

## The influence of cyber culture on students' digital literacy

by

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<p><b>Article History</b> Submitted: 02-05-2024 Revised: 03-07-2024 Accepted: 25-07-2024</p> <p><b>Keywords:</b> <i>Cyberculture, Digital Literacy, Social Studies Learning</i></p>	<p><b>Abstract</b> The study aims to analyze the influence of cyberculture on digital literacy skills in the context of social studies learning. Adopting a quantitative research design, the study employs a correlational approach and utilizes a variety of data collection methods, including observation, document review, and questionnaires. The research was conducted at SMP Negeri 50 Bandung, where a total of 1,169 students in grades seven, eight, and nine were surveyed. The sample was determined using the proportional stratified random sampling technique, resulting in a sample size of 300 students. The data analysis technique employed is a simple linear regression analysis test. The findings of the study indicated that cyberculture in social studies learning had a significant effect on the literacy skills of students at SMP Negeri 50 Bandung, with a variable correlation level in the medium category.</p>
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### Introduction

Information and communication technology continues to develop by always presenting various innovations to meet information needs through the development of the internet. The existence of the internet helps someone get information quickly just by pressing the search button. Based on the results of the Internet Service Providers Association (APJII) survey in 2023, active Internet users in Indonesia will reach 215 million people (APJII, 2023). The rise of digital media and the internet has created a new phenomenon in society known as cyberculture. The term "cyberculture" refers to the results of human thought and reflection about the representations, ideas, and images presented in digital media. The concept of cyberculture is evolving in parallel with the development of virtual life, commonly referred to as "cyberspace."

This phenomenon has had a profound impact on human life. The term "cyberspace" is used to describe the existence of various virtual communities, online games, personal blogs (websites), chat, online shopping applications, internet networks, virtual worlds, and other digital platforms. The Internet plays a pivotal role in the evolution of cyberculture. Its advent has facilitated profound changes in the media landscape, including the advent of user-generated content, the democratization of information, and the emergence of a new, structured culture (Bell, 2006). In addition, cyberculture is defined as a type of culture that encompasses various structures, including attitudes, behaviors, and beliefs, which evolve due to the influence of information and communication technology (Koçak, 2021). According to data obtained from Similarweb, the most prevalent cyberculture activity among individuals in Indonesia between July and September 2023 is searching on Google, with a total traffic share of 14.07% (Similarweb, 2023).

The existence of cyberculture presents a challenge for educators because the information available is not necessarily valid. Consequently, students must possess the literacy skills necessary to evaluate the information they receive. Furthermore, the phenomenon of cyberculture can also give rise to the phenomenon of cyberbullying, as it provides students with an extensive array of digital media through which they can access and engage in various activities (Hollá, 2016; Kodrat, 2017). In light of these challenges, teachers, schools, and parents must collaborate to provide students with guidance and support in anticipating the potential spread of hoax news and hate speech within the student environment. It is of great consequence that assistance be provided, particularly in light of the findings of the 2023 Internet Service Providers Association (APJII) survey. This survey revealed that 98.2% of internet users in the 13–18 age group utilize the internet (APJII, 2023). This age range suggests that internet users are teenagers who are still students at the junior high school level. The assistance provided must emphasize the ethical aspects of using digital media and digital literacy skills. Digital literacy skills enable students to process information logically and critically, thereby enhancing the accuracy of the information they consume.

The concept of digital literacy was first introduced by Paul Gilster in his 1997 publication, *Digital Literacy*. In 1997, Gilster posited that digital literacy is the capacity to comprehend and utilize information that is pervasively disseminated through computers. In their 2006 publication, Martin and Grudziecki define digital literacy as

the ability to acquire and utilize knowledge, techniques, attitudes, and personal qualities in the planning, implementation, and evaluation of virtual situations in real life. Digital literacy is inextricably linked to digital ethics, which encompasses the secure and appropriate utilization of digital media and an attitude of responsibility in the critical reading and assessment of information. Consequently, educational institutions, such as schools, must provide students with the knowledge and skills to access information on digital media and the Internet appropriately and civilly (Komalasari & Anggraini, 2020; Puspitasari, 2023).

The phenomenon of cyberculture is also evident in SMP Negeri 50 Bandung, where digitalization has been implemented in every learning process since 2020. The application of digitalization in the learning process is by the vision of SMP Negeri 50 Bandung, which is to adapt to the times and technology. This is pursued by creating innovative, creative, interesting, fun, and characterful learning that is adaptive to the times and technology. The results demonstrated that digitalization in the learning process at SMP Negeri 50 Bandung can be observed in the manner in which teachers present material through interactive PowerPoint presentations, assessment processes with CBT systems, and the development of learning resources through internet searches. Teachers at SMP Negeri 50 Bandung frequently direct students to utilize the Internet as a learning resource, thereby providing students with a diverse array of learning materials that are not typically found in textbooks.

The use of digital media is posited to facilitate the development of students' autonomy in identifying and processing reading material relevant to their learning objectives. This enables social studies subjects to utilize the internet as a source of information, including contemporary social issues that students will later need to study and solve problems with. The phenomenon of cyberculture in the social studies learning process is consistent with the connectivism learning theory, which posits that the connection between technology and knowledge is a primary component of learning activities (Kontesa, D.A., & Fauziati, 2022). According to the theory of connectivity, learning that has been adapted to accommodate digitalization must be meticulously planned to ensure the successful development of students' digital literacy.

Based on the preceding problems, researchers proposed the title "The Influence of Cyberculture on Students' Digital Literacy Skills." The study's general formulation of the problem is how cyberculture in social studies learning affects the digital literacy skills of

students. The objective of this study is to analyze the influence of cyberculture in social studies learning on students' digital literacy skills. Therefore, this study aims to analyze the influence of cyberculture on students' digital literacy skills in social studies learning. The usefulness of this research is in the form of new insights and knowledge in social studies, especially regarding the phenomenon of cyberculture in social studies learning, and as a reference for applying digitalization in the learning process while assisting the cyberculture phenomenon.

## **Method**

This study used a quantitative approach with a correlational method. The correlational method is used to determine the relationship between cyberculture phenomena in social studies learning and students' digital literacy skills and the influence of both. This research was conducted at SMP Negeri 50 Bandung, located on Jalan Pasir Jati No. 12, Cigending Village, Ujung Berung District, Bandung City. The population used was seventh-, eighth-, and ninth-grade students at SMP Negeri 50 Bandung, which amounted to 1,169 students. SMP Negeri 50 Bandung is one of the most popular schools in the eastern part of Bandung City. It has implemented a digitalization system in the learning process, which includes searching activities, the delivery of material using interactive powerpoints, and the use of smartphones in assessment activities.

However, the digital literacy skills of students at SMP Negeri 50 Bandung are still uneven. Seventh graders have not been permitted to utilize digital media, particularly in the context of searching. This is due to the perception that seventh graders lack the requisite skills to operate digital media and to select and sort the information they receive. In contrast, eighth and ninth graders are considered to be adept at using digital media, and thus teachers permit students to search the internet as much as possible. While the determination of the sample uses the proportional stratified random sampling technique, the researcher will take random samples according to the proportions in grades seventh, eighth, and ninth so that the number of samples is as many as 300 students.

Data collection techniques in this study were carried out by observation, document study, and questionnaire distribution. The questionnaire used by researchers used the Survey of Study Habits and Attitudes (SSHA) scale with five alternative answers, namely always, often, sometimes, rarely and never to measure how respondents' habits use cyber

in social studies learning and how respondents' digital literacy skills are seen from daily activities. The indicators of cyberculture variables in social studies learning are sender freedom, network connections, and cultural reconfiguration. The variable indicators of digital literacy skills consist of information literacy, media literacy, and ICT literacy. All variable indicators are arranged in 28 statement items which are then disseminated online to students via Google Form.

The researcher formulated a hypothesis, namely "there is an influence of cyberculture on the digital literacy skill of students." To prove the truth of this hypothesis, researchers used data analysis techniques in the form of simple linear regression analysis tests with the help of IBM SPSS Statistic 26 software.

### Result and Discussion

Firstly, researchers will explain the results of data processing obtained from the distribution of questionnaires to 300 respondents consisting of grade seventh, eighth, and ninth students at SMP Negeri 50 Bandung. The significance level of the data used is 5%. Pearson correlation test was done to measure the strength of the linear relationship between two variables where in this study the variables consist of cyberculture variables and digital literacy skills variables. The results of the Pearson correlation test are presented in the following table:

Table 1  
*Result of Pearson Correlation Test*

	Cyberculture	Digital Literacy Skill
Cyber Culture in Social Studies Learning	Pearson Correlation	1
	Sig. (2-tailed)	.518**
	N	300
Literacy Digital Skill	Pearson Correlation	.518**
	Sig. (2-tailed)	.000
	N	300

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Based on Table 1 regarding the results of the correlation test, a significance value of 0.000 was obtained, which means that cyberculture variables and digital literacy skills are declared to have a positive correlation with a Pearson correlation value of 0.518. The determination of the level of variable tightness according to Sugiyono (2018).

By the Pearson value classification, the correlation from Sugiyono (2018) above, it can be concluded that the level of correlation between cyberculture variables and digital literacy skills is included in the moderate positive category. The hypothesis in this study

is as follows: 1) Ho: There is no influence of Cyberculture on the Digital Literacy Skills of students at SMP Negeri 50 Bandung; dan 2) Ha: There is an influence of Cyberculture on the Digital Literacy Skills of students at SMP Negeri 50 Bandung.

Table 3  
 Result of Hypothesis Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	20.672	2.515		8.219	.000
Cyberculture	.696	.067	.518	10.457	.000

Based on Table 3 regarding the results of the calculation of the hypothesis test above, an unstandardized coefficient value of 20,672 and a significance value of 0,000 were obtained. Referring to the hypothesis that has been formulated, a significance value of 0.000 is obtained which means that the value is smaller than 0.05. So Ho was rejected and Ha was accepted so that it can be concluded that there is an influence between cyberculture variables on digital literacy skill variables. Table 3 also obtained a calculated value of 10,457. Furthermore, to determine the value of the  $t_{table}$ , the following calculations are needed, and the resulting value of 1.970423.

Based on the predetermined count and  $t_{table}$  values, it is obtained that the count value is 10.457 and the table is 1.970423 which values show the equation of count >  $t_{table}$ . Thus, there is a significant influence between cyberculture on students' digital literacy skills. A simple linear regression analysis was done and the resulting equation in this study is  $Y = 20.672 + 0.268X$ .

Table 4  
 Result of Simple Linear Regression Analysis Test

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.518	.268	.266	7.001

a. Predictors: (Constant), Cyberculture  
 b. Dependent Variable: Digital Literacy Skill

In line with the statement above, it can be concluded that if variable X (cyberculture) increases by one unit, then variable Y (digital literacy skill) can be predicted to increase by 0.268 (26.8%) at a constant 20.672. Furthermore, to determine the magnitude of the influence of variable X (cyberculture) on variable Y (digital literacy skill) can be seen from the value of r square contained in Table 4. From the table, an r

square value of 0.268 was obtained, which means that the influence of cyberculture variables on students' digital literacy skills variables was 26.8%, while 73.2% of digital literacy skills were influenced by other factors that were not studied in this study.

The existence of cyberculture in learning acts as a driver to promote the active role of students during the learning process to actualize, transform, and contribute to the knowledge presented in cyberspace. Based on research (Kodrat, 2017) states that the use of technology as part of the progress of civilization and good for learners needs to be reconsidered because technology is only an object that needs to be mastered by humans to be useful in life. Therefore, cyberculture in learning emphasizes how learners combine knowledge from various fields into online learning material products. In addition, learners and teachers need to understand wisely how to use technology in the learning process. Teachers are responsible for instilling cyber ethics and training information validation skills to learners during the use of digital media in the classroom. The benefits of cyberculture in education include (1) ease for students in accessing the information on any topic so that learning becomes more interesting and fun, (2) learning is more interactive because with the use of technology, students can explore and discover new things, (3) the use of technology can hone the ability of students to create, solve problems, analyze, (4) technology also facilitates learners in sharing information with other learners through collaborative projects using tools such as Google Docs, and (5) helps teachers in innovating learning, the use of technology in education that has been integrated into the curriculum encourages teachers to use technology in the learning process. (Junqueira, 2015; Rueda Ortiz, R., & Uribe Zapata, 2021).

Cyberculture changes the image of education that originally used conventional methods to be more interactive by applying technological collaboration to create more meaningful learning. Therefore, social studies subjects cannot be separated from the development of digitalization so social studies also feel the impact of cyberculture. Cyberculture requires teachers and students to be more responsive and active in finding learning resources and teaching materials. In addition, cyberculture also provides changes to the learning system from the teacher as director to the teacher as facilitator, guide, and consultant (Simanjuntak, 2019). Cyberculture in social studies learning is described in the form of digitalization in the learning process such as the use of interactive power points, video viewing, the use of Google Classroom, and the use of Google Search as a learning resource.

Cyberculture experienced by learners is by the first indicator, namely freedom of the sender, which means that individuals can express themselves and share information without constraints through the help of the internet and digital technology (Lemos, 2006). In the context of learning, freedom of the sender means that learners can express themselves in social studies learning through the use of digital media. Kodrat (2017) revealed that the use of technology as part of the progress of civilization and good for

learners needs to be reconsidered because technology is only an object that needs to be mastered by humans to be useful in life. Therefore, cyberculture in learning emphasizes how learners can combine knowledge from various fields into learning materials. Teachers are responsible for instilling digital literacy skills so that learners can validate information and understand cyber ethics.

Cyberculture provides many significant benefits in people's lives. It changes the way people live, work, and communicate and creates a unique cultural structure. Cyberculture can also change education and the way people learn and access information (Aurigi, A. & Graham, 1998). Cyberculture in social studies learning at SMP Negeri 50 Bandung shows the same thing. It can be seen from the proposed statement related to network connection indicators. Lemos (2006) states that network connection means that a person can carry out activities on the internet network, making it easier for people to connect, share information, and collaborate on a project. Referring to the 21st-century learning system, network connection activities are also shown through learning that is designed so that students seek information from various sources. Students can search for information through activities including literature studies, document studies, fields, interviews, observations, questionnaires, and other information collection methods. Social studies learning directs students to plan and develop investigations through the process of processing and analyzing data in the form of verification, interpretation, and triangulation to produce a complete conclusion that represents the problem that is happening. These conclusions can be expressed by students in oral, written, digital, and non-digital media (Kemendikbud, 2022).

The next indicator of cyberculture is cultural reconfiguration. According to Lemos (2006), cultural reconfiguration is a form of change in which digital technology changes its users in understanding and interacting with culture. The more dependent on digital tools and media, the greater the cultural experiences and expressions shaped by technology. In simple terms, cultural reconfiguration is described as symbolic of ownership and authorship. In this research, cultural reconfiguration is illustrated as the use and management of digital media accounts. Generally, digital media can be accessed by one Google account, with this Google account a person can use digital media without having to create a new account so it is easier but it is quite dangerous because if the Google account used is exposed to hackers, all digital media that use the account are also affected.

Cyberculture in social studies learning shows that currently, education in Indonesia has experienced a shift in learning as a result of the development of the 21st century. The 21st century is a time when all efforts in meeting needs are based on science (Mukhadis, 2013). To meet the needs of information and materials, social studies subjects utilize technological developments. Cyberculture does not only occur in the community but also occurs in the school environment. Cyberculture in the school environment not only provides convenience in finding information but also provides



knowledge and skills to students in using digital media. Students at SMP Negeri 50 Bandung experience similar benefits. Through the utilization of cyberculture in learning, learners become skilled in using digital media such as being able to operate a computer, laptop, or tablet and fully understand the features in it. In addition, students have additional skills in the form of editing skills in making posters, videos, memes, and PowerPoint.

The skills possessed by students at SMP Negeri 50 Bandung show one of the 21st-century skills, namely digital literacy. The concept of digital literacy was first developed by Gilster (1997) with the definition as the ability to understand and use information from various sources presented in digital form such as through computers, smartphones, and tablets. In addition, digital literacy can also be said to be literacy that involves the acquisition and use of knowledge, techniques, attitudes, and personal qualities in planning, implementing, and evaluating virtual situations in real life. Digital literacy is also a life skill in socializing, the ability to learn, have an attitude, and think critically, creatively, and innovatively as a digital competency (Martin, A., & Grudziecki, 2006; Walton, 2016).

Based on some of these definitions, it can be concluded that digital literacy is the ability to operate digital media and the ability to understand various information carefully which is then integrated into real life to improve knowledge and self quality. Digital literacy is one of the six basic literacy forms that need to be applied in learning. In the learning process, digital literacy can be formed through e-learning-based learning (Pratama et al., 2019; Putri, N et al., 2014). Not only that, to form digital literacy skills in schools, there needs to be a collaboration between students, teachers, and schools. Each school needs to detect its readiness in the implementation, starting from the availability of the internet network. To produce digital literacy skills in students, cyberculture needs to be utilized in massive learning activities in all subjects.

Digital literacy in education is very helpful for students to develop their abilities to compete and collaborate in global competition (Silalahi et al., 2022). But in fact, cultivating digital literacy skills is not as easy as imagined. The diversity of digital media causes information to spread freely, resulting in information confusion. Therefore, students need assistance to select and sort information according to their age level. Kementerian Komunikasi dan Informasi on Indonesia (Kominfo) in 2021 began to intensify digital literacy in all elements of society. The activities include socialization on the use of digital media, digital literacy ethics, negative influences in digital literacy, and how to overcome them. In the world of education, digitally literate learners are learners who can create, collaborate, communicate, and achieve based on ethics. The application of digital literacy to learners is done through a conceptual approach that focuses on aspects of cognitive and socio-emotional development and an operational approach that focuses on the ability to use digital media (Muhaemin, 2017; A. R. Setiawan, 2020).

Wijonarko (2020) argues that digital literacy in education can be said to be effective if it pays attention to basic principles including (1) understanding in the form of the ability to extract ideas from digital media both implicitly and explicitly, (2) dependence in the form of attachment between each other potentially and ideally as a comparison material and measuring the accuracy of information, (3) social factors as personal identity or information distribution, providing information opportunities, selecting information targets and reshaping information through self-reminders, and (4) curation in the form of finding, collecting and organizing information that is useful for students to have competitiveness. This curation relates to learners' skills in understanding the value and meaning of information. Furthermore, Komalasari & Anggraini (2020) revealed that schools as formal educational institutions need to provide students with an understanding of how to access information on digital media or the internet and communicate it in a civilized manner. Learners need to be equipped with an understanding of (1) digital literacy and information, (2) internet security, (3) privacy and security concepts, (4) cyberbullying, (5) cyber ethics, (6) copyright, and (7) digital footprints.

In this study, digital literacy skills in the first indicator, namely information literacy, explain that information literacy includes the ability to access information effectively and efficiently and evaluate information competently. Then the second indicator is media literacy which includes the ability to access, analyze, evaluate, and create messages or something on various platforms (Trilling & Fadel, 2009). In this study, media literacy indicators are integrated into the ability to operate and understand information and have editing skills. The third indicator of digital literacy is ICT literacy. Trilling & Fadel (2009) revealed that ICT literacy includes the ability to analyze media and create media. In this study, ICT literacy is integrated into basic ethics in using digital media and interpreting media in everyday life.

Cyberculture in social studies learning has a positive effect on students' digital literacy skills so the more accustomed students experience cyberculture, especially in social studies learning, the more digital literacy skills they have, so students will be more capable of using digital media amid current digitalization developments. Based on the test results that have been done, it is found that cyberculture in social studies learning has a positive effect on digital literacy skills as evidenced by the test results of the regression coefficient value of 0.268. The conclusion that cyber culture in social studies learning has a positive effect on digital literacy skills is based on the regression equation  $Y = 20.672 + 0.268X$ . The significance level in this study is  $0.000 < 0.05$ , so it can be concluded that  $H_0$  is rejected and  $H_a$  is accepted, which means that the digital literacy skills of students at SMP Negeri 50 Bandung are influenced by cyberculture in social studies learning.

This is following research from Pratama et al. (2019) entitled "Analysis of Student Digital Literacy through the Application of Schoology-based E-Learning" revealed that

to improve students' digital literacy skills, e-learning-based learning is needed. In the study, the e-learning used was Schoology so it resulted that the students' digital literacy skills increased by 12.5% but these results showed that the students' digital literacy skills were still relatively low. Therefore, it is necessary to use e-learning thoroughly in the learning process, especially in social studies learning. SMP Negeri 50 Bandung itself has not used e-learning thoroughly, e-learning used in social studies learning is still a platform in the form of Edmodo, Google Classroom, and E-Examination. However, cyberculture in social studies learning at SMP Negeri 50 Bandung does not only include the use of e-learning alone but on the use of interactive PowerPoint, the use of Google search in finding material, delivery of material through video, and so forth. So based on the results of the study obtained the amount of influence of cyberculture in social studies learning on the digital literacy skills of students in SMP Negeri 50 Bandung amounted to 26.8%.

The level of influence of cyberculture on digital literacy skills is influenced by the conditions at SMP Negeri 50 Bandung, where when entering December 2023 the school sets a rule limiting the use of cellphones in the school environment. This is a form of response to SMP Negeri 50 Bandung related to the circulation of videos about the number of students who broadcast live using social media while learning is taking place. Therefore, SMP Negeri 50 Bandung takes preventive steps to anticipate the incident in the SMP Negeri 50 Bandung environment even though it will have an impact on the digital literacy skills of students. In addition, there are certain restrictions applied by teachers in each class. Grade 7 students have not been given the freedom to use digital media, especially searching because the teacher assesses that grade 7 students are still lacking in operating digital media and have not been able to select and sort the information received, unlike grades 8 and 9 who are considered wise in using digital media so that teachers give students the freedom to search for information via the internet as much as possible. Muhaemin (2017) states that in the world of education, digitally literate learners are learners who can create, collaborate, communicate, and achieve based on ethics. The application of digital literacy to students is carried out through a conceptual approach that focuses on aspects of cognitive and socio-emotional development and an operational approach to the ability to use digital media (Setiawan, 2017).

Not only that, based on the research of Ginanjar et al (2019), it is found that the use of technology in supporting digital literacy skills needs to be supported by school facilities and infrastructure. Then the school also needs to develop a Standard Operating Procedure (SOP) which states that the use of digital media must have permission from the homeroom teacher or subject teacher who is in the classroom. Based on the results of observations, researchers found that the use of digital media by students at SMP Negeri 50 Bandung is very concerning. Cellphones brought to school must be collected in a container box during learning from the first hour to the last hour and will be

distributed to each student if there is a lesson that requires the use of a phone. This aims to discipline students not to use cell phones during the learning process so that students can focus on learning without any distractions. To avoid the negative influence of cyberculture, the use of digital media in the school environment must be properly supervised. To the vision and mission of SMP Negeri 50 Bandung, which is committed to being adaptive to the times and technology, the technology-based learning system and rules regarding the use of cell phones in the classroom are appropriate to overcome this.

## **Conclusion**

The correlation between cyberculture and students' digital literacy skills at SMP Negeri 50 Bandung is in the medium category. The study found a significant correlation between cyberculture and students' digital literacy skills, with an R square value of 26.8%. The integration of cyberculture into social studies learning at SMP Negeri 50 Bandung encompasses not only the utilization of e-learning but also the incorporation of interactive PowerPoint presentations, the use of Google search to identify pertinent material, the delivery of material through videos, and other similar techniques. To cultivate digital literacy skills in students, cyberculture must be integrated into extensive learning activities across all subjects.

The integration of cyberculture into the educational setting enables students to develop proficiency in the use of digital media, including the ability to operate a computer, laptop, or tablet and a comprehensive understanding of the various features associated with these devices. In addition, students develop additional skills in the form of editing abilities, which are particularly useful for students in the context of global competitions. The objective of the research is to increase awareness of the necessity for students to possess digital literacy skills.

It is recommended that future researchers consider the addition of further variables to ascertain the impact of other factors on students' digital literacy skills. For students to develop digital literacy skills through the use of cyberculture in schools, it is essential that teachers and parents collaborate and that the necessary infrastructure is in place, including the availability of internet networks.

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