



The Influence of Whatsapp Social Media on Learning Outcomes of Economics Subjects of Class X Students at SMAS Purnama Jakarta

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Abstract

The aim of this research is to determine the influence of WhatsApp social media on learning outcomes in economics subjects. By using a quantitative approach method, the sampling technique in this research uses nonprobability sampling with a sampling technique using saturated sampling, where the number of samples is the same as the population. The number of samples used was 48 students. After conducting research according to the title "The Influence of WhatsApp Social Media on Learning Outcomes for Class X Economics Subjects at SMAS Purnama Jakarta". It can be concluded that From the results of the analysis, it is obtained that the regression equation $Y = 86.1703 - 0.1318$, meaning that for every 1% increase in use of WhatsApp social media, it will reduce learning outcomes in economics subjects by 0.1318. The correlation results of $r_{xy} = -0.175$ indicate that there is a very low relationship between social media and learning outcomes. The Coefficient of Determination of 3.06% shows that WhatsApp social media contributes to learning outcomes by 3.06% while the remaining 96.94% is the contribution of other factors, such as physical, physiological and also family factors. This is also reinforced by the results obtained from hypothesis testing which show that it is smaller than $1.225 < 1.678$ which states that there is a negative influence of WhatsApp social media on the learning outcomes of class X economics subjects at SMAS Purnama Jakarta.

Keywords: *improving, vocational school, student, speaking skill, role play, video clips.*

INTRODUCTION

Education is a systematic process that takes into account internal and external influences. Internal influences include those within students, such as learning motivation, curiosity, aptitude, and perceptions of teachers and subjects. When determining one's learning outcomes, internal elements are very important. In addition, there are external factors, or elements that influence students not directly, such as the learning environment, family environment, family socioeconomic status, and parental involvement in helping children with their challenges. (Ari Suarmawan et al., 2019).

Economics subjects are chosen by utilizing economic principles used for educational purposes and derived from economic activities in the social life of society. Education at school can be used to learn about economics. Learning activities are part of education at school, therefore benchmarks are needed to assess student progress. Learning outcomes function as a standard for assessing a person's level of learning success.

Riska & Anwar, (2021) believes that learning outcomes are the result of the learning activities themselves and are directly related to changes in the knowledge, understanding, skills, abilities, attitudes and character of students. Meanwhile, student achievement in studying all relevant economic knowledge is the result of studying economics. After students take a test or exam related to economics lessons, the grades they get reflect the results of their economics learning. Economic learning outcomes show how much students'

skills have improved after studying economics subjects. The learning outcomes achieved depend on the students themselves, including intelligence, motivation, habits, anxiety and other interests. However, there are also external factors that can influence learning outcomes, such as the school family environment, especially the media and learning methods used, socio-economic conditions, and other factors. (Susanto in Riska & Anwar, 2021).

It is hoped that the development of science and technology (IPTEK) will benefit education. The implementation of online learning, one of which involves the use of social media, is a sign of how science and education have advanced in the field of education. As a result of the Covid-19 pandemic, social media is now often used as a means of online learning in Indonesia.

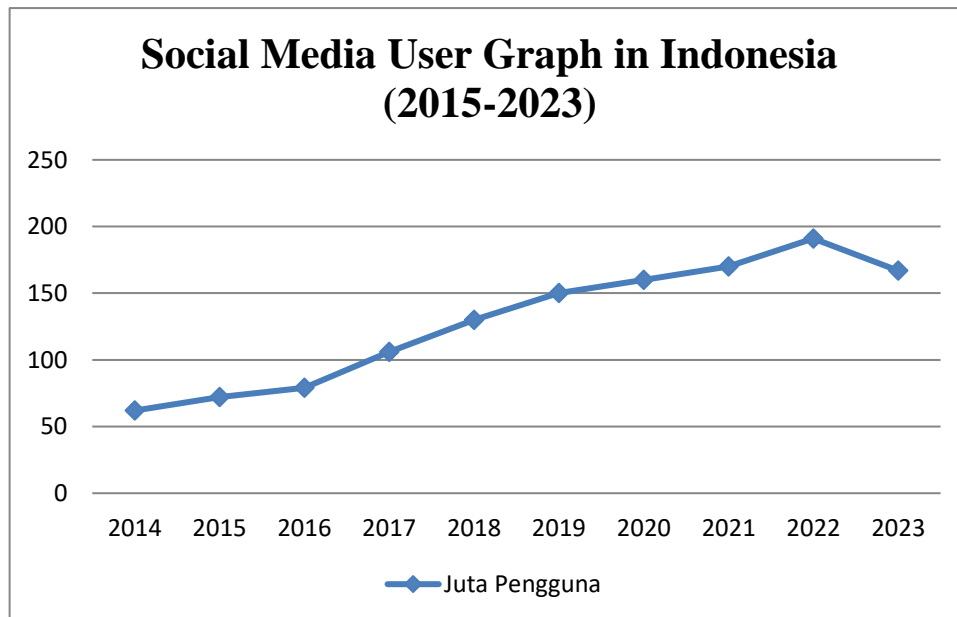


Figure 1. Social Media User Graph

Source: <https://wearesocial.com>

About half of Indonesia's population uses the internet, according to released data *We Are Social* (in Komalasari & Sukmana, 2023) stated that the number of active social media users in Indonesia in January 2023 will be 167 million people. This number represents 60.4% of the population in the country. The number of active social media users in January 2023 decreased by 12.57% compared to the previous year which was 191 million people. This decline is the first time in the last decade. According to survey findings conducted by the Indonesian Internet Service Providers Association (APJII) in 2016, 75.5% of them were internet users aged between 10-24 years, up to 68.9% of users were students, while social networking websites were accessed on 97.4% visits. The survey findings also stated that student intelligence which has an impact on student learning outcomes is influenced by internet technology (Susena & Lestari in Dedyerianto, 2020).

Social media is an online platform that facilitates user participation, information sharing, and interpersonal communication. As a result of the heavy use of social media, it has now become important for society. Not only adults, social media is especially familiar to teenagers. Changes in social values in society, especially among teenagers, can be triggered by the emergence of friendship sites (social media) which are very popular with millions of people throughout the world. For teenagers, using social media has become an integral aspect of growing up. WhatsApp is one of the social media platforms most frequently used by various groups.

The results of observations carried out by researchers for two months at one of the SMAS level schools in South Jakarta City, specifically SMAS Purnama Jakarta, researchers observed that almost all students actively used WhatsApp social media. So the time that

should be used for learning activities is only used for social media, especially in economics subjects, many students are negligent in implementing the learning that has been applied to economics subjects. For example, many students miss out on discussing the material given by the teacher because the students only focus on their social media.

SMAS Purnama Jakarta has students who on average are still in their teens. So it cannot be denied that SMAS Purnama Jakarta has quite a large level of students as social media users. The high use of social media among students can influence learning outcomes. However, in reality, the use of WhatsApp in economics learning is still unknown whether it has a positive or negative influence on students' economics learning outcomes.

According to a large-scale empirical study conducted by Jarot Wahyudi (in Nofatin, 2019), Internet media consumption has an impact on how well students learn economics in class XII IPS in Pontianak. Students may experience both positive and negative effects from social media. Social media can be beneficial for students if they utilize it responsibly such as searching through various online sources for learning resources. However, there are also many students who also use social media solely to communicate or to upload their daily activities.

Learning Outcomes

a. Understanding Learning Outcomes

Learning outcomes cannot be separated from learning activities, because learning activities are a process, while learning achievement is the result of the learner's process. Understanding learning outcomes in general must refer to understanding learning itself. For this reason, experts express different opinions, but points of similarity can be found.

Purwanto (in Dedyerianto, 2020), explains learning outcomes in terms of "The results achieved by someone in their learning efforts which are stated in the report card" (Learning Outcomes). According to this point of view, learning outcomes are the level of humanity shown by students when accepting, rejecting and evaluating the knowledge they acquire during the teaching and learning process. A person's learning outcomes are determined by how well they understand the material after going through the teaching and learning process, as seen in their grades or report cards for each field of study. After the examination, the learning outcomes are determined, the evaluation findings may reveal that the student's learning outcomes are very good or low.

In the field of education, learning outcomes are findings from measures of students' cognitive, emotional and psychomotor characteristics after the learning process has been examined using related instruments. Learning outcomes are then a measure of evaluation of learning efforts expressed in the form of symbols, letters and words that describe the results achieved by each child over a certain period of time. Learning outcomes are student assessment findings, which also include measurements of the learning process carried out with appropriate tools. Tests sometimes referred to as "learning outcome tests" can be used to check learning outcomes. According to Susanto (in Nofatin, 2019) "Learning outcomes are changes that occur in students as a result of learning, both affective and psychomotor."

Based on several definitions above, the author concludes that learning outcomes are changes in cognitive, emotional and psychomotor capacities which are shown in the scores obtained from the results of activities or teaching and learning processes based on several definitions above.

b. Factors that influence learning outcomes

According to Romadhoni et al., (2017), The factors that influence learning outcomes can be explained as follows:

1) Internal Factors

Internal student factors, or those that originate from within the student, include:

- a) Physical factors, namely: such as health and physical disabilities.
- b) Psychological factors, namely: talent, focus, interest, drive, maturity, and readiness.
- c) Fatigue factors, namely: physical fatigue and spiritual fatigue.

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2) External Factors

External factors are factors that come from outside the student, these factors include:

- a) Family factors, namely: the way parents teach their children, interactions between family members, the atmosphere at home, the family's financial situation, parental understanding, and cultural background are examples of family influence.
- b) School factors, namely: teaching methods, curriculum, teaching strategies, student-to-student interactions, school regulations, teaching materials, class size, academic standards, physical environment, and homework.
- c) Community factors, namely: including student involvement in local events, media exposure, close relationships, and community structure.

c. Learning Outcome Indicators

Gagne(in Tafiardi, 2006)revealed that learning outcomes are divided into five categories, namely as follows:

1. Verbal information is the capacity to communicate knowledge through language, both spoken and written.
2. Intellectual abilities, namely especially the capacity to communicate ideas and symbols.
3. Cognitive strategy is the capacity to organize and control cognitive activities.
4. Motor skills are the capacity to coordinate a succession of physical movements to the point where automatism of physical movements is achieved.
5. Attitude is the capacity to accept or reject anything depending on how one feels.

Social media

a. Understanding Social Media

According toRehmood and Khan (in Indriyani & Suri, 2020)social media is a type of media consisting of online resources that are created, discovered, used, and shared with the goal of educating others about goods, services, brands, subjects, and other events of interest. The creation and exchange of user-generated content is possible through a series of internet-based applications known as social media (Kaplan & Haenlein in Indriyani & Suri, 2020). This application is based on the philosophy and principles of web 2.0 technology. According toJashari (in Indriyani & Suri, 2020),Social media refers to the practices, actions, and interactions among online groups of individuals who come together to share information, ideas, and opinions using conversational media (web-based applications). Social media has changed the way information and interests are shared and the way people communicate. About 75% of people have searched for information on social media before buying something. This shows how social media is becoming increasingly popular as a source of knowledge(Yogesh & Yesha in Indriyani & Suri, 2020).

The question of how to utilize social media to make communication more efficient in society, both in the fields of marketing, politics and education, was then raised by the large number of social media users in Indonesia, which of course presents an opportunity to optimize the presence of social media as a communication medium.(Setiadi, 2016).

Based on the definitions above, the author concludes that social media is a type of media used to educate people about various things through online resources. The creation and exchange of content by users is done through internet-based applications known as social media. It is based on the web 2.0 philosophy. Social media has changed the way information is shared, interests and communicated. As many as 75% of people search for information on social media before buying something, showing its popularity as a source of knowledge. This opens up opportunities to utilize social media in various fields such as marketing, politics and education.

b. Characteristics of Social Media

Social media is one of the platforms used by cyber media, therefore its characteristics are not much different from cyber media. However,Nasrullah (in Setiadi, 2016)emphasized that social media has unique characteristics, including:

- 1) Network

An infrastructure called a network connects computers to other pieces of technology. This link is necessary because connecting computers allows communication, including data transfer.

- 2) Information
Social media users produce material, communicate, and develop representations of their identities based on information, making information a key aspect of social media.
 - 3) Archives
For social media users, archives take on a personality that makes it clear that the content has been saved and can be accessed at any time and from any device.
 - 4) Interaction
Social media creates a network between users that must be built with interaction between these users, not just expanding ties of friendship or followers. .
 - 5) Social Simulation (Simulation Of Society)
Social media has the potential to function as a platform for cyber communities. Social media has distinctive characteristics and usage patterns that, in many situations, differ from, and do not conform to, actual social hierarchies.
 - 6) Content by users (User-generated Content)
On social media, content is fully owned and comes from contributions from users or account owners. In new media culture, user-generated content (UGC) is a mutually beneficial partnership that offers people the opportunity and flexibility to contribute. This is different from previous (traditional) media, where the audience was only passive.
- c. Types of Social Media
According to Nasrullah (in Setiadi, 2016) There are at least six major categories for viewing social media sharing, namely:
- 1) Social Networking Media (Social networking)
 - 2) Online Journal (Blog)
 - 3) Simple Online Journal or Microblog (Micro-Blogging)
 - 4) Media Sharing (Media Sharing)
 - 5) Social Bookmarking (Social Bookmarting)
 - 6) Shared Content Media or Wiki
- d. Social Media Indicators
Social media has several indicators, namely (Indriyani & Suri, 2020):
- 1) There is interesting and entertaining content
 - 2) There is interaction between consumers and sellers
 - 3) There is interaction between consumers and other consumers
 - 4) Ease of searching for product information
 - 5) Ease of communicating information to the public
 - 6) Level of trust in social media
- e. Positive Impact of Using Social Media according to Rasyidah (in Yani & Siwi, 2020)
According to Rasyidah (in Yani & Siwi, 2020), Social media also has the following indicators:
- 1) Time allocation for accessing social media
 - 2) Owned social media accounts
 - 3) The need to use social media
 - 4) Impact of social media use
- f. Negative Impact of Using Social Media according to Khoiratun (in Yani & Siwi, 2020):
- 1) Expand your network of friends
 - 2) Increase students' insight into news or reports that are being widely discussed in the fields of education, culture, etc
- As a means to discuss learning.
- 1) Reduced study time, playing on social media for too long will reduce study time

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- 2) Disturbing your health, looking too much at a smartphone or computer or laptop screen can harm your eye health
- 3) Students become lazy easily, don't do their assignments because they always want to know the status of their friends, so they waste more time on things that are less useful, for example chatting, which will affect their interest in learning.
- 4) Lack of socialization with the environment.

This impact occurs due to playing social media too often and for too long Rasyidah (in Yani & Siwi, 2020). This is quite worrying about the development of students' social lives. Those who should learn to socialize with the environment actually spend more time in cyberspace.

WhatsApp



Figure 2. WhatsApp logo

Source: researcher 2024

One of the social media platforms is WhatsApp. According to the official WhatsApp account (whatsapp.com), more than 2 billion people in 80 different countries have used WhatsApp to stay in touch with friends and family. Jan Koum and Brian Acton, who worked at Yahoo for 20 years, founded WhatsApp. When WhatsApp and Facebook merged in 2014, WhatsApp had to continue to function as a distinct application with a focus on developing a fast and reliable messaging service globally. WhatsApp is a cross-platform mobile messaging application that allows the exchange of messages without having to pay for SMS. All these phones can send messages to each other thanks to WhatsApp's use of internet data packages for sending emails and browsing the internet, which allows it to send messages and can also be used to send other types of data such as files and photos.

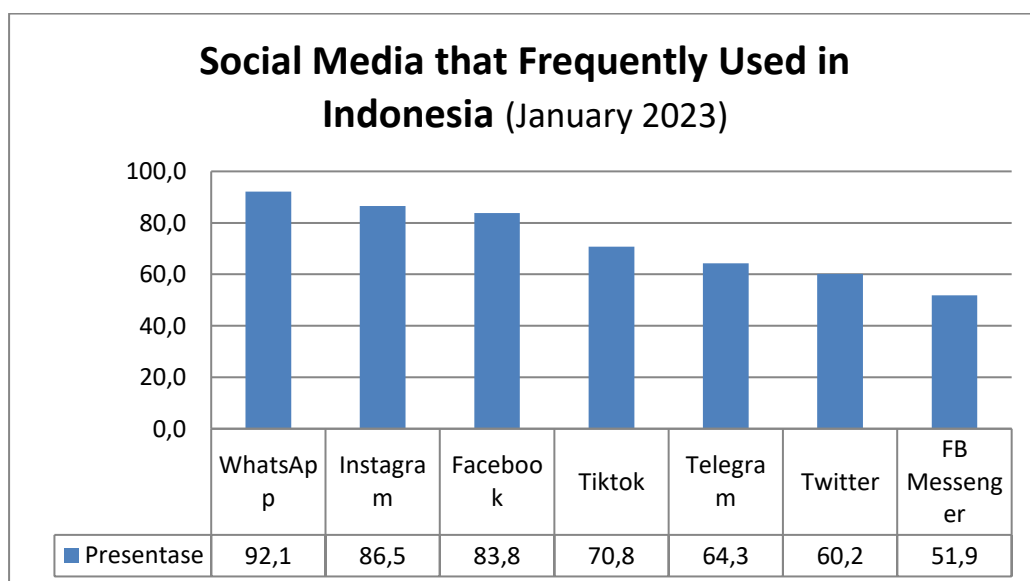


Figure 3. WhatsApp User Graph

Source: <https://wearesocial.com>

WhatsApp is still the social media most widely used by Indonesian people. According to the We Are Social report, the percentage of users of the instant chat application in the country reached 92.1% as of January 2023. In second place is occupied by Instagram with 86.5% of users. Then, Facebook was ranked third with 83.8% of users. Followed by TikTok in fourth position with 70.8% of users in Indonesia. The next percentages are Telegram and Twitter with 64.3% and 60.2% respectively. Then the seventh position is occupied by FB Messenger with a percentage of 51.9% of internet users in Indonesia. We Are Social did not provide a YouTube answer option in this survey, so the name of this social media did not appear in the list of widely used social media.

METHOD

Research method that is used in this research is the Quantitative research method. The variables studied are social media (Variable X) on learning outcomes (Variable Y). In the data collection method, researchers used a survey method by distributing questionnaires.

Population and Sample

1. Population

Population is a generalized area consisting of objects/subjects that have certain qualities and characteristics determined by the author to be studied and then conclusions drawn. (Sugiyono, 2013:80).

The population in this study was class X students at SMAS Purnama Jakarta, totaling 51 students with the following details:

Table 1. Number of Research Population

No	Class	Amount
1	X1	24 students
2	X2	24 students

Source: SMAS Purnama Jakarta Document for Academic Year 2023/2024

2. Sample

The sample is part of the population, where some research objects will be representatives of the population itself to be studied, and used as a data source. The processed values of sample data are also called statistics.

The sampling technique in this research uses nonrandom sampling (nonprobability sampling) with a sampling technique using saturated sampling, where the number of samples is the same as the population.

According to Sugiyono (2013:85), the saturated sampling method or total sampling is a sampling technique when all members of the population are used as samples. The samples taken in this research were class X students at SMAS Purnama Jakarta, totaling 48 students. The reason for using the entire population as a sample is because it represents the entire population because if the population is less than 100, then the entire research sample is used, therefore the researcher took 48 samples taken from the entire population.

Research Instrument

This research includes 2 variables, namely the Social Media variable (variable X) and the Learning Outcomes variable (variable Y). Research instruments are used to measure both variables.

1. Social Media Variables

a. Conceptual Definition

Social media is basically a set of online-based applications that can be used as a medium for communication, interaction and collaboration with other users to be more effective and efficient.

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- b. Operational definition
Social media has the following indicators:
- 1) Time allocation for accessing social media
 - 2) Owned social media accounts
 - 3) The need to use social media
 - 4) Impact of social media use
- c. Research Instrument

Table 2. Social Media Instruments Grid (X)

Variable	Indicator	Items	Amount
Social media	1. Time allocation for accessing social media	1,2,3,4,5	5
	2. The social media account used	6,7,8,9,10	5
	3. Uses/reasons for using social media	11,12,13,14,15	5
	4. Positive and negative impacts of using social media	16,17,18,19,20	5
Total			20

Source: Data processed by the author (2024)

- d. Instrument Testing

Instrument testing was carried out on 30 respondents, namely by distributing questionnaires in the form of Google Form to class X SMA/K students via social media, with the aim of perfecting the instrument in order to obtain validation and reliability of the statement items.

- 1) Validity test

Validity test is a measure that shows the levels of validity/validity of an instrument. The validity test of the question items is carried out to obtain the validity of the statement items. According to Sugiyono (2015:121), instrument means the measuring instrument used to obtain data (measure) is valid.

In this research, the correlation value of the measuring instrument item scores with the total score which is the sum of each item score is first sought. Validation for variable instrument x in the form of a questionnaire and y in the form of a document using product moment correlation with the following formula:

$$r = \frac{n \sum xy - \sum x \cdot \sum y}{\sqrt{n \sum x^2 - (\sum X)^2} \cdot \sqrt{n \sum y^2 - (\sum Y)^2}}$$

Product Moment Correlation Coefficient

Information:

r = Correlation Coefficient

n = Number of Samples

x = Independent Variable

y = Dependent Variable

According to Sugiyono in (Sukma et al., 2022), states the r value obtained from the calculation, then consulted with r_{tabel} product moment, the criteria are if $>$, then the question item is said to be valid, conversely if $<$, then the question item is said to be invalid. $r_{hitung} > r_{tabel}$ $r_{hitung} < r_{tabel}$

A questionnaire is said to be invalid if the questions or statements in the questionnaire are able to reveal something that the questionnaire will measure. The following is data from the results of validity tests carried out on 30 randomly selected respondents:

Table 3. Variable X Validity Test Results Data

No. Question	r xy	r table	Status
1	0.5166	0.3494	VALID
2	0.5937	0.3494	VALID

3	0.0509	0.3494	INVALID
4	0.3744	0.3494	VALID
5	0.6307	0.3494	VALID
6	0.7130	0.3494	VALID
7	0.4316	0.3494	VALID
8	0.6219	0.3494	VALID
9	0.0219	0.3494	INVALID
10	0.6866	0.3494	VALID
11	0.5239	0.3494	VALID
12	0.4491	0.3494	VALID
13	0.7073	0.3494	VALID
14	0.7652	0.3494	VALID
15	0.3086	0.3494	INVALID
16	0.4651	0.3494	VALID
17	0.6938	0.3494	VALID
18	0.3275	0.3494	INVALID
19	0.2846	0.3494	INVALID
20	0.5308	0.3494	VALID

Source: Data processed by the author (2024)

Based on the validity test table data above, 20 question items contain 5 invalid statement items, so only 15 valid question items will be used for the reliability testing stage.

2) Reliability Test

This instrument reliability test is intended to test and show the extent to which the measurement tool can be trusted. Sugiyono (2013:121) says a reliable instrument is an instrument that, when used several times to measure the same object, will produce the same data.

Reliability testing is a tool for measuring a questionnaire which is an indicator of a variable or construct. A questionnaire is said to be reliable or reliable if a person's answers to statements are consistent or stable over time. According to (Sugiyono, 2013) divides reliability results by interpreting coefficients from 0 to 1. In his book Arikunto (2014) clarify the r value coefficient as follows:

Table 4. Interpretation Coefficient Level

Coefficient Interval	Relationship Level
00.0-0.199	Very low
0.20-0.399	Low
0.40-0.599	Currently
0.60-0.799	Tall
0.80-1,000	Very high

Source: Arikunto, (2014:319)

The reliability formula in this research uses the Cronbach Alpha coefficient formula as follows:

$$r_{11} = \left(\frac{K}{(K-1)} \right) \left(1 - \frac{\sum \sigma b^2}{\sigma t^2} \right)$$

Information:

r_{11} = Instrument Reliability Coefficient

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k = Number of statement items

$\sum \sigma b^2$ = Number of item variants

σt^2 = Total number of variants

Reliability testing in this study used the Cronbach's alpha calculated value (α), the r value obtained from the calculation results using the Cronbach's Alpha formula will then be measured by the reliability coefficient. A construct or variable is said to be reliable if it is Cronbach Alpha(α) greater ($>$) than 0.60 Ghozaliin (Nurcahyo, 2018).

Testing of reliability for the WhatsApp social media variable obtained the following data:

Table 5. Variable X Reliability Test Results Data

Information	Results
Total Item Variance	9.2056
Total Variance	35.1523
Reliability Coefficient (r11)	0.7770
Interpretation/Reliability	Tall

Source: Data processed by the author (2024)

The reliability testing data in the table above shows that the variables in this study have coefficients *Cronbach Alpha* (α) with a value of 0.7770, where this value is greater ($>$) than 0.60, so it can be said that the measurement of the WhatsApp social media variable from the questionnaire is reliable.

2. Learning Outcome Variables

a. Conceptual Definition

Learning outcomes are an achievement of the process experienced by a person to obtain changes in behavior as a result of the process of interaction with their environment.

b. Operational definition

Learning outcomes are results obtained from learning activities. To find out what students' learning outcomes are, it can be seen from the evaluation. A person can be said to be learning if changes have occurred within him. One way to measure whether learning is successful or not is by conducting an assessment. In this research, the value for variable Y uses Odd Semester Learning Outcomes.

Table 6. Learning Outcomes (Y)

Variable	Indicator
Learning outcomes	Obtained from the results of the 2023/2024 Odd Semester report cards

Source : Researcher 2024

3. Normality test

The data normality test was carried out using the Lilifors test, which tests frequency equality at a significant level $\alpha = 0.50$. The test criteria are that the sample is considered normal if $L_{hitung} < L_{tabel}$

With L obtained from the critical value of L of the Lilifors test. The formula used is: $Lo = [F(z_i) - S(z_i)]$, the largest Lo value is chosen.

Table 7. Normality Test Results

Variable	L_{hitung}	L_{tabel}	Results
Social media	0.856	<0.886	Normal

Source :Research Data, processed 2024

Based on the results of the normality test using the Lilifors test, the results of L_{count} is 0.856 and is 0.886 so it can be concluded $< (0.856 < 0.886)$ so the data on the variable is normally distributed. $L_{tabel} < L_{count} < L_{tabel}$

Data analysis technique

According to (Sugiyono, 2013) Data analysis is the process of systematically searching and compiling data obtained from interviews, field notes and documentation, by organizing data into categories, describing it into units, synthesizing it, arranging it into patterns, choosing what is important and what is important. will be studied, and make conclusions so that they are easily understood by yourself and others. The data analysis technique that will be used in this research is by using regression and correlation formulas. The formula is as follows;

1. Simple Linear Regression Coefficients

This analysis is used to determine the functional relationship between variable (X) and variable (Y)

$$Y = +ab$$

Information:

Y = Subjects on the predicted dependent variable

X = Subject to independent variables that have certain values

a = Constant Price (price of Y for X)

b = Direction figures (regression coefficients). If (+) the line direction is up and if (-) the line direction is down

The coefficients a and b can be found using the following formula:

$$a = \frac{(\sum Y)(\sum x^2) - (\sum X)(\sum XY)}{n.(\sum x^2) - (\sum X)^2}$$

$$b = \frac{n.(\sum XY) - (\sum X)(\sum Y)}{n.(\sum x^2) - (\sum X)^2}$$

Information:

$\sum X$ = Number of Independent Variables

$\sum Y$ = Number of Dependent Variables

2. Correlation Coefficient Analysis

According to Uma & Rogerin (Nurchahyo, 2018), Correlation analysis is a statistical method used to determine a quantity which states that there is a strong relationship between one variable and another variable. Meanwhile, simple correlation analysis is correlation analysis that only involves two variables (bivariate). The product moment formula is as follows:

$$r_{xy} = \frac{n\sum xy - \sum x \sum y}{\sqrt{n\sum x^2 - \sum x^2} \sqrt{n\sum y^2 - \sum y^2}}$$

Information :

r_{xy} = Correlation coefficient of variables X and Y

X = Independent variable

Y = Dependent variable

$\sum x$ = Total score X

$\sum y$ = Total score Y

$\sum xy$ = Number of multiplications between variable X and variable Y

n = Number of pairs of data (sample units)

The magnitude of the correlation coefficient (r) between two variables is to provide an interpretation of the strength or weakness of the influence, so guidelines are used which can be seen in the following table:

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Table 8. Correlation coefficient

Coefficient Interval	Relationship Level
00.0-0.199	Very low
0.20-0.399	Low
0.40-0.599	Currently
0.60-0.799	Strong
0.80-1,000	Very strong

Source: Sugiyono (2016:184)

Pearson Product Moment Correlation is symbolized by (r) provided that the value is not more than the price ($-1 \leq r \leq +1$). If the value $r = -1$ means perfect negative correlation, $r = 0$ means there is no correlation and $r = 1$ means the correlation is strong.

3. Analysis of the Coefficient of Determination

According to Marpaung & Winarto, (2018) The coefficient of determination is a tool to measure how far the model's ability is to explain variations in the dependent variable. The coefficient of determination value ranges between 0 and 1 or $0 < R^2 < 1$. A small coefficient of determination value means that the ability of the independent variable to explain variations in the dependent variable is limited. A coefficient of determination value that is close to 1 means that the independent variable provides almost all the information needed to estimate variations in the dependent variable. The coefficient of determination is used to find out how much social media variable (X) contributes to learning outcome variable (Y).

By using the formula:

$$KD = r^2$$

Information:

K.D = Coefficient of determination

r^2 = Correlation coefficient

1. Hypothesis test

To analyze the hypothesis, testing the regression coefficient with t count is carried out, namely:

$$t_{count} = \frac{\sqrt{n-2}}{\sqrt{1-r^2}}$$

Information:

t_{hitung} = Significant correlation coefficient score

r = Moment correlation coefficient

n = Number of samples/data

The following statistical hypothesis applies:

$$H_0 : P = 0$$

$$H_1 : P \neq 0$$

Next, determine using a 2-sided test. After that, the value is compared with the value. $t_{table} dk = n - 2, a = 5\% = 0,05. t_{count} t_{table}$

Provision:

- If $>$ then it is rejected and accepted, meaning that there is an influence of WhatsApp social media on the learning outcomes of class X economics subjects at SMAS Purnama Jakarta. $r_{count} > r_{table} H_0 H_1$
- If $<$ then it is accepted and rejected, meaning that there is no influence of WhatsApp social media on the learning outcomes of class X economics subjects at SMAS Purnama Jakarta. $r_{count} < r_{table} H_0 H_1$

RESULTS AND DISCUSSION

A. Data Processing Research Results/Testing Analysis Requirements

The respondents used by researchers in this research were class X students at SMAS Purnama Jakarta, totaling 48 students. Based on the data that has been collected, the answers from respondents are summarized and then analyzed to determine the influence of WhatsApp social media on learning outcomes in economics subjects at SMAS Purnama Jakarta, South Jakarta city. The following is a simple regression and correlation calculation.

1. Simple Linear Regression Coefficients

Table 9. Simple Regression and Correlation Calculations

No. Respondent	X total	Y	X ²	Y ²	XY
1	65	80	4225	6400	5200
2	67	75	4489	5625	5025
3	53	80	2809	6400	4240
4	56	80	3136	6400	4480
5	69	70	4761	4900	4830
6	56	85	3136	7225	4760
7	56	80	3136	6400	4480
8	55	75	3025	5625	4125
9	51	80	2601	6400	4080
10	51	80	2601	6400	4080
11	61	80	3721	6400	4880
12	61	70	3721	4900	4270
13	62	70	3844	4900	4340
14	54	80	2916	6400	4320
15	62	75	3844	5625	4650
16	50	75	2500	5625	3750
17	58	75	3364	5625	4350
18	56	75	3136	5625	4200
19	64	80	4096	6400	5120
20	51	80	2601	6400	4080
21	59	80	3481	6400	4720
22	50	75	2500	5625	3750
23	61	70	3721	4900	4270
24	51	85	2601	7225	4335
25	58	85	3364	7225	4930
26	67	80	4489	6400	5360
27	63	75	3969	5625	4725
28	67	75	4489	5625	5025
29	69	80	4761	6400	5520
30	62	75	3844	5625	4650
31	63	75	3969	5625	4725
32	56	85	3136	7225	4760
33	66	80	4356	6400	5280
34	61	85	3721	7225	5185
35	62	80	3844	6400	4960
36	56	75	3136	5625	4200

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37	48	80	2304	6400	3840
38	59	75	3481	5625	4425
39	47	80	2209	6400	3760
40	56	77	3136	5929	4312
41	63	85	3969	7225	5355
42	50	80	2500	6400	4000
43	60	77	3600	5929	4620
44	65	72	4225	5184	4680
45	50	80	2500	6400	4000
46	63	89	3969	7921	5607
47	61	80	3721	6400	4880
48	65	85	4225	7225	5525
Amount	2816	3765	166882	296263	220659

Source :Data processed by researchers, 2024

This analysis is used to determine the functional relationship between variable (X) social media and variable (Y) learning outcomes.

$$Y = +ab$$

The results of the regression equation show the following values:

$$\sum X = 2.816$$

$$\sum Y = 3.765$$

$$\sum X^2 = 166.882$$

$$\sum Y^2 = 296.263$$

$$\sum XY = 220,659$$

$$(\sum X)^2 = 7,929,856$$

$$(\sum Y)^2 = 14,175,225$$

$$n = 48$$

Next, it is calculated using the following calculation:

$$a = \frac{(\sum Y)(\sum x^2) - (\sum X)(\sum XY)}{n.(\sum x^2) - (\sum X)^2}$$

$$a = \frac{628.310.730 - 621.375.744}{6.934.986}$$

$$a = \frac{8.010.336 - 7.929.856}{6.934.986}$$

$$a = \frac{80.480}{80.480}$$

$$a = \mathbf{86,1703}$$

$$b = \frac{n.(\sum XY) - (\sum X)(\sum Y)}{n.(\sum x^2) - (\sum X)^2}$$

$$b = \frac{10.591.632 - 10.602.240}{8.010.336 - 7.929.856}$$

$$b = \frac{-10.608}{80.480}$$

$$b = \mathbf{-0,1318}$$

So the regression equation is determined as follows:

$$Y = - X86,17030,1318$$

From the regression equation above, it can be concluded where the constant value is (a) or a fixed value of 86.1703, meaning that when the influence of social media is equal to 0, the learning outcomes are 86.1703 and if this means that when social media increases by 1% it will reduce learning outcomes by 0.1318. $b = -0,1318$,

2. Regression Coefficient Analysis

The calculation used is the Pearson Product Moment Correlation which aims to find out how strong the relationship is between the variable (X) of social media and the variable (Y) of learning outcomes.

To find out the magnitude of the correlation coefficient, the following calculation steps are carried out:

$$\begin{aligned} \sum X &= 2.816 \\ \sum Y &= 3.765 \\ \sum X^2 &= 166.882 \\ \sum Y^2 &= 296.263 \\ \sum XY &= 220,659 \\ (\sum X)^2 &= 7,929,856 \\ (\sum Y)^2 &= 14,175,225 \\ n &= 48 \end{aligned}$$

Next, it is calculated using the following calculation:

$$r_{xy} = \frac{(n \cdot \sum XY) - (\sum X)(\sum Y)}{\sqrt{[n(\sum X^2) - (\sum X)^2][n(\sum Y^2) - (\sum Y)^2]}}$$

$$r_{xy} = \frac{(48)(220.659) - (2.816)(3.765)}{\sqrt{[(48)(166.882) - 7.929.856][(48)(296.263) - 14.175.225]}}$$

$$r_{xy} = -0,175$$

In order to provide an interpretation of whether the correlation coefficient is found to be strong or not, guidelines are used as shown in the following table:

Table 10. Interpretation Coefficient Level

Coefficient Interval	Relationship Level
0.00-0.19	Very low
0.20-0.39	Low
0.40-0.59	Currently
0.60-0.79	Strong
0.80-1.00	Very strong

Source: Sugiyono (2015:231)

From the results above, it can be seen that the relationship between social media and learning outcomes can be said to be very low and negative through a correlation result of -0.175. Thus, increasing use of WhatsApp social media reduces student learning outcomes.

3. Analysis of the Coefficient of Determination

The coefficient of determination, denoted by the Coefficient of Determination, is used to find out how much contribution the variable (X) WhatsApp social media has to the variable (Y) learning outcomes. r^2 .

To find out the magnitude of the coefficient of determination, the following calculation steps are carried out:

$$\begin{aligned} KD &= x 100\% r^2 \\ KD &= x 100\% 0,175^2 \\ KD &= 0.0306 x 100\% \\ KD &= 3.06\% \end{aligned}$$

From the calculation above, we get $KD = 3.06\%$. This means that WhatsApp social media contributes to learning outcomes by 3.06% while the remaining 96.94% is contributed by other factors, such as physical, physiological, family factors and also other factors.

B. Data Processing Research Results/Testing Analysis Requirements

1. Hypothesis Formulation

$H_0 : P = 0$, meaning that there is no influence of WhatsApp social media on learning outcomes in economics subjects.

$H_1 : P \neq 0$, meaning that there is an influence of WhatsApp social media on learning outcomes in economics subjects.

2. According to t_{count}

$$t_{count} = \frac{r \sqrt{n-2}}{\sqrt{1-r^2}}$$

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$$t_{count} = \frac{0,175 \sqrt{48-2}}{\sqrt{1-(0,175)^2}}$$

$$t_{count} = \frac{0,175 \sqrt{48-2}}{\sqrt{1-(0,175)^2}}$$

$$t_{count} = \frac{1,187}{0,969}$$

$$t_{count} = 1.225$$

3. Marka and t_{count}

Once it is known, it is compared with the value. Significant level of error used t_{hitung} t_{hitung} t_{tabel} $\alpha = 5\%$ two-sided test and degrees of freedom (dk) = $n-2$. Where the critical test value can be obtained from the t distribution table with the following formula:

$$\alpha = 5\%$$

$$\alpha = 0.05$$

$$dk = n - 2$$

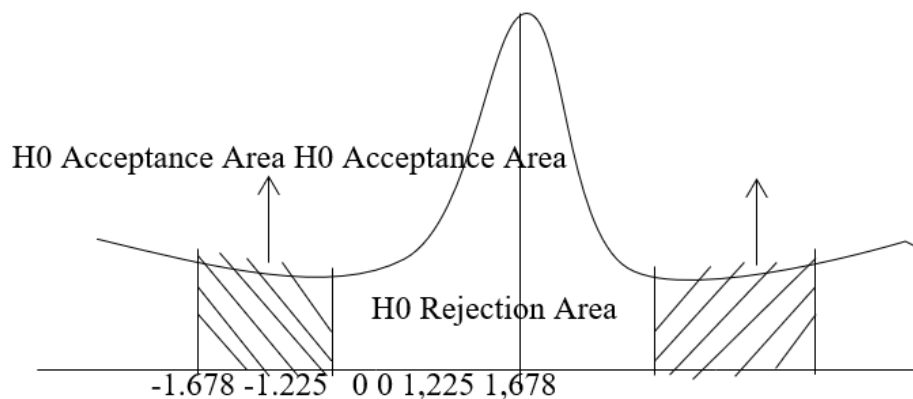
$$dk = 48 - 2$$

$$dk = 46$$

So, we get = 1.6786 t_{table}

4. Testing Criteria

The testing criteria in this research are:



- H_0 accepted and rejected if or $1.225 < 1.678 H_1 t_{count} < t_{table}$
- From the test results a H_0 rejected and accepted if or $1.225 > 1.678 H_1 t_{count} > t_{table}$

From the results above, it shows that with t_{hitung} $\alpha = 5\%$ for two-tailed test $dk = n - 2$ is 1.678 from the calculation results obtained ($1.225 < 1.678$) so it is accepted and rejected. So there is a negative and insignificant influence between WhatsApp social media on the learning outcomes of class X economics subjects at SMAS Purnama Jakarta. $t_{hitung} < t_{tabel}$ $H_0 H_1$

C. Discussion/Interpretation of Research Results

From the results of the analysis that has been carried out based on existing data, the researchers can conclude from the results of the analysis, including:

- From the results of the analysis, the regression equation $Y = 86.1703 - 0.1318$ if $b = -0.1318$, meaning that for every 1% increase in use of WhatsApp social media, it will reduce learning outcomes in economics subjects by 0.1318.
- To find out how strong the relationship is between the variable (X) WhatsApp social media and the variable (Y) learning outcomes in economics subjects, it can be seen from the results of the Pearson Product Moment Correlation of $r_{xy} = -0.175$. This shows that there is a very low relationship between variable X (social media WhatsApp) and variable Y (learning outcomes in economics subjects).

3. The Coefficient of Determination of 3.06% shows that WhatsApp social media contributes to learning outcomes by 3.06% while the remaining 96.94% is the contribution of other factors, such as physical, physiological and also family factors.
4. This is also reinforced by the results obtained from hypothesis testing which show that it is smaller than $1.225 < 1.678$ which states that there is a negative influence of WhatsApp social media on the learning outcomes of class X economics subjects at SMAS Purnama Jakarta.

From the results of the analysis above, it can be concluded that this research has succeeded in revealing the influence of social media on student learning outcomes at SMAS Purnama Jakarta. The coefficient of determination of 3.06% shows that WhatsApp social media contributes to learning outcomes in economics subjects, while the remaining 96.94% is the contribution of other factors, such as physical, physiological and family factors. This is also strengthened by the results obtained from hypothesis testing which show that it is smaller than $1.225 < 1.678$ so it can be concluded that it is rejected and there is a negative and insignificant influence between variable economics lessons).

One of the causes that can result in the invisible influence of WhatsApp social media on students' learning outcomes in economics subjects is excessive use of social media by students so that they forget the time to study according to questionnaire item no. 5 as the most frequently chosen statement by students. This is in line with research conducted by (Yeboah & Ewur, 2014) explained that 76% of respondents said using WhatsApp had a more negative impact on their learning and only 24% said using WhatsApp had a positive impact on their learning. This is because a student can rely on his cell phone for hours having conversations with his friends via WhatsApp without paying attention to the number of hours spent behind the phone for no relevant reason. This is in line with the theory according to Khoiratun (in Yani & Siwi, 2020) namely that one of the negative impacts of using WhatsApp social media is reducing study time due to playing on social media for too long which can reduce study time. This is also in line with research conducted by (Riska & Anwar, 2021), that there is no influence between the use of social media and mathematics learning outcomes. Theoretically, each use of learning media has its own influence. As an example, (Widiasih et al., 2017) states that student learning outcomes are influenced by the designated learning media. This is in accordance with opinion (Florayu et al., 2017) which states that there are several reasons why there is no positive influence between the use of social media WhatsApp on learning outcomes including the lack of student numbers. WhatsApp social media is only one of the learning media options so its use is not implemented well, resulting in no visible influence on this research.

CONCLUSION

After conducting research and analyzing the data obtained regarding "The Influence of WhatsApp Social Media on the Learning Outcomes of Economics Subjects for Class X Students at SMAS Purnama Jakarta". So, it can be concluded that the data obtained shows that there is no influence of WhatsApp social media on learning outcomes in economics subjects. These findings provide confidence that WhatsApp social media has a negative and insignificant influence on learning outcomes in economics subjects, this is proven by the results obtained from hypothesis testing which show that if it is smaller than $1.225 < 1.678$, it can be stated that there is a negative and insignificant influence between variable X (whatsapp social media) and variable Y (learning outcomes in economics subjects). The activity of accessing WhatsApp social media for class X students at SMAS Purnama Jakarta can also reduce the stability of student learning outcomes.

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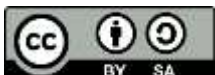
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