

## The Effect of Social Media Use on Students' Scientific Writing Ability

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**Abstract:** This article aims to analyze the effect of social media use on students' ability to write scientific papers in an educational environment, especially at the Ngawi Institute of Islamic Religion. Quantitative methods are used to obtain objective and numerically measurable results. By using the regression test and the coefficient of determination, the results show that the use of social media has a significant impact on the ability to write scientific papers of students, with a calculated t value of 6.128, which is greater than the t value of 1.195 with a significance of  $0.00 < 0.05$ . From this value, social media has a positive and significant influence on student's ability to write scientific papers and an R-value of 0.150. From this output, the coefficient of determination (R Square) is 0.053. The coefficient of determination means that the effect of the independent variable (social media) on the dependent variable (ability to write scientific papers) is 5.3%. This research article is expected to provide insights for educational institutions in designing policies and strategies that support student learning in the digital era and provide practical guidance for students in managing time and using social media wisely.

**Keywords:** Social media, Writing skills, Scientific papers, Students, Higher education

**Abstrak:** Artikel ini bertujuan untuk menganalisis pengaruh penggunaan media sosial terhadap kemampuan menulis karya ilmiah mahasiswa di lingkungan pendidikan, khususnya di Institut Agama Islam Ngawi. Metode kuantitatif digunakan untuk mendapatkan hasil yang objektif dan terukur secara numerik. Dengan menggunakan uji regresi dan koefisien determinasi, diperoleh hasil bahwa penggunaan media sosial memiliki pengaruh yang signifikan terhadap kemampuan menulis karya tulis ilmiah mahasiswa, dengan nilai t hitung sebesar 6,128 yang lebih besar dari nilai t tabel sebesar 1,195 dengan signifikansi  $0,00 < 0,05$ . Dari nilai tersebut dapat disimpulkan bahwa media sosial memiliki pengaruh yang positif dan signifikan terhadap kemampuan menulis karya tulis ilmiah mahasiswa dan nilai R sebesar 0,150. Dari output tersebut diperoleh nilai koefisien determinasi (R Square) sebesar 0,053. Nilai koefisien determinasi tersebut memiliki arti bahwa pengaruh variabel independen (media sosial) terhadap variabel dependen (kemampuan menulis karya ilmiah) adalah sebesar 5,3%. Artikel penelitian ini diharapkan dapat memberikan wawasan bagi institusi pendidikan dalam merancang kebijakan dan strategi yang mendukung pembelajaran mahasiswa di era digital, serta memberikan panduan praktis bagi mahasiswa dalam mengelola waktu dan menggunakan media sosial secara bijak.

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**Kata Kunci:** *Media sosial, Keterampilan menulis, Karya ilmiah, Mahasiswa, Pendidikan tinggi*

## **Introduction**

The use of social media has become an integral part of everyday life, especially among university students. On a point scale of 1 to 4, the main reasons for accessing the internet were identified, with social media ranking first at 3.33 points. This data indicates that the social media phenomenon has become very significant in everyone's daily lives, and students are no exception. Platforms such as Facebook, Instagram, Twitter, YouTube, and others have spread to various aspects of student life, proving that engagement in social media is one of the main aspects of internet usage in Indonesia in 2023. (APJII 2023 Survey). This phenomenon significantly impacts various aspects of life, including the ability to write scientific papers. In higher education, a person tends to be distracted or interrupted when completing tasks that require a lot of concentration; based on this theory, the use of social media can interfere with student concentration and academic productivity. (Baron 1986).

The ability to write scientific papers is not only a skill needed to complete academic tasks, but also the main foundation for conveying thoughts, ideas, and research in a systematic and structured manner. By having good scientific writing skills, students can develop their analytical power, argumentation, and problem-solving more effectively. In addition, scientific writing skills also prepare students to contribute to the academic and professional world, where the ability to compose correct and clear scientific writing is indispensable. Therefore, the relationship between scientific writing skills and academic activities is very close and important for students' intellectual development and professionalism. (Muhammad Heriyudanta 2021). However, the effect of using social media on the ability to write scientific papers is still a major concern in education. In today's digital era, students are exposed to the use of social media in their daily activities. This raises the question of how the use of social media affects the ability to write scientific papers of students in higher education.

This research article focuses on the influence of social media use on the quality of students at the Ngawi Islamic Institute. Quality scientific work is original work that significantly contributes to knowledge in a particular field, is supported by valid

data and facts, and is structured using clear and accurate language. Quality scientific work reflects a deep understanding of the topics discussed and can present strong and supportive arguments. In addition, quality scientific work must also adhere to the ethics of scientific writing, including in terms of correct citation and reference writing. (Widodo et al. 2022). Distraction factors such as lack of effective time, concentration, and potential decrease in argumentation quality will be analyzed in depth. Ngawi Islamic Institute was chosen as the object because it is representative in describing the condition of students in the higher education environment in Indonesia, as well as providing relevant contributions to the educational institution.

Several previous articles are related to this research article used as a form of Gap Analysis and determining novelty to obtain comparison materials and avoid similarities with previous articles. Researcher Rafiq conducted the first research on social media titled "*The Impact of Social Media on Social Change in a Society*", showing that social media makes it easy to obtain and convey information efficiently and cheaply. Still, it can also give rise to social groups that deviate from norms. (Rafiq 2020). The second study by Suvia Nisa with the title "*The Relationship between the Intensity of Social Media Use with the Tendency of Narcissism and Self-Actualization of Adolescents*", shows that there is a positive correlation between the intensity of social media use with the *tendency* of narcissism and self-actualization (Nisa n.d.). The third research by Alfin Khosyatillah with the title "*The Impact of Social Media on Religious Behavior of Religious Studies Students of the Faculty of Ushuluddin and Philosophy UIN Sunan Ampel Surabaya*", shows that the positive and negative impacts of behaviour, based on the use of social media are good or not. (Khosyatillah 2018)The fourth research by Nasri Uba, titled "*The Impact of Social Media on Reading Interest of Students of SMA Negeri 1 Ile Ape in Lembata Regency*", shows that excessive use of social media can harm students' reading interest and hurt discipline and learning concentration. Researchers found novelty in terms of topics, methods, results, and implications from these four studies.

This article aims to provide a broader understanding of the impact of social media use on students' scientific writing skills and assist educational institutions in developing strategies to help students manage their use of social media wisely. This article is expected to contribute to the development of literature and academic understanding in the field of social media and education, as well as provide valuable

insights on how to improve the quality of scientific papers produced by students in the digital era. This article uses quantitative methods to provide objective and numerically measurable results and a clear picture of how social media can affect students' scientific writing skills. The purpose of this article is to provide a broader understanding of the impact of social media use on students' scientific writing skills, as well as to provide relevant contributions for educational institutions in developing strategies to help students manage their use of social media wisely

### Research Methods

This article uses a quantitative design with a survey approach. The data is generated as numbers, then processed and analyzed to obtain scientific information hidden behind the numbers. (Martono 2012) (Bugin 2013). The survey was conducted by distributing questionnaires to respondents randomly selected from the student population of Ngawi Islamic Institute.

The population that is the subject of this article is students of the Ngawi Institute of Islamic Religion who actively use social media. Population is a generalization area that includes objects or subjects with certain qualities and characteristics. (Sukmadinata 2020) (Sugiono 2017). The sample was taken using a purposive sampling technique, with the criteria of students who actively use social media and are writing scientific papers. The minimum sample size is 15 times the number of variables to be studied, so in this study, the number of samples was determined to be more than the minimum limit, namely 15 times the number of variables to be studied. (Sukirman 2011).

The instrument used is a questionnaire. A questionnaire is a data collection tool with a series of questionnaires. The questions contained in the questionnaire must be detailed and complete (Sugiono 2017). This questionnaire consists of two parts. The first part contains questions about the use of *social media*, while the second part contains questions *about the ability to write scientific papers* interpreted on a *Likert scale*. A Likert scale is a measurement scale that refers to giving values or numbers to objects or phenomena according to certain rules. This concept involves three key aspects, namely numbers, assignments, and rules. Assigning or assigning value is defined as mapping. In this context, rules refer to instructions or guidelines for acting (Umar 2005). (Umar 2005). The validity and reliability of the instrument will be tested using the SPSS 26 application.

There are two variables as indicators in the following research article:

There are six questions as indicators of the *Social Media Usage* variable.

Table 1. Questions as indicators of the *Social Media Usage* variable.

No.	Question	SS	S	KS	TS	STS
1	You are very concentrated when using social media					
2	Does social media use affect your academic productivity?					
3	You feel distracted by social media when doing academic work.					
4	You feel helped by social media when doing academic work.					
5	Social media use lowers your overall academic performance.					
6	Does using social media improve your overall academic performance?					

There are nine questions as indicators of the *ability to write scientific papers*.

Table 2. Questions as indicators of the *ability to write scientific papers*.

No.	Question	SS	S	KS	TS	STS
1	Does the use of social media affect the quality of your scientific writing?					
2	does the use of social media affect the efficiency of your scientific writing?					
3	Is there a significant difference in the ability to write scientific papers between those of you who use social media intensively and other students who do not?					
4	Do you understand the material well after using social media?					
5	Do you need help crafting strong arguments after using social media?					
6	Do you produce quality scientific work after using social media?					

7	Does using social media help your ability to understand the material taught?					
8	Does the use of social media help your ability to construct strong arguments?					
9	Does using social media help your ability to produce quality scientific work?					

The data obtained will be analyzed using descriptive and inferential statistical analysis techniques. Descriptive analysis is used to describe the characteristics of respondents and research variables. Inferential analysis is used to test the research hypothesis and determine the effect of the independent variable on the dependent variable. A hypothesis is a conjecture that may be true and may also be false, it will be rejected if it is wrong and will be justified if the facts justify it. (Suharsimi 2010).

The validity and reliability of the research instrument will be tested using the SPSS 26 application. The validity test is carried out by comparing the total score correlation with the free correlation value ( $r$ ). The validity test is an important step to evaluate the accuracy of a questionnaire. The success of a questionnaire is considered valid if it can adequately reflect the dimensions to be measured. (Ghozali 2016)The reliability test is carried out by calculating the reliability coefficient using Cronbach's alpha. A reliability test is an index that shows the extent to which a measuring device can be trusted or relied upon. The measured reliability coefficient is then seen for its value. Variables with a reliability coefficient that is negative or smaller than the table value need to be revised again because they have a low level of reliability. Reliability is how much a measuring device can provide consistent and reliable results (Noor Wahyuni, 2014). (Noor Wahyuni 2014).

The benchmark of success is the achievement of research objectives and whether or not the proposed hypothesis is proven. The success of the research can also be seen from the contribution to the development of literature and academic understanding in social media and education, as well as providing valuable insights on how to improve the quality of scientific papers produced by students in the digital era.

## Results and Discussion

In this article, 100 respondents were taken as samples. This research article focuses on students from semesters 3 to 9 or students who have received Scientific Writing Techniques courses in semester 3 with the following respondent characteristics:

Table 3. respondent characteristics

No.	Characteristics	Frequency (percentage)
1	Gender	
	a. Male	40
	b. Female	60
2	Age	
	a. 18-20 years	70
	b. 23-27 years old	30
3	Duration of Social Media Use	
	a. Every day (weekly)	80
	b. A few days (a week)	20
4	Faculty	
	a. Tarbiyah	30
	b. Sharia	30
	c. Islamic Economics	30
	d. Additional (Kail Student Activity Unit)	10
5	Semester	
	a. Three	25
	b. Five	25
	c. Seven	25
	d. Nine	25

60% of respondents were female, and 40% were male. Most respondents are between 18-22 years old (70%), while the rest are between 23-27 years old (30%). 80% of respondents use social media daily, while the rest use social media several times a week. Overall, students come from 3 different faculties: Tarbiyah 30%, Sharia 30%, Islamic Economics 30% and the rest are filled by students who are members of the

KAIL Student Activity Unit (Scientific Studies),

The first result to be conveyed in this article is about whether or not there is a relationship between Social Media (X) and the Ability to Write Scientific Work (Y); it can be seen from the Coefficient table (Simple Regression Test Results) obtained the following results

		<b>Coefficients</b>				
		Unstandardized		Standardized		
		Coefficients		Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	31.887	5.128		6.218	.136
	Social Media	.278	.185	.150	1.504	.000

a. Dependent Variable: Scientific Writing Ability

From the results, it is found that the calculated t value is 6.128, which is greater than the t value of 1.195, with a significance of  $0.00 < 0.05$ . Thus, social media positively and significantly influences students' scientific writing skills. This can be stated because the calculated t value is greater than the t value, and the significance value is less than 0.05, so the null hypothesis ( $H_0$ ) is rejected, and the alternative hypothesis ( $H_a$ ) is accepted. In more detail, these results indicate a positive and significant relationship between social media and the ability to write scientific papers of IAI Ngawi students. Thus, this finding indicates that social media use can positively influence students' ability to write scientific papers in this environment.

The second result is to determine the amount of influence or the coefficient of determination between Social Media (X) on the Ability to Write Scientific Work (Y) can be analyzed from the following table Model Summary.

<b>Model Summary</b>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.150 <sup>a</sup>	.053	.013	2.443

a. Predictors: (Constant), Social Media



From the table above, it can be explained that the value of the  $R$  relationship between the social media variable ( $X$ ) and students' ability to write scientific papers ( $Y$ ) is 0.150. From this output, the coefficient of determination ( $R$  Square) is 0.053. The coefficient of determination means that the effect of the independent variable (social media) on the dependent variable (ability to write scientific papers) is 5.3%. In other words, about 5.3% of the variation in students' ability to write scientific papers can be explained by variations in the use of social media. The rest, most of the variation in the ability to write scientific papers cannot be explained by the social media variables in this regression model.

It should be noted that the low value of  $R^2$  indicates that other factors also contribute to students' scientific writing ability and have yet to be included in this model. The results of this article contradict previous research that shows a negative effect; in this article, the use of social media has a positive impact on the use of social media on the ability to write scientific papers. This article has advantages in a more representative sampling method and using more valid and reliable research instruments.

The benchmark for research success is the achievement of research objectives and whether or not the proposed hypothesis is proven. Based on the results of the data analysis, it can be concluded that the research objectives have been achieved, and the proposed hypothesis is proven. The success of the research can also be seen from the contribution of the research to the development of literature and academic understanding in the field of social media and education, as well as providing valuable insights on how to improve the quality of scientific papers produced by students in the digital era. There are no failures shown in this article. However, there are some limitations in this research article such as sampling that was only conducted in one educational institution and the use of research instruments that are limited to questionnaires.

For future research, conducting a wider sampling and involving several educational institutions is recommended. In addition, using more varied research instruments and more complex research methods can increase the validity and reliability of the research results.

## Conclusion

Based on the research and discussion results, social media use has a significant negative impact on students' ability to write scientific papers at the Ngawi Institute of Islamic Religion (IAI). This finding aligns with previous research that shows a negative effect of social media use on students' scientific writing ability. Nonetheless, this research article makes a valuable contribution to understanding social media's influence on the ability to write scientific papers in the digital era. The limitations of this research article lie in the sampling that was only conducted in one educational institution and the use of research instruments that were limited to questionnaires. Therefore, for future research, it is recommended to involve several educational institutions in sampling, use more varied research instruments, and apply more complex research methods to increase the validity and reliability of the research results. The implication of this research article is the need for more attention in managing the use of social media for students, especially in improving the ability to write scientific papers. Educational institutions also need to consider strategies to help students use social media wisely to improve the quality of their scientific work. Thus, the recommended follow-up research involves a wider sample, more varied research instruments, and more complex research methods. Further research is expected to provide a deeper understanding of the impact of social media use on students' scientific writing skills and provide more concrete guidance in developing educational strategies in the digital era.

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