The Importance of Digital Literacy in Enhancing the Quality of Education and Social Harmony

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ABSTRACT: Digital literacy has become a crucial aspect in the development of modern education in the digital era. Students' ability to access, understand, and use digital technology directly contributes to both the quality of education and social harmony. This research aims to understand the extent to which digital literacy has been adopted by students in schools and how these skills impact their educational quality and social interactions. This article explores the importance of digital literacy in improving education quality and fostering social cohesion through a survey conducted among students at SMA Negeri 3 Sumedang. The research aims to examine the relationship between digital literacy and its impact on education quality and social harmony. Data were collected from 272 students as respondents. The findings indicate that increasing digital literacy has a positive correlation with improved education quality and the ability to engage in harmonious social interactions. The results of this research provide a foundation for developing educational programs that focus on enhancing digital skills and security awareness to prepare students for the challenges of the digital era.

KEYWORDS: Digital Literacy, Digital Technology, Social Harmony, Students, Quality Education

I. INTRODUCTION

In the era of the 4.0 Industrial Revolution and rapid digital transformation, digital literacy has become an essential competency that cannot be overlooked, particularly in the context of education and society. Digital literacy encompasses an individual's ability to access, understand, and use information through various digital platforms. This is important not only for supporting the learning process in schools but also for fostering more harmonious social interactions in society.

Digital literacy refers to the ability of individuals to use digital technology, communication, and media to access, manage, integrate, evaluate, and create information effectively, ethically, and safely. It involves the use of digital devices such as computers, smartphones, the internet, and social media, as well as the ability to critically and creatively process information. UNESCO (2018) defines digital literacy as a skill that is not limited to technical understanding but also includes the ability to think critically about the available digital information.

According to Gilster (1997), who first popularized this concept, digital literacy is the ability to understand and use information in various formats delivered through computers. In the modern context, digital literacy also involves the ability to interact effectively in online environments, understand the social and ethical implications of digital actions, and maintain cybersecurity. In the educational context, this ability plays a crucial role in enhancing the quality of teaching and learning processes, aligning with the paradigm shift in education in the digital era.

Recent research by Livingstone (2020) shows that strong digital literacy among students enables them to be more adept at utilizing digital resources for learning, ultimately contributing to better academic outcomes. Additionally, digital literacy contributes to the development of critical and collaborative thinking skills, which are essential for facing future challenges in the workforce and global society.

Besides its contribution to education, digital literacy also plays a vital role in promoting social harmony amid the overwhelming flow of information on social media and digital platforms. The presence of digital technology has changed the way individuals interact with each other, with social media becoming a new public space that often creates challenges related to ethics and social norms. Research by Boyd and Ellison (2007) shows that with the increasing use of social media, understanding digital ethics, such as how to interact positively and avoid conflicts in the online world, becomes crucial for maintaining social harmony.

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However, not all students in Indonesia possess adequate levels of digital literacy, especially in regions where access to technology is still limited. A study by Zainal (2021) in several secondary schools in Indonesia indicates that although the use of digital technology among students is increasing, there remains a significant gap in digital literacy. This is due to various factors, including limited infrastructure, low teacher skills in using digital technology, and a lack of awareness of the importance of digital literacy in building healthy social relationships.

On the other hand, a survey conducted by the Ministry of Education and Culture of Indonesia (2022) found that students with better digital literacy tend to have better communication skills, both inside and outside the school environment. They are more capable of avoiding digital conflicts, such as cyberbullying, and better understand the importance of ethics in online communication, which ultimately helps create a more harmonious social environment.

This research offers novelty by holistically examining how digital literacy affects not only academic aspects but also the social aspects of students, particularly in shaping social harmony in the digital era. The focus on the relationship between digital literacy and social interaction among high school students is an approach that has not been extensively researched in Indonesia.

This study has several main objectives, including: 1) to assess the level of digital literacy among students at SMA Negeri 3 Sumedang; 2) to analyze the relationship between digital literacy and the quality of education for students; 3) to identify the impact of digital literacy on social harmony among students; and 4) to provide recommendations for enhancing digital literacy to support quality education and social harmony.

Considering this background, the research focuses on the role of digital literacy in improving the quality of education and maintaining social harmony among students at SMA Negeri 3 Sumedang. The choice of SMA Negeri 3 Sumedang as the research location is based on the high use of digital technology in this school, as well as the school's interest in integrating digital technology into their learning curriculum.

II. RESEARCH METHODS

A. Type of Research

The type of research used is descriptive quantitative research. This research aims to explain and analyze the relationship between digital literacy, the quality of education, and social harmony among students. Quantitative research will produce numerical data that can be statistically analyzed, allowing researchers to describe and understand the phenomena under study more clearly. In this context, a survey will be used to collect information from 272 respondents representing the student population.

B. Research Approach

The approach used in this research is a cross-sectional approach. This approach allows for data collection at a specific point in time, enabling the researcher to explore the relationships between digital literacy, the quality of education, and social harmony within the student population. With this approach, the researcher can obtain a more comprehensive picture of students' perceptions of digital literacy and its impact on the quality of education and social interactions.

C. Data Collection Techniques

The data collection technique used is a survey using a questionnaire. The questionnaire will be designed with questions covering:

a) Digital Literacy: Questions that measure students' abilities to use digital technology, search for information online, and communicate on digital platforms. Example questions:
   i.   How often do you use the internet to search for learning information?
   ii. Do you feel skilled enough in using digital learning applications?

b) Quality of Education: Questions that evaluate students' learning experiences, including their engagement in the learning process, access to digital learning resources, and the effectiveness of teaching. Example questions:
   i.   How do you assess the quality of teaching you receive at school?
   ii. How important is the use of digital media in your learning?

c) Social Harmony: Questions that assess students' social interactions both inside and outside the school environment, as well as the influence of digital literacy on friendships. Example questions:
   i.   How good are your relationships with your friends at school?
   ii. Does social media help you interact better with your friends?

The questionnaire will be distributed online and also in paper form, depending on the conditions and preferences of the school, to reach all 272 respondents.

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D. Unit of Analysis / Research Subjects

The unit of analysis in this research is the students of SMA Negeri 3 Sumedang. The research will involve 272 students from various classes and majors to ensure data diversity. Respondents will be selected using random sampling techniques to minimize bias and ensure a good representation of the population. With a sample size of 272 respondents, this research is expected to provide valid and reliable results.

E. Data Analysis Techniques

The data collected from the survey will be analyzed using descriptive and inferential statistical techniques. The following are the steps of data analysis:

a) Descriptive Statistics: Data will be summarized using descriptive statistics such as frequency, percentage, mean, and standard deviation. This will provide an overview of the levels of digital literacy, the quality of education, and social harmony among students. For example, the researcher can calculate the average score of digital literacy and describe the proportion of students who are satisfied with the quality of education.

b) Correlation Analysis: The researcher will conduct correlation analysis, such as the Pearson correlation coefficient, to evaluate the relationships between the variables of digital literacy, the quality of education, and social harmony. This analysis will help identify whether there are significant relationships between digital literacy and the quality of education as well as social harmony.

c) Linear Regression: If necessary, linear regression analysis may be conducted to evaluate the impact of digital literacy on the quality of education and social harmony. The regression model will provide information regarding the contribution of digital literacy in explaining the variations in the quality of education and social harmony.

d) Qualitative Analysis (if applicable): If there are open-ended questions in the questionnaire, the data will be analyzed using a thematic analysis approach to extract themes and patterns from the students' responses.

III. RESULT AND DISCUSSION

This research involves collecting data from respondents at schools to understand the extent to which digital literacy has been adopted by students and how these skills impact their educational quality and social interactions. Data from respondents provide a clear picture of technology usage, confidence levels in evaluating digital information, and awareness of the importance of digital security.

A large majority of respondents (98.5%) use the internet daily or several times a week to seek information, indicating a high frequency of internet use among them. Only a small number of respondents (1.5%) rarely or very rarely use it. These results show that the internet plays a central role in information access, and marketing, communication, and education strategies could be effective if digitally based, given the high level of internet usage among respondents.

Data shows that smartphones dominate as the primary device used to access the internet by most respondents (96.7%). This indicates the importance of optimizing mobile-based services, applications, and content to reach users more effectively. The use of computers/laptops and other devices is very minimal (a total of only 3%), demonstrating a shift in device usage behavior towards more mobile-friendly platforms. For digital marketing strategies, communication, and application development, the main focus should be directed towards mobile platforms, given the dominance of smartphone users.

Most respondents (82.7%) have a relatively high level of confidence in evaluating information on the internet, indicating an adequate level of digital literacy. However, there are some respondents who still feel uncertain (13.6%), highlighting the importance of developing information literacy skills among internet users. While only 3.7% feel very confident, this reflects that there is still room to enhance critical abilities and knowledge in evaluating information more accurately. Efforts to improve digital literacy through education and training could help boost the public's confidence and ability to verify the information they find online.

Most respondents (70.3%) often or very often use the internet to search for information to complete school tasks, reinforcing the critical role of the internet in today's academic activities. However, 29.4% of respondents only use the internet occasionally. This may indicate variability in students' learning methods or differences in internet accessibility. For educational institutions, these results could indicate the need to improve digital literacy and provide more affordable and credible online resources so that students can make optimal use of the internet for learning activities.

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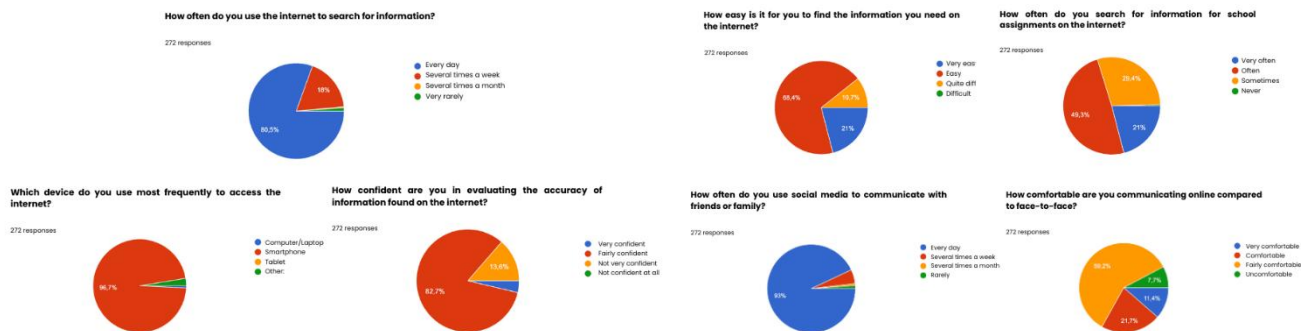

Figure 1. Respondents' Answers Related to Technology Usage, Information Competency, and Communication Competency

A large majority of respondents (89.4%) find it easy or very easy to find the information they need on the internet, showing that the internet is considered an effective and efficient tool for information searching. However, 10.7% of respondents find it difficult, emphasizing the importance of improving digital literacy and better information search skills. For educational platforms or information services, this highlights an opportunity to provide clearer guidance in navigating and filtering online information, thus enhancing the search experience for users who still find it challenging.

Most respondents (93%) use social media every day to communicate with friends or family, indicating the importance of social media in daily life as the main communication tool. However, a small portion of respondents (7.9%) use social media less frequently, either a few times a week, monthly, or very rarely. These results suggest that social media has become an integral part of social interaction, and for most people, it serves as the primary platform for efficient and easy communication.

Most respondents (92.3%) feel at least fairly comfortable communicating online, which shows that digital communication has been widely accepted in daily life. However, the majority are still in the "fairly comfortable" category (59.2%), indicating that they still value face-to-face communication and see online communication as a practical but not always ideal option. Meanwhile, 7.7% feel uncomfortable with online communication, highlighting a preference for direct interaction and potential difficulty in adapting to technology-based communication.
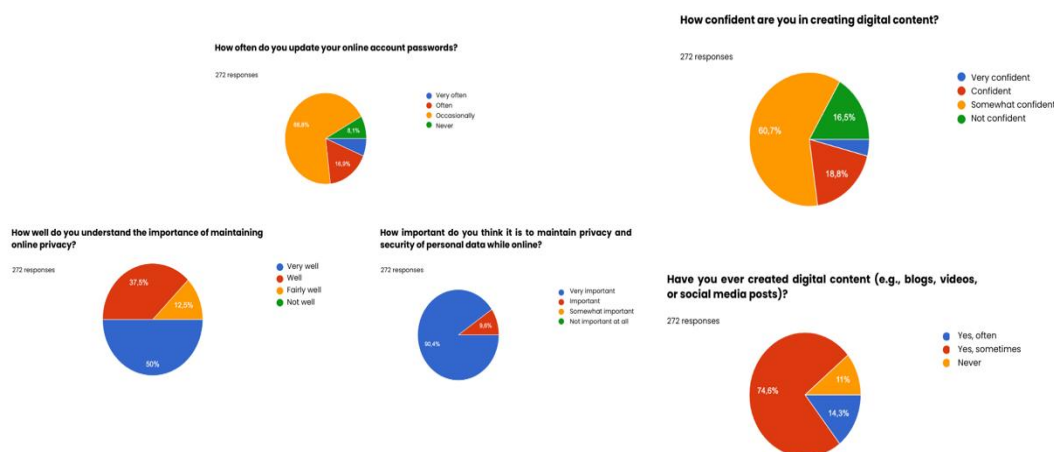

Figure 2. Respondents' Answers Related to Content Creation Competency and Security Competency

A large majority of respondents (88.9%) have experience creating digital content, either frequently or occasionally, showing that many people are now engaged in creative activities on digital platforms. This reflects the growth of digital culture in society, where content creation has become more accessible and increasingly popular. However, 11% of respondents have never created digital content, indicating there is room to increase participation in this activity, perhaps through education and training on how to create and share content effectively.

Most respondents (79.5%) feel at least somewhat confident in creating digital content, showing that many people feel capable of engaging in this creative activity. However, only 22.8% of respondents feel very confident or confident, indicating the potential to boost this confidence through training, support, and skill development. On the other hand, 16.5% of respondents who lack

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confidence show a need for more in-depth interventions, such as workshops or courses on digital content creation to build their confidence and skills.

Figure 3. Presentation and Discussion on Digital Security to the Students of SMA Negeri 3 Sumedang

Survey results show that 99% of respondents consider it important to maintain privacy and personal data security online. This indicates a very high level of awareness about the risks and challenges associated with internet use. This awareness can be used as a foundation to increase education and training related to best practices in data security, helping individuals to be more prepared to face challenges in the digital world. Additionally, this high level of concern also signals to online service providers to prioritize user security and privacy in their product and service development.

Survey results show that 87.5% of respondents feel they have a good or very good understanding of the importance of maintaining online privacy. This reflects a high level of awareness among respondents about privacy issues in the digital world. However, with 12.5% of respondents feeling they only have a fair understanding, there remains an opportunity to improve education about online privacy. Increasing understanding among all respondents can be achieved through education programs and training that focus on best practices for protecting privacy, raising awareness about risks, and strengthening skills in using tools and techniques to effectively protect personal data.
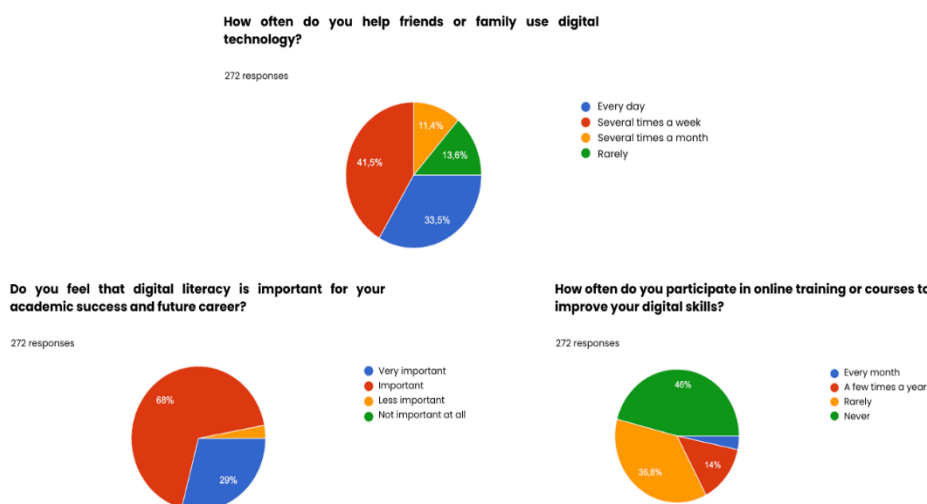

Figure 4. Respondents' Answers Related to Strengthening and Applying Digital Literacy

Survey results show that 75.1% of respondents update their passwords less frequently than recommended (i.e., "sometimes" or "never"). This indicates an urgent need to improve awareness and practices related to cybersecurity among respondents. Although most respondents have knowledge about the importance of updating passwords, the actual action of doing so regularly still needs to be improved. Education and training focused on cybersecurity best practices, such as how to choose strong passwords and set reminders to update passwords, can help improve these habits and ultimately reduce the risk of data breaches and hacking.

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Survey results show that 82.8% of respondents (rarely and never) are not actively participating in online training or courses to improve digital skills. This indicates a major challenge in building awareness and motivation for digital skill development among respondents. Education on the importance of digital skills and how online training can help in careers and daily life is greatly needed. Additionally, online course providers and educational institutions can play an active role in facilitating accessibility and attracting participants through relevant, engaging, and flexible programs.

Survey results show that 97% of respondents (very important and important) believe that digital literacy is an important element for academic and career success. This reflects a high level of awareness among respondents about the relevance of digital skills in the modern era. Although only 29% feel that digital literacy is "very important," the combination of both groups indicates an urgent need to enhance digital literacy among respondents. Therefore, educational institutions and organizations need to provide more support, resources, and training in digital literacy so respondents can fully utilize these skills in their future studies and careers.

Survey results show that 75% of respondents (daily and several times a week) actively help friends or family with the use of digital technology. This shows a strong level of collaboration and mutual support among respondents in facing technological challenges. High involvement in helping others can boost respondents' own confidence and digital skills, as well as strengthen social relationships. To further maximize this positive impact, educational or training programs in digital technology can help more individuals feel comfortable and competent, enabling them to provide more effective support to those around them.

The analysis results from the survey indicate a strong relationship between digital literacy, digital culture, and social harmony among students. In this context, digital literacy refers to an individual's ability to effectively use digital technology, while digital culture encompasses norms, values, and practices related to technology use in society.

IV. CONCLUSIONS

This research aimed to explore the relationship between digital literacy, educational quality, and social harmony among students, particularly focusing on how these aspects are influenced by the widespread use of digital technology. By surveying a representative sample of students, this study has provided valuable insights into their digital habits, perceptions of online interactions, and awareness of digital security. The findings reveal a nuanced understanding of how digital literacy not only facilitates educational engagement but also fosters social interactions and community cohesion.

A. The Role of Digital Literacy in Education

A significant finding of this research is the pivotal role digital literacy plays in students' educational experiences. With an overwhelming majority (98.5%) of respondents utilizing the internet daily for information gathering, it is evident that digital platforms have become essential for academic activities. This high frequency of internet use aligns with contemporary educational practices, where digital resources are increasingly integrated into curricula. Moreover, 70.3% of students reported using the internet frequently for school tasks, underscoring its importance in their learning processes.

However, while most respondents (82.7%) expressed confidence in evaluating online information, a substantial portion still felt uncertain about their skills. This indicates a crucial area for intervention. Educational institutions must prioritize enhancing digital literacy through tailored training programs that equip students with the necessary skills to critically assess information sources. This could involve workshops focusing on information evaluation, effective research strategies, and best practices for navigating online content.

B. The Impact of Digital Communication on Social Interactions

The research also highlights the profound impact of digital communication on students' social interactions. The data revealed that 93% of respondents engage in daily social media communication, demonstrating its integral role in their lives. While most students feel comfortable communicating online, there remains a preference for face-to-face interactions among a significant segment of the population. This ambivalence points to an evolving communication landscape where digital interactions complement, rather than replace, traditional socializing.

Furthermore, the substantial proportion of students (88.9%) involved in creating digital content reflects the democratization of content production in the digital age. This trend not only fosters creativity but also cultivates a sense of community among peers. Educational initiatives should therefore encourage students to participate in digital content creation actively, helping them gain confidence and skills in this area. Programs that facilitate collaborative content creation can enhance both digital literacy and social cohesion.

C. Awareness and Practices Regarding Digital Security

Another critical aspect of the findings pertains to digital security awareness among students. An impressive 99% of respondents recognized the importance of maintaining privacy and personal data security online. This level of awareness

is commendable and serves as a solid foundation for further education on digital security best practices. Despite this, the research revealed concerning gaps in actual practices, particularly regarding password management, with 75.1% of respondents updating their passwords less frequently than recommended.

These discrepancies highlight an urgent need for targeted educational interventions focused on cybersecurity. Institutions must provide comprehensive training on how to create strong passwords, the importance of regular updates, and the potential risks of neglecting digital security practices. By improving students' practical skills in cybersecurity, educational institutions can empower them to protect their online identities effectively.

D. The Intersection of Digital Literacy, Culture, and Social Harmony

A noteworthy conclusion drawn from the survey analysis is the strong interrelationship between digital literacy, digital culture, and social harmony. Digital literacy encompasses not only the ability to use technology effectively but also involves understanding the norms, values, and practices associated with digital engagement. As students navigate these digital landscapes, their interactions and the cultural contexts surrounding their use of technology play crucial roles in shaping their educational experiences and social relationships.

The finding that 97% of respondents view digital literacy as essential for academic and career success indicates a broader recognition of its significance beyond mere technology usage. This awareness underscores the need for educational institutions to cultivate a culture that prioritizes digital literacy as a fundamental component of student development. By fostering a digital culture that promotes collaborative learning, critical thinking, and ethical online behavior, schools can enhance both educational outcomes and social cohesion.

E. The Importance of Peer Support in Digital Skill Development

Moreover, the data indicating that 75% of respondents actively assist friends and family with digital technology usage highlights the community-oriented approach to digital literacy. This collaboration not only reinforces students' confidence in their skills but also strengthens social bonds within their networks. Educational programs should harness this community spirit by encouraging peer-led initiatives, where students can share knowledge and skills with one another.

Creating opportunities for students to collaborate on digital projects or provide tech support to peers can enhance their learning experience and foster a culture of mutual assistance. Such initiatives can further bolster social harmony by promoting teamwork and shared responsibility within the student community.

F. Recommendations for Future Research

While this study has shed light on the current state of digital literacy, educational quality, and social interactions among students, further research is warranted to explore the long-term implications of these findings. Future studies could examine how digital literacy evolves over time and its impact on academic performance and social dynamics. Additionally, investigating the role of educators in facilitating digital literacy and addressing disparities in access to technology could provide valuable insights into enhancing educational practices.

Furthermore, qualitative research could delve deeper into students' experiences with digital literacy, exploring their challenges and successes in navigating the digital landscape. Such research can inform the development of more nuanced educational programs that address the diverse needs of students.

In summary, this research highlights the critical importance of digital literacy in enhancing educational quality and fostering social harmony among students. The findings underscore the need for educational institutions to prioritize digital literacy training, promote cybersecurity awareness, and cultivate a supportive digital culture. By addressing these areas, schools can empower students to navigate the complexities of the digital world confidently, enhancing their academic and social outcomes in an increasingly interconnected society. As digital technologies continue to evolve, the ongoing development of digital literacy will be essential for preparing students for future challenges and opportunities.

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