

The Influence of Campus Wifi Facilities on Students Learning Motivation in State University Surabaya

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Abstract

This study aims to determine the effect of WiFi facilities in schools on student motivation to complete the Office Administration Education study program as well as factors that moderate or mediate the influence of the program. The analysis method used is a quantitative approach using purposive sampling to produce non-probabilistic sample data. The sample of this study consisted of 188 master students from the Department of Educational Administration Class of 2022, and 65 people were selected as a representative sample from a total of ten different classes. Data were collected using a questionnaire selected based on relevant indicators. Using SPSS software, data analysis was conducted using classical assumptions such as heteroscedasticity, multicollinearity, and normality. Reliability and validity of the instrument were assessed using a feasibility trial assessment. A Likert scale was used to rank the statements in the instrument. The results show that there is a positive impact of WiFi services on students' learning motivation and tenacity level.

Keywords: Campus WiFi Facilities, Learning Motivation



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INTRODUCTION

In today's digital era, the internet is a communication highway that connects and changes the entire world where every individual can connect, see or talk to each other, and exchange information instantly through one point (Apuke & Iyendo, 2018). Therefore, university students as technology-biased individuals have an advantage in terms of utilizing and acquiring new technologies quickly. They can use digital tools to increase productivity, strengthen relationships and obtain information more effectively. They use electronic devices such as laptops, tablets, and smartphones as tools in learning, both inside and outside the classroom. Because the internet has changed the way we live, work, and interact, students' role in digitalization not only includes the use of technology, but also has potential to become an agent of change in society (Itszah, 2023). The availability of free WiFi is a key factor in facilitating the use of this technology to assist the learning process. However, even though free WiFi service is available, not all students are satisfied with its quality. Problems such as slow internet speed, limited coverage, or connection problems often become obstacles to using WiFi for academic purposes. This can be overcome by educational institutions regularly asking for feedback from students regarding their satisfaction with WiFi services and evaluating network performance and implementing strategies that have been implemented. This will allow them to continuously improve their services according to student needs.

Adequate campus WiFi facilities have a strategic role in supporting student academic activities. With smooth internet access, students can more easily access journals, electronic books and other learning resources that are not physically available in the library. Apart from that, campus WiFi also supports the implementation of online lectures, where students can attend lectures online or access additional material provided by lecturers via the e-learning

platform. In this digital era, the speed and stability of internet connections are crucial factors that can influence the effectiveness of learning and student motivation. Internet connections have an impact on the process of teaching and learning activities (Ulayyah & Rosy, 2022). The UNESA Office Administration Education Study Program, as one of the study programs that focuses on administrative education and training, really needs adequate information technology support to support a dynamic and interactive learning process. However, even though WiFi facilities have been provided by the campus, not all students feel the same benefits. Signal quality, access speed and WiFi coverage area are often complaints that can hinder the learning process. Students who have good WiFi access tend to be more motivated in studying because they can access information quickly and follow scientific developments in real-time. On the other hand, limited access can reduce learning motivation and hinder academic achievement. Therefore, it is important to understand the extent to which campus WiFi facilities influence student learning motivation, as well as what factors mediate or moderate this influence.

Information and communication technology has significantly changed many aspects of daily life, including education. One technological development that is very influential in the world of education is the internet. The internet provides access to a wide range of everyday materials and information that support the learning process. In the context of higher education, fast and easy internet access via WiFi facilities on campus is one of the main needs for students. Surabaya State University (UNESA) as one of the leading universities in Indonesia realizes the importance of WiFi facilities in supporting academic activities. Good campus WiFi facilities can make it easy for students to access various academic information, take online lectures, download course materials, and communicate with lecturers and fellow students. The UNESA Office Administration Education Study Program also utilizes these resources to enhance student learning and foster confidence in learning. Motivation is the basis for students to achieve optimal learning outcomes, which are then used as a basis for determining the achievement of desired competencies (Karimatul et al, 2024). High motivation can encourage students to study harder, do their assignments well, and achieve optimal academic achievement. This study aims to evaluate the impact of WiFi facilities in schools on the learning motivation of high school students in the Office Administration Education Study Program (PAP) UNESA until 2022. It is expected that this research can provide an overview of how the technology available at school can be used effectively to increase students' enthusiasm for learning. In addition, the results of this study are expected to encourage university managers to improve WiFi capabilities in classrooms in order to improve student learning outcomes at UNESA.

RESEARCH METHODS

This research method uses quantitative methods. Systematically, the research framework carried out on Office Administration Education students class of 2022 regarding Campus WiFi Facilities on student Learning Motivation is as follows:

Population and Sample

Sugiono (2003: 90) defines population as a group of objects or subjects that have certain characteristics and attributes chosen by researchers to be studied and analyzed. In the context of this study, the population consists of 188 students of the Office Administration Education Study Program at Surabaya State University who will graduate in 2022. Most of the research participants are math teachers who use WiFi facilities at school to complete assignments and study relevant modules. The sample is part of the population to be studied. The sampling

technique used in this research is non-probabilistic sampling using purposive sampling method. According to (Sugiyono in Jasmalinda, 2021) Non-probability sampling is a technique used in sample selection where all individuals or members of the population do not have the same opportunity to be selected as a sample. Purposive sampling is a technique for collecting sample data based on the requirements and observations made by the researcher. (Sugiono in Lukitaningsih & Lestari, 2023). This technique was chosen so that the sample could reflect the variations that exist in the population and provide relevant and accurate research results regarding the influence of campus WiFi facilities on the learning motivation of students in the UNESA Office Administration Education Study Program. The criteria for sampling in this study were that they were active students from PAP Unesa and used campus WiFi during/for assignments and learning.

According to this study, the Sloven method is used in the sample preparation technique. Sloven's formula is usually used to study a specific object from a large population. Therefore, it is used to examine a sample from a large number of object (Nalendra et al., 2021:27). In this research, it is known that the total population is 188 students. Due to this, the sample size when using the Slovin formula with a 10% tolerance for error is as follows:

$$n = \frac{N}{1 + N(e)^2}$$

Information:

n = Total Sample

N = Total Population

e = Margin of error (Error Rate)

So:

$$n = \frac{188}{1 + 188(0,1)^2}$$

$$n = \frac{188}{1 + 1,88}$$

$$n = \frac{188}{2,88}$$

$$n = 65,2 = 65 \text{ samples}$$

In this research study, a sample of approximately sixty-five people fairly selected from a large class was interviewed. Purposive sampling, a non-probability sampling technique, was used to collect sample data, with participants selected based on input from the researcher. According to Sugiono (2003:90), population refers to a group of objects or subjects with certain characteristics that are recorded by researchers to be analyzed and studied. The population in this study consisted of 188 master students from the Department of Office Administration Education at Surabaya State University class of 2022. The researchers chose several students who used campus WiFi facilities for learning and accessing certain modules for download. The technique used is non-probability sampling, which utilizes intentional sampling. This technique was chosen so that the sample could reflect the variations that exist in the population and provide relevant and accurate research results regarding the influence of campus WiFi facilities on the learning motivation of students in the UNESA Office Administration Education Study Program.

Data collection technique

Data collection is done by distributing questionnaires that have been pre-screened based on relevant indicators. Indicators were made clear and concise to ensure the accuracy and consistency of the data obtained when analyzing the variables under study. The questionnaire

is recommended to collect comprehensive and detailed information to support the analysis required in this study.

Data analysis technique

This study uses classical assumptions that combine three data analysis techniques: normality, multicollinearity, and heteroscedasticity. Apart from that, there is also a test which is supported by the SPSS application. After that, the questionnaire distributed to respondents will be tested on the instrument with the aim of testing the suitability of each item of the available instrument and carried out using validity and reliability tests. In this research, to answer the statements on each instrument using a Likert Scale.

RESEARCH RESULTS AND DISCUSSION

Research Result

This analysis will help us understand the extent to which these facilities influence student learning motivation, as well as the factors that mediate or moderate their influence. Based on this, the assumption test is one of several tests used as prerequisites in statistical analysis.

Normality test

The aim is to determine whether the residuals, also known as nuisance variables, follow a normal distribution in the regression model. The quality of a good regression model is if the distribution of the variables concerned is normal. Normality is assumed to be greater if the significance value is greater than 0.05, and is considered abnormal if it is less than 0.05.

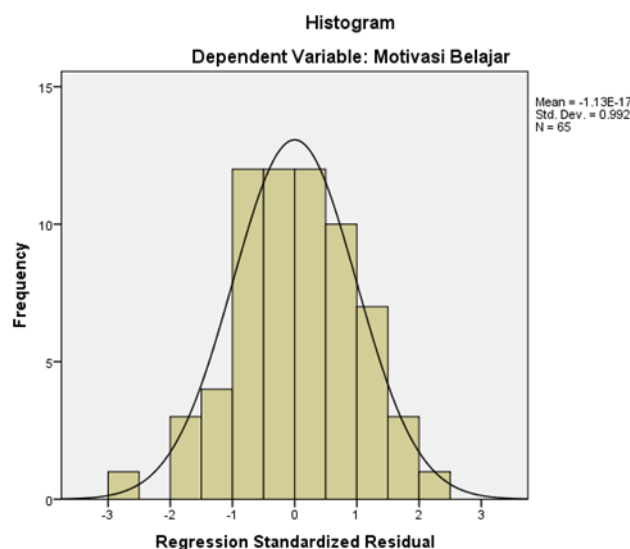


Figure 1. Dependent Variable Histogram

1. Histograms. If the line is in the shape of a mountain, it is said to be normal.
2. Plots. According to Imam Ghozali (2011:161), if a graph that displays the current data exhibits a diagonal pola, then a regression model is likely to have a normal distribution.

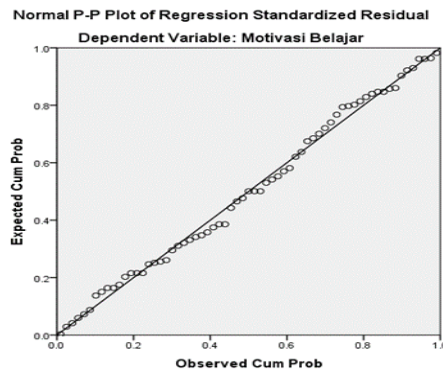


Figure 2. Normal P -P Plot of Regression Standardized Residual

It is clear from the table above that the points lie along the diagonal, which is the starting point for decision making. According to Imam Ghazali, from the normality test it can be concluded that a regression model has a normal distribution because the data follows the diagonal path.

- Sample Kolmogorov. If the 2-tailed Asymptotic Sig > 0,05, If the value is more than or equal to 0.05 then the data is normally distributed, otherwise if the value is less than or equal to 0.05 then the data is not normally distributed. Based on the available table, the result is $0.200 > 0.05$, which indicates that the data is normally distributed.

		Unstandardized Residuals
N		65
Normal Parameters, b	Mean	.0000000
	Std. Deviation	3.99908356
Most Extreme Differences	Absolute	,061
	Positive	,061
	Negative	-.057
Statistical Tests		,061
Asymp. Sig. (2-tailed)		,200c,d

Multicollinearity Test

Imam Ghazali (2011: 107-108), If the tolerance value is less than 0.100 and VIF is less than or equal to 10.00, then there is no multicollinearity. The purpose of multicollinearity analysis is to determine whether there is a significant correlation between the independent variables in the regression model (Ghozali, 2016). Here are some important points that must be considered:

- There is no multicollinearity if the tolerance value is > 0.10.
- If the Variance Inflation Factor (VIF) < 10.0, this indicates that there is no multicollinearity.

Table 2. Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	32.253	3.483		9.261	.000		
	Fasilitas Wi-Fi Kampus	.705	.143	.527	4.921	.000	1.000	1.000

From the table above, Thus, it can be concluded that there is no difference of opinion regarding the multicollinearity problem in the given data. This is based on the fact that the VIF for the Campus WiFi variable (X) is $1,000 < 10$, and the tolerance is $1,000 > 0.01$. Therefore, the result of the multicollinearity test is that there is no multicollinearity because tolerance > 0.100 and VIF $<$ than 10.

Heteroscedasticity Test

According to (Ghozali (2011:139) in Ayuwardani & Isroah, 2018) The heteroscedasticity test is used to assess whether in the regression there is an inequality of residual variation from the residuals of one observation to another. One of the important requirements in a regression model is that there is no indication of heteroscedasticity.

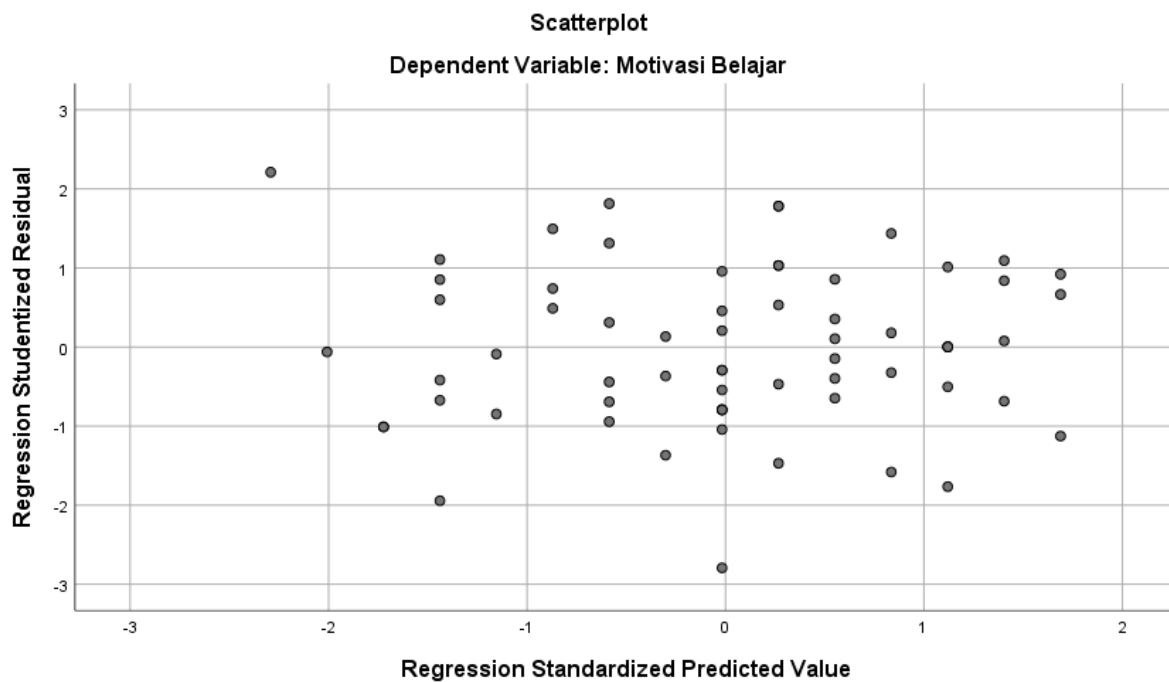


Figure 3. Scatter Plot

Characteristics of the absence of heteroscedeticity symptoms:

1. Stores point data near the value 0.
2. Definition that is spread across the entire range.
3. Ensure that the point distribution does not interfere with repeated ups and downs.
4. The dots do not follow the current pattern.

Based on the research that has been done, the conclusion is that the data points are irregular around the value of 0, both above and below, and do not show a clear pattern.. So the result was that there were no symptoms of heteroscedasticity in the data tested.

Simple Linear Regression Test

Simple linear regression uses relationship analysis of independent and dependent variables. It is a statistical technique used to determine some strong relationship between the independent variable (x) and the dependent variable (Ginting et al., 2019). In this study, the general formula used in simple line regression is as follows:

$$Y = a + b(X)$$

Note:

a = Constant

b = Regression coefficient

Y= Dependent variable (dependent variable)

X = Independent variable (independent variable)

Table 3. Simple Linear Regression Test

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	32,253	3,483		9,261	,000
	Campus Wifi Facilities	,705	.143	,527	4,921	,000

a. Dependent Variable: Learning Motivation

From the table above, the results of simple linear regression analysis are obtained with the following equation formula: $Y = 32.253 + 0.705 (X)$ The regression equation model means:

- Constanta (a)* = 32,253, meaning that if the Campus Wifi Facilities are constant, then Learning Motivation is 13,946.
- Regression direction coefficient / $b(X) = 0.705$ (positive value) meaning, if Campus Wifi Facilities increase by one (1) unit, then Learning Motivation will also increase by 0.705.

T test

Table 4. T test

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	32.253	3.483		9.261	.000		
	Fasilitas Wi-Fi Kampus	.705	.143	.527	4.921	.000	1.000	1.000

- If the significance value is $<$ or equal to 0.05, or if the t-count value is $>$ or equal to the t-table, then there is an influence between variable X and variable Y.
- If the significance value is $>$ 0.05 or the t-calculated value $<$ from the t-table, then the variable has no effect.

The significance value in the table is $0.000 < 0.05$. So, based on this decision making, there is an influence of Campus Wi-Fi Facilities on Learning Motivation.

Discussion

The results of the completed analysis show that the availability of WiFi in the classroom has a positive impact on the level of learning motivation of students majoring in office administration education at Surabaya State University. All of this is influenced by the results of the simple linear regression line test which shows the appropriate regression line / $b(X) = 0.705$ (positive value) means, if Campus Wifi Facilities increase by one (1) unit, then Learning Motivation will also increase by 0.705. The results of the t test can also be shown, namely the significance level shown in the table is $0.000 < 0.05$. The results of this research are in

accordance with previous research conducted by (Hermalia et al., 2019). The results of this research show that Wi-Fi services have a positive influence on students' levels of satisfaction and learning motivation, and in other research conducted by (Fitria Rizky Kurniawati, 2016) also obtained similar results which show that there is a relationship between internet use as learning media with learning motivation.

CONCLUSION

After conducting research related to the influence of campus WiFi facilities on the learning motivation of students majoring in Office Administration Education, UNESA, it can be concluded that there is a positive relationship between the influence of campus WiFi facilities on the learning motivation of students majoring in Office Administration Education, UNESA. The shortcomings of the research we conducted were the lack of strength of the independent variables which influenced the dependent variable, and the small size of the population and sample studied. The advice we give to institutions is to improve campus WiFi facilities even better because there are many learning activities that require WiFi access. Then the suggestion for future researchers is to examine in more depth what the uses of campus WiFi are and whether it still has a positive influence on learning motivation.

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