiyono (2017:142).

In this study I will use Likert to find out the results of the questionnaire. The Likert scale is used to measure attitudes, opinions, and perceptions of a person or group of people about social phenomena (Sugiyono, 2018). To obtain the data that the authors need and are considered relevant to the problem that the authors examine, the authors use a questionnaire data collection technique

3.5 Validity Test

The validity test was carried out by comparing the calculated r value with the table r value for the degree of freedom $d(F) = n-2$ with an alpha of 0.05. If r count is greater than r table and r is positive, then the item or question is invalid. To test the validity of the instrument in this study using the correlation formula as follows:

$$\text{Formula } r_{x,y} = \frac{N \cdot \sum XY - (\sum X)(\sum Y)}{\sqrt{(N\sum X^2 - (\sum X)^2)(N\sum Y^2 - (\sum Y)^2)}}$$

Description:

rx y = Correlation coefficient (instrument validity)

N = Number of questions

X = Number of item scores

Y = Total score of respondents

X² = Sum of squared scores X

Y² = Sum of squared scores Y

In testing the validity of the instrument using the moment product correlation formula to find out between the item scores (X) and a single score (Y). The data is processed through the SPSS version 17 program, to prove the results of the analysis can be measured at the output of the reliability test in the corrected item total correlation.

- a. If r count is positive and r count > r table then the item or variable is valid.
- b. If r arithmetic is not positive and r arithmetic < r table then the item or variable is invalid.

3.6 Reliability Test

This reliability test can be used through the SPSS version 25 program, which will provide facilities to measure the reliability value using the cornbach alpha (α) statistic test.

The formula for finding reliability is as follows:

$$r = \frac{n \sum AB - (\sum A)(\sum B)}{\sqrt{(n \sum A^2 - (\sum A)^2)(n \sum B^2 - (\sum B)^2)}}$$

Description:

r = Correlation Coefficient

n = Number of respondents

A = Odd question item score

B = The score of the question item is even

After knowing the correlation coefficient, then the results are entered into the Spearman Brown formula with the formula;

$$r = \frac{a^2 r b}{b^2 + r b}$$

Description;

r = reliability value

rb = Product moment correlation between the first hemisphere (odd) and the second hemisphere (even)

In the analysis test there are correlation, regression and determination tests along with their explanations.

3.7 Correlation Test

Two variables are said to be correlated if a change in one variable will be followed by a change in the other variable in a certain way in the same direction (positive correlation) or opposite (negative correlation).

$$r_{xy} = \frac{n\sum X_i Y_i - (\sum X_i)(\sum Y_i)}{\sqrt{(n\sum X_i^2 - (\sum X_i)^2)(n\sum Y_i^2 - (\sum Y_i)^2)}}$$

Description:

rx_y = Pearson correlation coefficient

X = Independent Variable

X = Number of item scores

Y = Total score of respondents

N = Number of samples

3.8 Determination Test

The coefficient of determination aims to determine the contribution of attitudes to increasing mathematical problem solving abilities.

3.9 Regression Test

Regression tests are used to process the relationship between two or more variables, especially to explore the pattern of relationships whose models are not yet fully known, or to find out how independent variables affect the dependent variable in a complex phenomenon. The regression equation was used to test the significant effect of the independent variable (Infrastructure) on the related variable (Online Learning (Online)). According to (Sugiyono, 2016) the regression coefficient formula can be used to predict how high the value of the dependent variable (Infrastructure) is if the value of the independent variable (Online Learning) is manipulated (changed).

In general, the regression equation can be formulated as follows:

3.10 Hypothesis Test

Hypothesis Testing is a temporary answer to the formulation of the research problem, the test used is the t test (partial), (Yusuf et al., 2022) the following is the explanation:

3.11 Test Statistics t

The t test is used to test whether the independent variable partially has a significant effect on the dependent variable. The independent variable is said to have a partially significant effect on the dependent variable if it is significant (sig) < that is 0.05. The positive (+) and negative (-) signs of Beta and t indicate the direction of the variable. If it is negative (-) then the variable has a negative effect, meaning it decreases the level of sales volume and if it is positive (+) then the independent variable has a positive effect, which means it increases sales volume.

IV. Results and Discussion

4.1 Results

a. Analysis and Presentation of Discriminatory Data

This section will describe and explain descriptive data from research that has been carried out with the title The Effect of Infrastructure on Online Learning at the SD Bina Kreasi Mandiri Bekasi. In this research, the authors distributed questionnaires to elementary school teachers and parents. The questionnaires distributed consisted of two parts, namely responses to infrastructure and online learning.

Descriptive Statistical Analysis used to determine the description of the variables studied through the average (mean), maximum value, minimum value. Standard deviation, range, and variance.

Table 1. Descriptive Test of Infrastructure Variables

Descriptive Statistics							
	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
Total_X	97	30	40	70	55.15	6.505	42.320
Valid N (listwise)	97						

Source: Data processed

Based on the table above, it can be seen that the number of respondents who filled out the statement questionnaire was 97 people. Of the 97 respondents who filled out the Infrastructure (X) questionnaire, the range value was 30, the minimum value was 40, the maximum value was 70, the average value (mean) was 55.15, the standard deviation was 6.505, the variance value was 42.320.

Table 2. Descriptive Test of Online Learning Variables (Y)

Descriptive Statistics							
	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
Total_Y	97	29	21	50	38.00	6.035	36.417
Valid N (listwise)	97						

Source: Data processed

Based on the table above, it can be seen that the number of respondents who filled out the statement questionnaire was 97 people. Of the 97 respondents who filled out the Online Learning (Y) questionnaire, the range value was 29, the minimum value was 21, the maximum value was 50, the average value (mean) was 38.00, the standard deviation value was 6,035, and the variance value was 36,417.

b. Instrument Test Analysis

1. Validity Test

Based on the results of the data processing test through SPSS, the Infrastructure variable (X) of the 14 statement items is valid, this can be seen from the correlation value R Count 0.610 for each statement item which is greater than the R Table value of 0.202 (significance level 5% and $n = 97$).

Based on the SPSS results, the Online Learning variable (Y) of 10 items is valid, it can be seen from the correlation value R Calculate 0.610 for each statement item is greater than RTable 0.202 of (significance level 5% and $n = 97$). Thus, of the 10 items in the instrument's validity requirements or statistically the data can be used to measure f

2. Reliability Test Results

Table 3. Reliability Statistics

Cronbach's	
Alpha	N of Items
.881	10

Source: Data processed

Based on the table above, the SPSS results for the Infrastructure variable are 0.838, the Online Learning variable is 0.881, it shows that the instrument for each research variable is reliable or consistent because if the cronbach alpha value is > 0.6 then it is reliable or consistent.

3. Correlation Test Results

Table 4. Correlation Test Results

Correlations		Total_X	Total_Y
Total_X	Pearson Correlation	1	.446**
	Sig. (2-tailed)		.000
	N	97	97
Total_Y	Pearson Correlation	.446**	1
	Sig. (2-tailed)	.000	
	N	97	97

** Correlation is significant at the 0.01 level (2-tailed).

Source: Data processed

Based on the table above, it can be seen that the correlation coefficient is 446**. This means that the large correlation or relationship between the Infrastructure variable (X) and Online Learning (Y) is 0.446 or low because it is close to 1. The two asterisks (**) means that the correlation is significant up to a significant number of 0001. Based on the table above, the relationship between Infrastructure variables (X) on Online Learning (Y) is significant because the significance number is $0.000 < 0.01$. The direction of the correlation can be seen from the coefficient number, the result is positive or negative. In

accordance with the results of the analysis, the far correlation coefficient is positive, namely 0.446, so the correlation between the two variables is unidirectional.

4. Determination Test Results

Table 5. Determination Test Results

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.446 ^a	.199	.191	5.429

a. Predictors: (Constant), Total_X

Source: Data processed

Seen from the table of SPSS output results above, the R value (coefficient of determination) is 0.199, which means that the influence of infrastructure (independent variable) is 0.199%. This shows that the R value reaches 1 and the independent variable can provide almost all the information needed to predict the related variable (dependent).

c. Regression Test

Table 6. Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	15.179	4.730		3.209	.002
	Total_X	.414	.085	.446	4.857	.000

a. Dependent Variable: Total_Y

Source: Data processed

From the data in table 6 above the calculation of the regression value, the constant (a) value is 15.179 while the regression coefficient value is 0.414 so that the regression equation can be written as follows:

$$Y = a + BX$$

$$Y = 15.179 + 0.414X$$

The constant value of 15.179 means that the coefficient value of the Online Learning variable is 15.179. And the value of the regression coefficient X is 0.414 which means that for every 1% addition to the value of Infrastructure (X), the value of Online Learning (Y) increases by 0.414. With a significance value of 0.000, this indicates that the significance value is less than 0.05 so it can be concluded that the Infrastructure variable (X) has an effect on the Online Learning variable (Y).

d. Hypothesis Testing

t test results

Table 7. One Sample Test

Test Value = 0

	T	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Total_X	83.502	96	.000	55.155	53.84	56.47
Total_Y	62.018	96	.000	38.000	36.78	39.22

Source: Data processed

Based on the table above, it is known that the significance value (Sig) of the Infrastructure variable is 0.00. Because the value of Sig 0.00 probability < 0.05 , it can be concluded that the infrastructure is accepted. This means that there is an influence of Infrastructure (X) on Online Learning (Y).

4.2 Discussion

Based on the results of the analysis above, it has been described that the variable (X) Infrastructure has a significant effect on the variable (Y) Online Learning. Descriptive data analysis, correlation test, determination test, regression test and hypothesis testing obtained very significant results between the two variables. Descriptive analysis of the Infrastructure variable has the results of means 55.15, range 30, standard deviation 6.505, minimum value 40, maximum value 70, variance 42.320. Online learning means 38.00, range 29, standard deviation 6.035, minimum score 21, maximum value 50, variance 36.417. The reliability results have the results of the Infrastructure variable 0.838, the Online Learning variable 0.881, which shows that the results are all consistent because it can be seen from the cronbach alpha value > 0.6 so it is reliable or consistent.

The correlation test resulted in a value between the Infrastructure variable and Online Learning of 0.446 or low because it was close to 1. Although low, the Infrastructure and Online Learning variable had a unidirectional or interconnected nature with a significance number of $0.000 < 0.01$. The regression test value for the online learning variable is 15.179 and the infrastructure is 0.414, the significance value is 0.000, which is smaller than 0.05, which means that the infrastructure variable has an effect on the online learning variable.

The results above can be proven that the variable (X) Infrastructure and variable (Y) Online Learning has a significant value less than 0.05, namely ($0.00 < 0.05$). Then the relationship is declared linear and there is a significant relationship. Likewise partially and simultaneously, both of these tests get significant hypothesis results partially and simultaneously. It can be proven by the significance value in test 1 partially obtained a significance value of 0.00 which is smaller than 0.05.

V. Conclusion

Based on direct analysis and research by distributing questionnaires, conclusions and suggestions can be drawn as follows:

It can be seen that based on the questionnaire, the respondents who participated the most were women and all respondents had cellphones. There is a significant influence of Infrastructure on Online Learning.

The application of the Online Learning system greatly facilitates students and teachers in carrying out teaching and learning activities and increasing knowledge by utilizing technology. It must be implemented because of the Covid-19 pandemic which applies a social distancing system so that everyone has to keep their distance, which is why they are forced to implement an online learning system. And there is a significant relationship between infrastructure and online learning.

Suggestion

Based on the results of the research obtained, the researcher recommends several things to be taken into consideration and thoughts, including:

There are still some students who do not yet have the ability to manage the online learning system. It is better to pay more attention to the student's condition, whether it has been used properly or used to play games and others. Internet quota facilities and cellphones or laptops as supporting factors for the implementation of this learning must be adequate, so that the effectiveness of learning can be carried out properly. The learning process with online media is highly dependent on the availability of an internet connection, so that when internet network facilities are disrupted, the learning process can be disrupted. Private SD Bina Kreasi Mandiri Bekasi should pay more attention to online learning activities, by changing strategies to be more effective and efficient so that the facilities used in online learning are useful for students. Pay attention to student learning progress so that they know whether the knowledge conveyed by the teacher during online learning is well absorbed.

References

- Adijaya, N., & Santosa, L. P. (2018). Persepsi Mahasiswa Dalam Pembelajaran Online. *Wanastra*, 10(2), 550. <http://ejournal.bsi.ac.id/ejurnal/index.php/wanastra><http://ejournal.bsi.ac.id/ejurnal/index.php/wanastra>
- Arumsari, R. (2017). Perbedaan motivasi belajar antara siswa yang berasal dari Jawa dan dari Papua di SMAN 1 Kediri. *Simki-Pedagogia*, 1(1), 1–13.
- Emmanuel Sujatmoko. (2010). Hak Warga Negara Dalam Memperoleh Pendidikan. *Jurnal Konstitusi*, 7(1), 182–211. <https://media.neliti.com/media/publications/110344-ID-hak-warga-negara-dalam-memperoleh-pendid.pdf>
- Imron, I. (2019). Analisa Pengaruh Kualitas Produk Terhadap Kepuasan Konsumen Menggunakan Metode Kuantitatif Pada CV. Meubele Berkah Tangerang. *Indonesian Journal on Software Engineering (IJSE)*, 5(1), 19–28. <https://doi.org/10.31294/ijse.v5i1.5861>
- Marpaung, N. N. (2021). Pengaruh Manajemen Tenaga Pendidik Terhadap Prestasi Belajar Peserta Didik di SD Harapan Indonesia Kota Bekasi. *PARAMETER*, 6(1), 12–23. <https://doi.org/10.37751/parameter.v6i1.158>
- Mishra, L., Gupta, T., & Shree, A. (2020). Online teaching-learning in higher education during lockdown period of COVID-19 pandemic. *International Journal of Educational Research Open*, 1(June), 100012. <https://doi.org/10.1016/j.ijedro.2020.100012>
- Ningrum, P. A., et al. (2020). The Potential of Poverty in the City of Palangka Raya: Study SMIs Affected Pandemic Covid 19. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)* Volume 3, No 3, Page: 1626-1634

- Nugroho, B. P. (2018). Implementasi Sistem Untuk Prediksi Harga Emas. *Jurnal SAINTEKOM*, 8(2), 90. <https://doi.org/10.33020/saintekom.v8i2.56>
- Sadikin, A., & Hamidah, A. (2020). Pembelajaran Daring di Tengah Wabah Covid-19. *BIODIK*, 6(2), 109–119. <https://doi.org/10.22437/bio.v6i2.9759>
- Sahu, P. (2020). Closure of Universities Due to Coronavirus Disease 2019 (COVID-19): Impact on Education and Mental Health of Students and Academic Staff. *Cureus*. <https://doi.org/10.7759/cureus.7541>
- Saleh, A., Mujahiddin. (2020). Challenges and Opportunities for Community Empowerment Practices in Indonesia during the Covid-19 Pandemic through Strengthening the Role of Higher Education. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*. Volume 3, No 2, Page: 1105-1113.
- Sihombing, E. H., Nasib. (2020). The Decision of Choosing Course in the Era of Covid 19 through the Telemarketing Program, Personal Selling and College Image. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)* Volume 3, No. 4, Page: 2843-2850.
- Sugiyono. (2016). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. ALFABETA Bandung.
- Sugiyono, S. (2015). *Metode penelitian kuantitatif dan kualitatif dan R&D*. ALFABETA Bandung.
- Sutopo, Yeri; Slamet, A. (2017). *Statistika inferensial*.
- Yusuf, M., Teknologi, I., & Rakyat, B. (2022). *EFFECT OF SHARIA COMPLAINT , GOVERNANCE , AND SOCIAL RESPONSIBILITY ON BUSINESS SUSTAINABILITY : MEDIATING ROLE OF BUSINESS GROWTH*. 28(1), 2686.
- Zhang, W., Wang, Y., Yang, L., & Wang, C. (2020). Suspending Classes Without Stopping Learning: China's Education Emergency Management Policy in the COVID-19 Outbreak. *Journal of Risk and Financial Management*, 13(3), 55. <https://doi.org/10.3390/jrfm13030055>