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The Effect of Using Google Classroom and Whatsapp Applications on Learning Activities

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Abstract

This study aims to describe the effect of using google classroom and WhatsApp applications on learning activities. The method in this research is a quantitative approach. The sample in this study were students of class X clinical pharmacy expertise program totaling 31 respondent persons. Data collection instruments: using a questionnaire in the form of a google form with a Likert scale, namely use of google classroom, WhatsApp application, and learning activities. The data analysis technique used multiple linear regression. The results of data analysis show that the use of google classroom has a positive and significant effect on learning activities with a significance of 0.000; The WhatsApp application has no positive and significant effect on learning activities with a significance of 0.472, and Simultaneous use of Google Classroom and WhatsApp applications has no significant effect on learning activities as much as 54.5% with a significance of 0.000. This research can be used as consideration for policy makers in using the Google Classroom and WhatsApp applications. The use of google classroom has an effect on learning activities. While the use of the WhatsApp application does not have an effect on learning activities. Novelty in research: researchers want to see the effect of google classroom and WhatsApp application on learning activities at the vocational high school level. By knowing whether or not the influence of Google Classroom and the WhatsApp application on learning activities in vocational high schools can be taken into consideration for state vocational high schools 3, Rejang Lebong Regency, Bengkulu Province. In order to advance this research, it is necessary to carry out further research activities.

Keywords: Google Classroom, WhatsApp Application, Study Activities

1. Introduction

Bengkulu Province has decided to postpone the opening of face-to-face schools in the even semester of the 2020/2021 Academic Year. Given the surge in Covid-19 cases that are still happening. The decision was issued through the Bengkulu Governor's Circular Number: 420/825/Dikbud/2020 dated December 30, 2020 regarding the Postponement of Face-to-Face Teaching and Learning Activities for the Even Semester 2020/2021 in Bengkulu Province. (Http: Merdeka.com).

Head of the Education and Culture Office of Rejang Lebong Regency Khirdes Lapendo Pasju in his statement in Rejang Lebong, Saturday said the plan to implement face-to-face learning is contained in a permit issued by the Rejang Lebong Regency Government and signed by Regent Ahmad Hijazi on December 30, 2020. He explained based on the second adjustment. Joint ministerial decree of 4 ministers, namely the Minister of Education and Culture, the Minister of Health, the Minister of Religion and the Minister of Home Affairs, regarding learning guidelines in the even semester of the 2020/2021 academic year and the 2020/2021 academic year that the granting of face-to-face learning permits is no longer based on the risk zoning map from the Handling Task Force National COVID-19. For this reason, the Rejang Lebong Regency Government gave permission to schools to carry out face-to-face learning at the kindergarten, primary school, Junior high school, and Vocational High School (https://benngkulu.antaranews.com/).

This also applies to the State Vocational High School 3 Rejang Lebong, Bengkulu Province, to conduct online learning. Online learning is learning that is carried out with the help of the internet (Syarifudin 2020). According to the head of the Rejang Lebong District Health Office, Syamsir said that of the 585 residents who were confirmed positive for Covid 19, 522 were declared cured, 11 died and 52 were still under surveillance (https: //www.antaranews.com).

Based on the results of the virtual meeting, on January 3, 2021, online, teaching was carried out using Google Classroom and WhatsApp Group for State Vocational High School 3, Rejang Lebong Regency, Bengkulu Province. The choice of Google Classroom is because the assignment can be done in the Google Classroom and then it can be discussed together between the students and the teacher (Wicaksono 2020), Google Classroom can be used to create and manage classes, assignments, grades and provide live feedback (Ratnawati 2020); (Darmawan 2021); (Longa 2021), The Google Classroom application is very easy to use in learning activities (Maharani and Kartini 2019), as a learning media that is easy to operate, creates a discussion space between educators and students, and does not waste quotas (Wulandari 2021), the advantages that teachers feel when using the google classroom portal, namely the google classroom portal, can be used to support the learning process (Diantari, Wisudariani, and Artika 2021), The advantages of google classroom are effectiveness and efficiency in well-structured learning (Utomo 2020). In addition to the advantages there are also disadvantages in using Google Classroom.

The disadvantages of google classroom are 1). The first shortcoming is due to internet network problems around campus (Rozak and Albantani 2018), 2). lack of features to write formulas and include pictures when making questions, both multiple choice questions and essay questions (Hammi 2017), 3). Google Classroom has no automated quizzes or tests (Ramadhan, Susilaningsih, and Husna 2021). In addition to using google classroom based on the results of the meeting, the help of the WhatsApp group application was also used.

WhatsApp is a messaging application for smartphones with a basic similar to BlackBerry Messenger (Indaryani and Suliworo 2018). WhatsApp social media which is often abbreviated as WA is one of the communication media that can be installed on a Smartphone (Suryadi, Ginanjar, and Priyatna 2018). The advantages of WhatsApp are; 1) Easy to use (Hidayawati 2020), 2). Automatic Contact Sync (FAUZI 2021), 3). Can Contact People Around the World (Rachmawaty 2021), 4). Chat Back Up Features(ILMA 2020), 5). Have Stories Feature (SARI 2020). In addition to the advantages of WhatsApp, it also has disadvantages, namely 1).Account Hacking Risk (SALIM, Arfan, and Jamilah 2021), 2). Unable to send large files (Bhagaskara, Afifah, and Putra 2021), 3). Troublesome WhatsApp Web (Saputri 2021), 4). Data Not Stored Safely (Hermawan, Hendrawan, and Ritzkal 2019).

Previous research only examined: Constraints of Online Learning Using Google Classroom (Susanto, Sasongko, and Kristiawan 2021), the use of the WhatsApp grouping application on the results of learning to write geigerite (Budiono 2021), Analysis of Google Scholar Services as a Reference Material on Student Satisfaction (Husain 2019), Google Scholar and Fulfillment of Information Research (Correlational Study of the Effect of Google Scholar on Fulfillment of Information Needs) (Manik 2018), The Influence of Google Scholar Usage Motives on Student Satisfaction (Latania n.d.), Google Classroom-Based E-Learning Media To Improve Vocational High School Student Learning Outcomes (Su'uga et al. 2020), The effect of using WhatsApp messenger as an integrated mobile learning group investigation method on critical thinking skills (Kartikawati and Pratama 2017), The effect

of the use of social media WhatsApp on student activity in business economics subjects class X Public Vocational Secondary Schools 2 (Umami and Suja 2019), The effect of using WhatsApp social media on the dissemination of learning information at public senior high school 5 Depok (Pangestika 2018). Because of the importance of this, it is necessary to do further research with the title "The effect of using google classroom and WhatsApp applications on learning activities."

The results of the study are expected to be able to contribute as a consideration for state vocational high schools 3 in Rejang Lebong Regency, Bengkulu Province regarding activities in student learning. As well as increasing knowledge for stakeholders in state vocational high schools 3, Rejang Lebong district, Bengkulu Province and for teachers both theory teachers and vocational teachers to continue to make improvements in terms of using appropriate and good applications in the teaching and learning process.

2. Methods

This research is quantitative descriptive research. The place of research is at the State Vocational High School 3, Rejang Lebong Regency, Bengkulu Province, Indonesia. The study was conducted for two months, from March to the end of May 2021. The population of this study was class X, XI, XII totaling 491 people. The sample of this research is class X expertise program: Clinical Pharmacy totaling 31 people.

Table 1: Student Data of State Vocational School 3 Rejang Lebong Bengkulu Province Academic Year 2020/2021

No	Expertise program	Class	The Number of Students		Total
			L	P	
1	Network Computer Engineering	X TKJ	15	11	26
2	Motorcycle Business Techniques	X TBSM	30	2	32
3	Agri Fishery Business	X PAT	14	15	29
4	Poultry Livestock Agri Business	X AU	10	13	23
5	Welding Technique	X TP	22	0	22
6	Clinical Pharmacy	X FAR	5	26	31
Number of Class X Students			**96**	**67**	**163**
1	Computer and Network Engineering	XI TKJ	17	13	30
2	Motorcycle Business Techniques	XI TBSM	26	0	26
3	Agri Fishery Business	XI PAT	18	12	30
4	Poultry Livestock Agri Business	XI ATU	9	8	17
5	Welding Technique	XI TP	14	0	14
6	Clinical Pharmacy	XI FAR	5	26	31
Number of Students of Class XI			**89**	**59**	**148**
1	Computer and Network Engineering	XII TKJ	19	15	34
2	Motorcycle Business Techniques	XII TBSM	27	1	28
3	Agri Fishery Business	XII APA	23	10	33
4	Poultry Livestock Agri Business	XII ATU	12	18	30
5	Welding Technique	XII TP	26	0	26
6	Clinical Pharmacy	XII FAR	4	25	29
Number of Class XII Students			**111**	**69**	**180**
Total number			**296**	**195**	**491**

Source: Student Data for State Vocational High School 3 Rejang Lebong, Bengkulu Province, January 2021

Sampling in this study is to determine the class of research using purposive sampling technique. Purposive Sampling is a sampling technique with certain considerations(Campbell et al. 2020). By selecting the class X

students of the Clinical Pharmacy Skills Program at the State Vocational High School 3, Rejang Lebong Regency, Bengkulu Province, Indonesia, there were 31 students, consisting of 5 male students and 26 female students.

3. Results and Discussion

a.   Normality test

Tests of Normality

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistics	df	Sig.	Statistics	df	Sig.
Google Classroom	.137	31	.144	.955	31	.212
WhatsApp App	.150	31	.073	.967	31	.451
Student learning activities	.134	31	.168	.949	31	.142

a. Lilliefors Significance Correction

Based on the results of the output value of Sig. Google Classroom 0.212 > 0.05, Sig. The WhatsApp application is 0.451 > 0.05 and the value of learning activities is Sig. 0.42 > 0.05, it can be concluded that the data is normally distributed.

b.   Linearity test

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Student learning activities * Google classroom	Between Groups	(Combined)	1917.043	6	319,507	8,320	.000
		linearity	1521,871	1	1521,871	39,629	.000
		Deviation from Linearity	395,172	5	79,034	2.058	.106
	Within Groups		921,667	24	38.403		
	Total		2838,710	30			

Based on the output value Deviation from Linearity Sig. 0.106 > 0.05. It was concluded that there was a significant linear relationship between learning activity variables and the WhatsApp application.

c.   Multicollinearity test

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	17,788	22,694		.784	.440		
	Google Classroom	.889	.158	.723	5.646	.000	.991	1.009
	WhatsApp App	-.112	.153	-.093	-.730	.472	.991	1.009

a. Dependent Variables: student learning activities

Based on the output results **Coefficientsa** in section Collinearity Statistics Tolerance value 0.991 > 0.10 and 1.009 < 10.00, it is concluded that there are no symptoms multicollinearity

d.   Heteroscedasticity test

Scatterplot
Dependent Variable: Learning activity
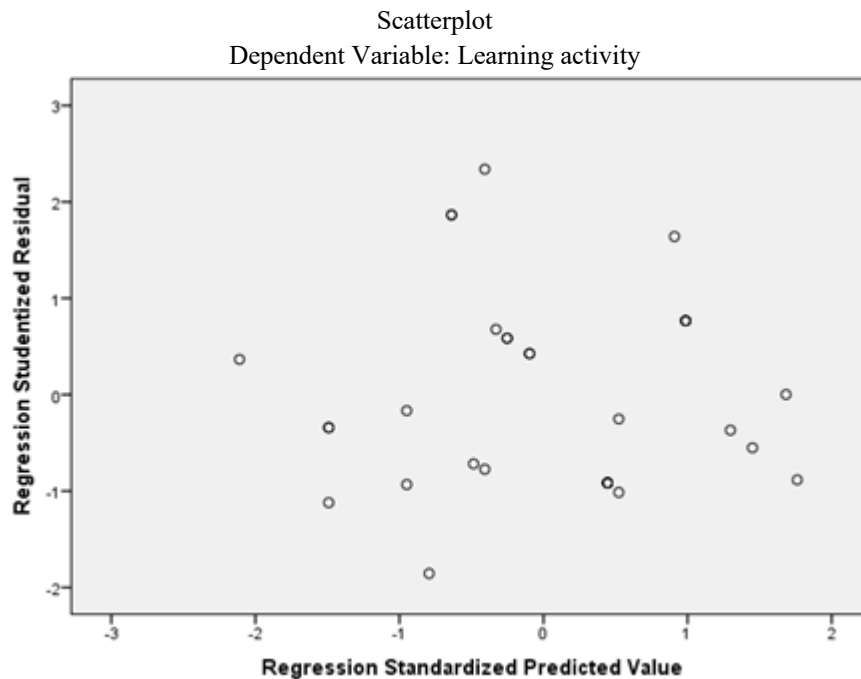
Based on the scatterplot output it is known that
-    Spread data points above and below or around the number 0
-    The dots don't collect just above or below
-    The spread of data points does not form a wavy pattern that widens then narrows and widens again
-    The spread of data points is not patterned.

It was concluded that there was no heteroscedasticity problem.

e.   Prerequisite test

Multiple regression test

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.738a	.545	.512	6.79357

a. Predictors: (Constant), Google Classroom, WhatsApp App

Based on output **Model Summary**: 1. Large relationship between Google Classroom and WhatsApp App (simultaneously) with Learning activity namely 0.738 which is strong, and 2). R Square, contribution or contribution simultaneously variable Google Classroom and WhatsApp App with Learning activity is 54.5% while 45.5% is determined by other variables

ANOVAa

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1546,437	2	773,218	16,754	.000b
	Residual	1292,273	28	46,153		
	Total	2838,710	30			

a. Dependent Variable: Learning activity

b. Predictors: (Constant), Google Classroom, WhatsApp App

1) Based on the significance value, it is known that the value of Sig. is 0.000 < 0.05, then according to the basis of decision making in the F test it can be concluded that: Ha is accepted, so Google Classroom and the WhatsApp application simultaneously have no effect on Learning activity and 2). Based on the comparison of the calculated F value with the F table, it is known that: F arithmetic 16.754 > F table 3.33, then Ha accepted, so Google Classroom and the WhatsApp application simultaneously have no effect on Learning activity.

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17,788	22,694		.784	.440
	Google Classroom	.889	.158	.723	5.646	.000
	WhatsApp App	-.112	.153	-.093	-.730	.472

a. Dependent Variable: Learning Activities

a. Based on output **Coefficientsa**: 1) Based on the Significant value, Google Classroom Sig. 0.000 < 0.05, it is concluded that Ha is accepted so there is an effect Google Classroom against Learning activity, and 2). Based on the comparison of the value of t arithmetic with t table, namely t arithmetic Google Classroom 5,646 > t table 2.93then it is concluded that Ha is accepted so there is an effect google classroom against learning activity.
b. Based on output **Coefficientsa**: 1). Based on the significance value, the IQ score is Sig. 0.472 > 0.05, it is concluded that Ho is accepted so there is no influence on the WhatsApp application on learning activities and 2). based on the comparison of the value of t count with t table, namely t count WhatsApp application -0.730 < t table 2.93then it is concluded that Ho is accepted so there is no influence on the WhatsApp application to learning activities.

4. Conclusion

The use of google classroom and the WhatsApp application on learning activities simultaneously has no significant effect on learning activities of 54.5% with a significance of 0.00. the results of this study that the effect of using google classroom and the WhatsApp application cannot have an effect on learning activities. But there is an effect Google Classroom against Learning activities while WhatsApp App there is no effect on learning activities.

Acknowledgment

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