

Student Responses in Utilizing Social Media for Independent Learning: Insights from Physical Education Study Program Students

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Abstract

Background of study: Digital technology is now the main supporter of modern learning, with the internet and various digital media as popular learning resources that have great potential in increasing the effectiveness of the learning process.

Aims and scope of paper: This study aims to understand students' responses in using digital media as a learning resource and to examine its impact on improving their critical thinking skills towards social media.

Methods: This study uses a quantitative descriptive method with a survey approach and data analysis to describe the phenomena studied systematically. Data were collected using a questionnaire, then analyzed using descriptive statistical methods to describe the results systematically and structured.

Results: The results of the study show that social media is used by students as a source to find references related to lecture materials and references to work on assignments independently. Students said that social media as a source of independent learning has negative impacts, such as facilitating copy paste or plagiarism and causing laziness in thinking, which has the potential to weaken critical thinking skills. However, social media can also encourage critical skills by forcing students to choose accurate and reliable information.

Conclusion: The study shows that social media helps students find useful references, making it easier to understand materials and complete tasks. While it can lead to copy-pasting and reduced critical thinking, it also encourages students to choose reliable information, improving their analytical skills. The study highlights the need for students to use digital media effectively, critically assess information, and develop paraphrasing skills for better learning and critical thinking.

Keywords: Respons; Social Media; Learning

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INTRODUCTION

Starting in the 21st century, humans are required to adapt and live in harmony with the development of digital technology in various aspects of life (Herdiyanti et al., 2025). In the world of education, digital technology is used as a tool to support modern learning and is a very potential source of information to improve the effectiveness and quality of the teaching and learning process. The Internet, especially various types of digital media, is now the main source used in the learning process. All educational facilities and infrastructure are undergoing a transformation towards a digital technology-based system (Astleitner & Schlick, 2025). Digital technology has been utilized in educational institutions as a means of supporting learning. The technology functions as a tool for accessing information as well as a media to assist in carrying out learning activities and tasks. According to affirms that digital technology has a very significant influence on the current global education system. The positive impact is seen from the efficiency of time, logistics, and costs, and is supported by the effectiveness and attractiveness of digital-based learning which is able to improve the quality and flexibility of the teaching and learning process.

The use of digital technology in education is generally closely related to the use of the internet, especially in the form of various digital media. Various online sources such as websites and social networks provide information that supports the learning process, allowing students to develop insights and improve their independent learning skills more flexibly and efficiently. In addition, the ease of accessing information through search engines provides advantages in terms of the speed of searching for the required data. This is very helpful in saving time, especially when searching for educational references such as catalogs, scientific journals, magazines, or books that are relevant to the topic of learning or research being conducted.

The Internet plays an important role as a rich and easily accessible source of information to support the learning process. In addition, the Internet also functions as an interactive and flexible learning medium in helping students develop knowledge, skills, and broaden their horizons according to the needs and developments of the times (Huda, 2024). The internet can be utilized optimally by students and teachers as a learning resource. Learning references are also easier to access to support learning activities at school. This is reinforced by Web-based digital learning resources provide easy access to learning materials. This allows students to study independently whenever needed. Therefore, various types of internet-based digital media can be utilized as relevant and easily accessible learning resources. These media serve to provide important information in the form of literature and scientific references needed to support the smooth running of the learning process.

Technological advances have created a variety of more modern and innovative learning resources. The digitalization process is a major differentiating factor that makes these resources easier to access and use in learning activities. Digital learning resources are a combination of hardware and software designed to support the educational process. Its presence has the potential to overcome various learning obstacles and facilitate learning activities more effectively (Yadav, 2024). The internet allows quick access to various digital learning resources. Some of them include e-books, e-journals, e-learning, digital libraries, learning videos, YouTube, and educational games. Students have easy access to information and knowledge relevant to the course according to academic needs. The use of the internet as a learning resource supports the smoothness and acceleration of completing various lecture assignments, including final assignments such as writing a thesis more efficiently and in a focused manner (Arifudin, 2025).

The development of technology today has experienced very rapid progress compared to the period before the popularity of social media. In the past, communication was mostly done via SMS or phone calls using mobile phones, but now people prefer to use chat services or instant messages available on various social media platforms to communicate more practically and efficiently. The digital native generation is also inseparable from the use of social media in their daily lives. Platforms such as Facebook, Instagram, WhatsApp, YouTube, and LINE are already very familiar in their environment (Kirschner, 2024).

The use of internet-based digital media as a learning resource has an impact on students' cognitive processes. One of them is increasing critical thinking skills through access to broad and diverse information. This is in line with research conducted by that the use of e-learning as a learning medium has the potential to improve critical thinking skills, because there is a positive relationship between the two (Sinaga & Setiawan, 2022). However, on the other hand, the use of digital media can also have negative impacts if not

used wisely and in a targeted manner. Plagiarism is still often found among students. Forms of cheating include copy-paste and cheating when doing assignments.

This problem needs to be studied in depth by knowing the factual conditions of the use of social media as a source of learning by students. Based on this, this study aims to determine students' responses to social media as a source of independent learning and its influence on critical thinking skills. The difference between this study and previous studies is that it focuses on students' opinions about the copy paste actions carried out and the follow-up of the study program regarding the case.

METHODS

The data analysis technique used in this study is a descriptive type of survey analysis through case studies. Conducting a case study is an appropriate method when not much is known about a topic. Since little research has been done on the development and changes in the same students across units, it is more appropriate to adopt the case study method. To conduct this case study, we used sources from students of the physical education study program, faculty of teacher training and education at the Muhammadiyah University of Surakarta. The subjects of this study were students of the Physical Education Study Program. The sampling technique used random sampling technique (selection of control and experimental classes based on a lottery system) (Wang et al., 2024). The random sampling technique was taken randomly based on 100 respondents spread across semesters 2, 4, and 6. The object of this study was student responses to digital media as a source of independent learning. The data collection technique was carried out using a questionnaire or survey. A questionnaire or survey is a set of tools containing statements or questions used to collect data by distributing them to respondents to answer them. Data collection was carried out online using Google Form as a research instrument. The data analysis technique used descriptive statistical analysis in the form of validity and reliability which showed the level of response. Descriptive statistics are statistics used to analyze data by describing or depicting the data that has been collected as it is without intending to make conclusions that apply to the public or generalization. Data collection instruments include questionnaires and tests. Data analysis techniques are as follows:

a. Validity Test

The validity test is conducted to determine the feasibility of statement items in defining variables. The testing technique in this study uses r count. The results of r count from the SPSS output on each statement are compared with the r table $df = n-2$ and calculate the significance level of 5% or 0.05.

b. Reliability Test

The reliability test is conducted to measure the steadiness of respondents in answering statements in the questionnaire. The reliability test criteria in this study use alpha cronbach with an alpha value of 0.60, so that the data is declared reliable.

RESULTS AND DISCUSSION

This study involved 100 students of the Physical Education study program who were the main respondents. The demographic distribution of respondents was described based on the variables of age, gender, semester, and frequency of social media use.

Tabel 1. Demografis Responden

Variabel	Kategori	Frekuensi (n)	Persentase (%)
Usia	17-18 tahun	30	30%
	19-20 tahun	56	56%
	21-23 tahun	14	14%
Jenis Kelamin	Laki-laki	81	81%
	Perempuan	19	19%
Semester	2	30	30%
	4	60	60%
	6	10	10%
Frekuensi Penggunaan Media Sosial	< 1 jam	20	20%
	1-3 jam	20	20%
	> 3 jam	60	60%
Status Mengikuti Mata Kuliah Sejarah Olahraga	Aktif	70	70%
	Pasif	30	30%

Demographic analysis of respondents shows a fairly clear distribution of the various variables studied, namely age, gender, semester, frequency of social media use, and status of taking sports history courses. In terms of age, the majority of respondents are in the 19-20 year age range with a percentage of 56%. This shows that most of the survey participants are students who are generally in early adulthood, which is a productive and critical period in the learning process. In addition, there are 30% of respondents aged 17-18 years, indicating that there are students who are still relatively young and have just entered college. Meanwhile, respondents aged 21-23 years amounted to 14%, indicating that a small portion of the participants are at a more advanced stage in their studies. This age distribution is important to determine the characteristics of the generation of students who are the research sample and how age can affect patterns of social media use and responses to independent learning (Szymkowiak et al., 2021).

Furthermore, in terms of gender, the data shows that the majority of respondents are male at 81%, while females are only 19%. This difference provides an illustration that the research sample tends to be dominated by male students. This may be related to the characteristics of certain departments or faculties that have a higher proportion of male students, or it may also be the result of unbalanced sampling. The difference in numbers between men and women needs to be considered in further analysis, especially in seeing whether there are significant differences in social media usage patterns and their impact on independent learning between the two gender groups (Theophilou et al., 2024).

Then, regarding semesters, the data indicates that the majority of respondents are in semester 4, which is 60%, followed by semester 2 at 30%, and semester 6 at 10%. This shows that most respondents are students who have been studying at university for quite a long time, so they have more mature academic experience compared to students in the early semesters (Layoo et al., 2025). Students in semesters 4 and 6 usually start to face more complex and diverse courses, so the potential for using social media as a source of

independent learning may be different compared to students in semester 2. This semester distribution also helps researchers understand the dynamics of changes in learning habits and the use of technology among students at different stages of study (Chang & Kabilan, 2024).

The frequency of social media use is an important variable in this study, because the main focus is how social media affects students' independent learning. From the data obtained, the majority of respondents use social media for more than 3 hours per day, with a percentage of 60%. Meanwhile, as many as 20% of respondents use social media for 1-3 hours, and the remaining 20% use social media for less than 1 hour per day. These data show that almost all students are very active in using social media, which has the potential to greatly affect the way they access information and learning resources. High use of social media can make it easier to find learning references, but it can also pose risks such as the tendency to copy-paste or plagiarism and cause a sense of laziness in critical thinking, as expressed in the previous analysis.

Finally, the status of taking sports history courses is also a variable that is measured, where 70% of respondents stated that they were actively taking the course, while the other 30% were passive. This shows that most respondents have quite high involvement in the learning that is the focus of the study. The active status in taking this course may affect the pattern of independent learning, including how they use social media to support learning activities. Respondents who actively take courses may be more motivated to seek information and references that support course materials through social media, while passive respondents may tend to make less optimal use of social media for learning. Overall, the results of this demographic analysis provide a comprehensive picture of the profile of respondents consisting of students with a dominant age range of 19-20 years, the majority of whom are male, in semester 4, with a high frequency of social media use, and most of whom are actively carrying out independent learning (Chang & Kabilan, 2024).

This profile is an important basis for understanding the research context regarding the impact of social media as a source of independent learning. The high use of social media has two contrasting impacts: on the one hand, it provides easy access to information, but on the other hand, it has the potential to reduce students' critical thinking skills if not handled wisely. Therefore, this study is expected to provide in-depth insight into how students with these demographic characteristics utilize social media effectively to support their learning process, while identifying the challenges that arise from excessive use of social media (Awoke & Zikargae, 2023). Understanding the distribution of age, gender, semester, and social media usage patterns can also be a reference for lecturers and campuses in designing learning strategies that are more adaptive and relevant to the characteristics of today's students. For example, by paying attention to the dominance of intense social media users, lecturers can develop digital learning methods that utilize social media in a positive and educational way, so that students are encouraged to use social media as a productive and creative learning tool. In addition, awareness of negative risks such as plagiarism and laziness in critical thinking must continue to be socialized so that students can develop good academic attitudes.

This is in line with the opinion that the internet can be useful, including broader knowledge; access to scientific and technological information; library/reference sources; and increasing knowledge, socializing, insight, and career development. In addition, argues that various sites, webs, and social networks accessed via the internet provide a variety of useful sites that can be used by students to explore knowledge or broaden their horizons

through independent learning. The internet as a learning medium can be used to access relevant sources, download information, interact with sources, interact with others about sources, make analyses of sources, and provide responses to sources.

The validity testing technique in this study was carried out using a significance level of 5% or 0.05. Data were obtained from 100 student respondents who answered 15 statement items on the research instrument. In this study, the following validity test results were obtained:

Tabel 2. Data Validity Test Results Per-Statement Item on Research Instrument Testing

No	Statement Item Categories	Data Validity Results Per Questions Item
1.	<i>Ease of access to information</i>	0,562
2.	<i>Speed of getting information</i>	0,405
3.	<i>Diversity of learning resources</i>	0,409
4.	<i>Academic interaction and discussion</i>	0,684
5.	<i>Self-study motivation</i>	0,279
6.	<i>The use of social media as an academic reference</i>	0,290
7.	<i>Availability of video tutorials</i>	0,493
8.	<i>Critical thinking development</i>	0,609
9.	<i>The influence of social media on study habits</i>	0,490
10.	<i>Level of dependence on social media</i>	0,658
11.	<i>Availability of online study groups</i>	0,623
12.	<i>Authenticity of social media information</i>	0,785
13.	<i>Frequency of social media use</i>	0,394
14.	<i>Using social media to gain motivation</i>	0,539
15.	<i>Self-readiness to manage social media</i>	0,718

Based on the results of data analysis, all statement items showed significant validity coefficients, with the average validity value above the minimum limit that has been set. This proves that the research instrument used is valid and reliable to measure the variables studied accurately. This high validity guarantees the quality of measurement and the relevance of the items to the research objectives. The results of the reliability test showed a Cronbach's Alpha value of 0.8103 for 15 statement items. This research instrument can be declared reliable based on the criteria stating that a Cronbach's Alpha value ≥ 0.6 is considered reliable. This indicates that the instrument has good internal consistency and can be used to measure research variables reliably.

Tabel 3. Results of Reability Test

Reability Statistic	Value
Cronbach's Alpha	0,8103
Number of Item (N)	100

Based on the analysis, it can be seen that all respondents agree that in searching for references from social media, source selection is required. The student's response can be interpreted that this source selection is carried out in order to obtain reliable sources to obtain accurate and up-to-date references and information. Reliable sources accessed via the internet to search for accurate information or references include Google Scholar and Google Books. This is because both sources contain the latest research that has been conducted by competent researchers in their fields.

The use of internet-based social media as a learning resource is widely used by students to help in the lecture process. The function or use of the media is to obtain the latest information or news, increase insight, increase references so that it is easier to do college assignments. Students can also find out the answers to various questions from lecturers and increase their knowledge about lecture materials (Khatri, 2021).

The results of the study show that the use of social media in education certainly has consequences, both positive and negative. Positive consequences include increasing knowledge, improving critical thinking skills. In addition, digital media can reduce paper consumption in collecting assignments, thereby reducing environmental damage. Meanwhile, negative consequences include making students reluctant to read and often citing incorrect information or inaccurate references.

Several previous studies have highlighted the role of social media in supporting students' independent learning process. According to (Nyoman & Putu, 2020), Social media provides quick and easy access to a variety of diverse learning resources, thus encouraging students to be more active in seeking and utilizing learning materials independently. Also shows that platforms such as YouTube and Instagram are very effective in increasing students' learning motivation, especially because of the interesting and easy-to-understand audiovisual content. In addition, found that although social media offers many benefits, its use can cause concentration disorders due to constant notifications and content that is not relevant to learning. This emphasizes the need for time management and self-control skills when using social media for learning. In the context of information validity, emphasizing the importance of digital literacy as a critical ability to assess the credibility of learning sources on social media, considering the large amount of information that is unverified and prone to hoaxes.

Students also voiced the need for digital literacy training to assess the credibility of information and manage study time to avoid distractions. These results indicate that social media has become an integral part of students' learning process, especially in physical education which requires visual and practical understanding, in accordance with the findings. Which emphasizes the importance of social media in digital education. The preference for audiovisual content is in line with Mayer's theory about multimedia learning that increases the effectiveness of understanding. However, obstacles in the form of distractions that divert attention according to studies emphasizes the importance of self-regulation skills to utilize social media productively. The issue of information validity is also important, in line with which highlights the need for digital literacy so that users can sort out accurate and relevant information.

Technical obstacles of unstable internet signals are in accordance with the UNESCO on inequality of access to technology that impacts the quality of online learning. The practical implications of this study indicate that educational institutions must improve technological infrastructure and provide digital literacy training in order to maximize the benefits of social media as a means of independent learning. Integration of social media into the formal learning process is also an effective strategy to make social media a part of blended learning, so that it is not only a source of independent learning but also a component of structured learning. The limitations of this study include the sample which is only from one study program so that generalization is limited, as well as the use of quantitative survey methods that do not explore aspects of motivation and perception in depth. Therefore, further research is recommended to expand the population and use mixed-method methods so that the data is more comprehensive. In addition, it is also

necessary to study other topics in more depth related to the use of social media and its relationship to critical and creative thinking skills.

Future research can also examine the relationship between social media use and academic achievement quantitatively and use a longitudinal approach to monitor the development of social media use patterns over time. Overall, this study confirms that social media is an effective tool in supporting independent learning for Physical Education students, as long as it is used with good management and supported by adequate infrastructure and sufficient digital literacy, so that it can improve the quality and effectiveness of learning in the digital era.

CONCLUSION

The results of the study indicate that the use of social media as a learning resource makes it easier for students to find relevant references. These references not only enrich their understanding of lecture materials but also help them complete various academic tasks more effectively and efficiently. Social media as a learning resource has negative impacts, such as encouraging copy-paste habits and decreasing interest in critical thinking due to easy access to information. However, digital media also has positive impacts because it encourages students to be selective in sorting out valid and reliable information. Students also have the opportunity to develop and expand the information and references obtained. This process can help improve critical thinking skills through deeper analysis and understanding of the material. The findings of the study show the importance of optimally utilizing internet-based digital media as a learning resource. Students are also expected to be able to manage information by involving critical thinking skills in the learning process. The ability to process information by selecting accurate and reliable data from digital sources is very important. In addition, paraphrasing skills are also needed so that students gain meaningful learning experiences and can develop critical thinking skills.

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AUTHOR CONTRIBUTIONS AND DECLARATIONS

This research is a collaborative effort among all authors, each of whom actively contributed to different stages of the study. The first author was responsible for formulating the research problem, designing the study, analyzing the data, and writing the main manuscript focused on students' responses to social media and its impact on independent learning in physical education. The second author contributed to data collection, literature review, and manuscript editing to ensure scientific accuracy. The third author was involved in validating the research instruments, developing the theoretical framework, and supervising the entire research process. All authors declare that they have read, approved, and are accountable for the content of this manuscript and confirm that there is no conflict of interest influencing the outcomes of this study.

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