Effect of Duration of Social Media Use on Biology Education Students' GPA

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INFO ARTIKEL

ABSTRACT

Social media is no longer a foreign thing, especially for the millennial generation of students. Social media is used as a necessity and a means of communication. This type of research is quantitative research with a descriptive method that aims to provide or create an overview of the effect of the duration of using social media on the GPA of Biology Education Students. This research can be regarded as quantitative research because it collects and processes data using numbers, interprets the data obtained, and is also in the stage of presenting the output. The data in this study were obtained from the respondents' answers in filling out the questionnaire (closed questionnaire) and using the Likert scale in determining the score. 20 respondents were selected using the convenience sampling technique. The conclusion is that the effect of the duration of using social media on the GPA of the students of the Biology Education Study Program of UIN Sunan Kalijaga Yogyakarta is not significant. This is reinforced by the results of the R Square analysis which is 0.002 means only 1.2%. Through these results, it can be seen that the effect of the duration of social media on the GPA of biology education students only has an effect of 1.2% and the rest is influenced by other variabels not explained in this study. The benefit of this research for science is to determine the impact of the development of technology and information on academic potential, especially for education students at Sunan Kalijaga State Islamic University, Yogyakarta.

How to Cite

INTRODUCTION

The results of student achievements that are cumulative during the period in the terms of the course in the form of exclusive numbers or symbols are the definition of academic achievement. In addition, Setiawan's opinion quoted by Chairiyanti (2013) suggests that academic achievement is a stage of success in a certain direction, which is the student's maximum effort. There are many questions regarding the use of social media: can the duration of high-intensity use of social media be able to help students, thereby affecting their academic achievement. Some mass media justify that social media is useful in academic

activities, easily accessing learning media on social media is a form of utilization in the academic field (Irwandani & Juariyah 2016). This does not rule out the opinion that the use of social media can also have a negative impact. An unfavorable impact occurs for example on Facebook, when users have a relatively frequent intensity of usage so that their eye health is disrupted. In addition, among students, social media is used to carry out cyberbullying (Maya, 2015). The spread of hoax or fake news is caused by the irresponsible use of social media (Rahadi, 2017).

There are several impacts arising from social media. Research conducted by Kirschner & Karpinski (2010) (United States of America) noted that the GPA (Grade Point Average) results of some students who are active users of social media are below those who are not users of social media. The same thing was also stated by Pramudawardani (2016) through his research, that decreased achievement can be caused by increased use of social media. Other research says that the scores of students who have good grades and improve their achievement in Islamic religious subjects. This is in line with Lestari's (2016) findings that learning outcomes obtained by active students on social media (Facebook) tend to have a good index. This was further elaborated by Ramdhani (2016), that the relationship between the use of social media and learning achievement is relatively small.

It can be seen that the impact caused by the use of social media has differences in each individual. The positive impact of the internet is that people can shop online, communicate at the right time with family members and friends around the world, even with people they have never met, and are able to get the information they need and communicate. Kandell (1998) states that college students are prone to social media addiction. Based on the APJII survey, individuals with a high level of education tend to have a high intensity of using social media as well (APJII, 2015).

This research was conducted in conditions where there was a transitional change from normal learning directly to distance learning. Stress levels due to learning also occur adjustments by being more active in using social media as a form of outlet. There is an increase in the duration of social media for students, it is undeniable that it will affect academic achievement for students. The benefit of this research for science is to determine the impact of technological and information developments on academic potential, especially the GPA of biology education students at UIN Sunan Kalijaga.

METHOD

Types of Research and Research Samples

The type of research used is quantitative research and descriptive method which aims to create an overview of the effect of the duration of social media use on the GPA of biology education students. The research was conducted using a questionnaire which was distributed to several selected students.

The research sample consisted of 20 class A and class B students of the Biology Education Study Program at UIN Sunan Kalijaga Yogyakarta, who were selected using a convenience sampling technique. The sample is selected based on the easiest person to access or contact (Widodo, 2016).

Place and time of research

This research was carried out in their homes by collecting data through questionnaires and will be distributed via the internet. The time for conducting the research was in May 2022. This research took the specifications of several Biology Education Students at UIN Sunan Kalijaga Yogyakarta Class of 2021 which had been selected as many as 20 students.
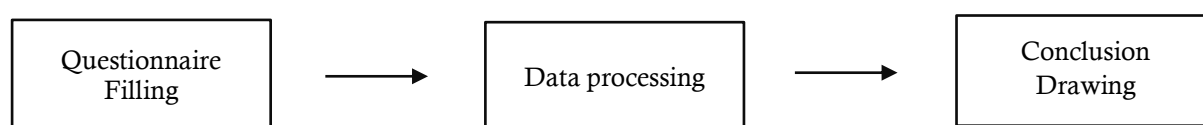
Figure 1. Analysis Stage

Procedure

The researcher made a questionnaire in the form of a questionnaire through the Google form which was used as a research instrument. Respondents were asked several questions to find out their views both from an assessment point of view or responses regarding the influence of the duration of social media use on the GPA of biology education students. The form of the questionnaire that was given to respondents was a closed research questionnaire, namely alternative answers were given so that respondents would only choose one of these answers (Akramunnisa & Hardiana, 2021). The options provided consist of five choices. namely by obtaining a score of one with the option strongly disagree (STS), a score of two with the option to disagree (TS), a score of three with the option of don't know (TT). Score four with the agree option (S), and score five with the last option, namely strongly agree (SS). The technique used in this research uses linear regression analysis techniques. This is a way to explain the effect of the independent variable on the dependent variable (Marcus, *et al.*, 2012).

RESULT AND DISCUSSION

The data obtained from this study were first subjected to the classical assumption test which included the normality test and heteroscedasticity test to see whether the data met the requirements for analysis or not. In this study using the classical assumption test includes the normality test and heteroscedasticity test. Some of the classic assumption tests in this study were managed using supporting tools, namely SPSS, with the One-Sample Kolmogorov-Smirnov Test analysis technique.

Tabel 1. Uji *One-Sample Kolmogorov-Smirnov Test*

		Unstandardiz ed Residual
N		20
Normal Parameters	Mean	.0000000
	Std. Deviation	1.42045804
Most Extreme Differences	Absolute	.164
	Positive	.076
	Negative	−.164
Test Statistic		.164
Asymp. Sig. (2-tailed)		.166

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

It can be seen in Table 1 above that the value of the unstandardized residual at sig. (2-tailed) is more than 0.05, namely 0.166 > 0.05, where the value of $\alpha = 0.05$. This shows that the data is normally distributed.

Tabel 2. Uji *Heteroskedastistika*

Model	Unstandardized Coefficients		Standardized Coefficients Beta	T	Sig.
	B	Std. Error			
1 (Constant)	$9.770E - 16$	1.938		.000	1.000
Social Media Duration	.000	.171	.000	.000	1.000

a. Dependent Variables: abs_res

Furthermore, a heteroscedastic test was carried out to test whether the data has a constant variation of the residuals between respondents (Fitria, 2018). The results of the heteroscedasticity test obtained the value of Sig. 1,000, which means more than the significance value of $1,000 > 0.05$. Based on the results of the existing data test, it is acceptable (heteroscedasticity does not occur) and is continued with a simple linear regression analysis test with the aim of knowing the effect of the independent variable (X) on the response variable (Y) with only one independent variable (Syilfi, *et al.*, 2012).

Tabel 3. *Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.109	.012	−.043	1.459

a. Predictors: (Constant), Durasi Sosial Media
b. Dependent Variabel: IPK

Tabel 4. *Anova*

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	.464	1	.464	.218	.646
Residual	38.336	18	2.130		
Total	38.800	19			

a. Dependent Variables: IPK
b. Predictors: (Constant), Social Media Duration

Tabel 5. *Coeffcients*

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
1 (Constant)	12.491	1.938		6.445	.000
Social Media Duration	−.080	.171	−.109	−.467	.646

a. Dependent Variables: IPK

Based on Table 3 of the summary model, the value of R. Square was obtained at 0.012 which means 1.2% through these results it can be seen that the effect of the duration of social media on the GPA of biology education students only has an effect of 1.2% and the rest is influenced by other variables. Then from Table 4, it is known that the anova f-count = 0.218 with a significance probability of 0.646 and degrees of freedom (dk) = 18 f-table, the result is 3.55, which means that the f-count < f-table (0.218 < 3.55). It can be concluded that there is no significant effect in this study. Whereas in Table 5 the coefficients can be found the results of the t-test and the regression equation. The results of the t-test show the significance value of the effect of social media duration on GPA with t-count = –0.467. Because the t-count is negative, a one-

tailed test is carried out with a t table value of 1.73406. Thus, t-count = 0.467, which is smaller than 1.73406, so it can be said that there is no big effect.

The results of the analysis show that there is no significant effect on the impact of duration on social media on biology education students with GPA for the regression equation which can be written as follows:

$$\hat{Y} = a + bX$$
$$\hat{Y}$$
$$= 12.491 - 0.08X$$

can be interpreted as $a = 12.491$, if variable X or the duration of using social media is constant, then the average value of variable Y or GPA is 12,491 and $b = -0.08$ if variable x or duration of social media use increases by 1 unit, then variable Y or GPA decreases by 0.08. Based on these results, the hypothesis is rejected, which means that the length of time using social media has no significant effect on the GPA of students in the biology education study program. The duration of using social media does not affect student GPA because it does not really support their academics, because student GPA may be influenced by other factors such as students' activeness in seeking insights and the study references they use.

Research that has been done before Ramdhani (2016) shows that the use of social media has no effect on student academic achievement. But in other studies there are also other results which show that the use of social media cannot affect academic achievement (Fitri, 2013). In his journal it is explained that academic ability is influenced by study time. The survey found that it had no significant impact on social media. The duration of using social media on the GPA of Biology Education Study Program students at UIN Sunan Kalijaga Yogyakarta class of 2021 with the results of the analysis being R Square of 0.012, which means 1.2%. From these results it can be seen that the effect of the duration of social media on the GPA of biology education students only has an effect

of 1.2% and the rest is influenced by other variables. The results show that it is in line with the research by (Fitri, 2013) and (Fitri, 2019) and not in line with research by (Ramdhani, 2016).

In connection with the statement above, academic achievement can be seen from changes in student behavior skills, or performance levels that continue to increase over time and are influenced by learning performance rather than being triggered by the growth process (Sobur, 2006). Siswanto (2013) states that academic achievement is an achievement of the stage of learning success. Learning motivation is an effort that is carried out internally and externally by students who carry out the learning process, and students who are motivated encourage greater efforts to achieve academic achievement (Saleh, 2014).

The second factor that can affect student learning achievement is time management that can be well managed can have a good impact on academic achievement, also because students can know the time to study well (Juliasari, 2016). The third factor that results in increased academic ability is interest in learning. If students have a high interest in learning lessons, they will pay more attention to the material to help them achieve maximum learning outcomes (Lestari, 2016). The fourth factor that causes students to increase their academic achievement is intelligence or IQ. (Intelligence Quotient). Most students with an IQ above the average find it easier to carry out learning activities, so the results obtained are also better than students with below-average IQ (Khumaidi, 2014).

CONCLUSION

Based on research conducted on Biology Education study program students at UIN Sunan Kalijaga Yogyakarta class of 2021, it can be said that there is no significant effect between the duration of using social media and GPA. The R Square scan value of 0.012 or 1.2% means that it only has an effect of

1.2% and the rest is influenced by variables other than those described in this study. Thus, based on a probability level of 0.05 with a confidence level of 95%, it can be said that there is no significant effect between the duration of using social media and the cumulative average value of students. From the ANOVA data it is known that the calculated f value = 0.218 with a significance probability of 0.646 and degrees of freedom (dk) = 18. The results of the f table are 3.55, which means that the arithmetic value of f < f table (0.28 < 3.55), so it can be said there was no significant effect. Meanwhile, based on the coefficient table, the t-test results show the value of the effect of the duration of social media on GPA with a t-score of −0.467. Because t-count = 0.467 is smaller than 1.73406 and it can be said that there is no significant effect. The results of the analysis show that there is no significant effect of the duration of social media on the GPA of biology education students. Based on these findings, the hypothesis is rejected, meaning that there is no significant effect of the duration of social media on the GPA of biology education students.

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