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PRIMARY APPLICATIONS OF STUDENTS IN JAVA ISLAND

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Abstract

This research discusses the usage of applications commonly used by elementary school students in Java Island. The method employed is analytical descriptive survey research. The application of analytical descriptive survey method allows researchers to gain accurate understanding of user preferences among students. Data analysis provides comprehensive information on the distribution of application usage and differences in usage motivation among students at various levels of elementary school. The survey involved 546 students from various regions in West Java, Central Java, and East Java. The aim of this research is to deeply understand patterns of popular application usage, motivation for usage, and duration of usage by students. Survey results indicate variations in student activity patterns. WhatsApp is the most popular application with 189 students using it. TikTok, YouTube, Instagram, and Facebook are also used by students for entertainment, education, and communication purposes. WhatsApp emerges as the top priority application frequently used by students, indicating its significant role in their daily lives. It also suggests that the full potential of the smartphones they use, such as utilizing them for acquiring knowledge or work beyond the context of communication with close friends, has not been fully explored.

Introduction

Educational role in Indonesia holds a crucial role in shaping the nation's future. As an archipelagic country with cultural and geographical diversity, Indonesia faces a number of unique challenges in ensuring equal access to education across all regions (Putro et al., 2023; Simanjuntak et al., 2010). Significant efforts have been made by the government to improve the quality and relevance of the curriculum, expand educational infrastructure, and enhance teacher qualifications (Hasanah et al., 2023; Yani et al., 2023). However, there is still significant work to be done, especially in remote areas that often struggle to access education equivalent to other regions. In addition to geographical challenges, education in Indonesia is also confronted with the demands of globalization and technological advancement (Munir,

2018). Digital transformation has changed the way humans interact and acquire information. In an era where information technology plays a central role in everyday life, it is important for the education system to integrate technology into the learning process. This involves the use of digital tools, the development of technology skills, and innovative learning approaches that harness the potential of technology (N. Hidayat & Khotimah, 2019; Lestari & Kurnia, 2023).

The vision of the Indonesian government is to ensure that every citizen has equal access to quality education, regardless of background or geographic location. Programs such as the National Literacy Movement (Gerakan Literasi Nasional, GLN) and the School Literacy Movement (Gerakan Literasi Sekolah, GLS) have been pivotal in efforts to improve literacy rates nationwide (Destrianto, 2021; Widodo, 2020). Additionally, emphasis is placed on the development of 21st-century skills, including critical thinking, creativity, communication skills, and adaptability to change. With the spirit of unity and cooperation among the government, society, and education stakeholders, Indonesia has great potential to achieve remarkable progress in the field of education (A. Hidayat & Machali, 2012; Yunas, 2019). The future of education in Indonesia will not only reflect academic excellence but also equip the younger generation with the skills and knowledge they need to face global challenges in the 21st century.

Recognizing the immense potential and global challenges in the field of education, Indonesia has adopted technological innovations as a means to achieve remarkable progress (Ismiasih et al., 2022). With the spirit of unity and cooperation among the government, society, and education stakeholders, the country has leveraged digital transformation as a new gateway to access, deliver, and utilize educational information. Alongside the advancement of global technology, tools such as computers and mobile devices have expanded access to educational resources and enabled more interactive learning methods (Anih, 2016; Nurdyansyah, 2017). Amidst the rapid pace of global technological development, Indonesia is not exempt in adopting technological innovations to advance the education sector (Adha, 2020). Digital transformation has opened new doors to how we access, deliver, and utilize information. The utilization of technology tools, ranging from computers to mobile devices, has facilitated broader access to educational resources and enabled more interactive learning methods (Nurfadillah et al., 2021).

One significant milestone in the evolution of educational technology is the introduction of Learning Management Systems (LMS) and cloud-based applications. This enables students and educators to interact virtually, share materials, and collaborate on learning projects (Ambarwati et al., 2021). Additionally, online learning platforms provide access to various types of content, from text to video, and enable personalized teaching tailored to individual needs.

The advancement of technology also allows education to become more inclusive and accessible to all segments of society, regardless of geographical location or economic conditions (Ammar, 2023; Marlina & Rahmat, 2018). Government initiatives and

non-governmental organizations have focused on providing internet access in remote areas and providing technology training to educators and students. However, while technology brings great potential, it is important to ensure that the digital divide among communities is still being addressed. Efforts to ensure equal access and training must continue to be made to maximize the benefits of the technological revolution in education.

The development of technology has brought great potential in advancing education, including expanding access and facilitating inclusive learning (Aryanto et al., 2021). However, the digital divide remains a challenge that needs attention. Nevertheless, the COVID-19 pandemic has accelerated the adoption of technology in the education sector in Indonesia. The urgent need for online education and distance learning has spurred innovation in educational technology, such as sophisticated LMS platforms and collaborative applications. The COVID-19 pandemic has presented unprecedented challenges, but it has also forced us to seek creative and innovative solutions (Hs & Silitonga, 2021; Tumurun et al., 2016). In Indonesia, this pandemic has acted as a strong driver in accelerating technology adoption in various sectors, including education (Aidhi et al., 2023; Firmansyah et al., 2022). In response to physical restrictions and school closures, online education and distance learning have become urgent needs. Innovation in educational technology, such as sophisticated LMS platforms and collaborative applications, has become the foundation of contemporary education.

Students from various parts of the country, even from remote areas, now have greater access to online learning; the provision of online classes has enabled educators to continue interacting with their students, facilitating discussions and assigning tasks without the need for physical face-to-face interaction (N. A. S. N. Hidayat & Nisa, 2022). Furthermore, specially designed learning applications allow students to access course materials, complete exercises, and even participate in online exams. However, despite the significant potential offered by educational technology, there are also challenges that need to be addressed (Risnawati et al., 2022; Rosarina et al., 2016). Access gaps to devices and internet connectivity in some areas remain a serious issue. Therefore, the government and relevant organizations are working hard to ensure that all students have equal access to learning technology.

Looking ahead, it is important for Indonesia to continue leveraging this momentum and develop sustainable strategies to maximize the benefits of accelerated technology in education. The COVID-19 pandemic may have enforced changes, but wise policies and initiatives can ensure that we will inherit a more robust education system that is responsive to future demands (Muslihat et al., 2019; Ulya et al., 2016).

In developing sustainable strategies to maximize the benefits of accelerated technology in education, Indonesia has witnessed the development of WhatsApp applications as a highly effective communication tool in the education sector. Although the COVID-19 pandemic has necessitated changes, wise policies and initiatives can ensure that our education system inherits stronger capabilities and remains responsive to future demands. In this context, WhatsApp provides an instant platform that allows teachers and students to

interact directly and efficiently, through text messages, images, videos, voice calls, and video calls (Afnibar & Fajhriani, 2020; Ryan & Zulfah, 2021).

Alongside technological advancements, WhatsApp has emerged as a highly effective communication tool in the education realm (Maspur, 2022; Yusmita et al., 2018). This application provides an instant platform that enables teachers and students to interact directly and efficiently beyond the confines of the physical classroom. With the ability to send text messages, images, videos, and even make voice or video calls, WhatsApp facilitates deeper and more engaged communication between educators and learners. Teachers can use WhatsApp to send additional learning materials, provide clarification on assignments, or offer direct feedback on student work. Additionally, the platform allows educators to quickly and easily disseminate class announcements, schedules, or other important information. Meanwhile, students can ask questions or share ideas with their teachers outside of class hours, creating an open communication channel that facilitates more integrated learning.

In addition, WhatsApp also enables the formation of discussion groups among students for collaboration on projects or discussing specific topics, promoting peer-to-peer interaction that enriches the learning experience (Purnamayanti & Putri, 2020; Supriadi et al., 2022). Furthermore, WhatsApp can serve as a platform for the exchange of experiences and resources among teachers, allowing for broader collaboration and professional development. However, it is important to remember that the use of WhatsApp in an educational context also requires considerations of privacy and security. Clear policies are needed to ensure that communication is conducted with attention to ethics and data security standards.

By harnessing the advantages of WhatsApp technology, education in Indonesia can maximize communication potential between teachers and students, creating a more open, engaged, and connected learning environment. This article aims to investigate in-depth the use of WhatsApp as an educational tool among students in Java Island. Through data analysis and comprehensive literature review, we will explain how WhatsApp has shaped the way students learn, communicate, and collaborate in the educational context of Java Island. Additionally, this article will also discuss the implications of WhatsApp usage in the educational context and offer recommendations to maximize the benefits of this application. We hope that this study will provide valuable insights into the role of WhatsApp as a primary educational tool for students in Java Island, and understand whether this application meets expectations as the main platform for learners in this region.

Methods

This research aims to descriptively analyze the optimization of smartphone application usage among elementary school students in Java Island. The method used in this research is a survey research with an analytical descriptive approach (Abbott & Faris, 2000; Bansal & Kumar, 2020; Creswell & Creswell, 2018). In this study, an assessment will be conducted on the usage of smartphone applications by elementary school students, including the

frequency of usage, types of applications used, and their impacts on learning quality as well as physical and mental health. This research will provide a comprehensive overview of the trends in smartphone application usage and offer recommendations for parents, teachers, and policymakers to optimize smartphone usage among elementary school students.

This study involves a survey conducted among students in Java Island to gain a comprehensive understanding of smartphone usage and the applications they frequently use. The total number of respondents involved in this survey reached 546 students from various schools scattered across the regions of West Java, Central Java, and East Java. The process of selecting respondents was done randomly to ensure the representation of survey results. Data obtained through this survey includes information on the patterns of smartphone usage among students, the applications frequently used, and the duration they spend using smartphone applications. Additionally, the motivation for smartphone usage, such as for educational purposes, entertainment, or communication, is also a focus of this survey.

This survey also involves students from various levels of elementary school, ranging from grade 1 to grade 6. By involving the class variable, this research enables a more comprehensive understanding of the differences in smartphone usage and application preferences among students at different developmental phases and levels.

Result and Discussion

In the survey conducted among students in Java Island, the applications chosen as primary preferences by students are quite diverse. Based on the data depicted in the chart above, the most widely used application is WhatsApp, with a total of 189 respondents. Next, the TikTok application has a user count of 152 students, followed by YouTube with 139 students, Instagram with 54 students, and finally, Facebook with only 12 students. This indicates that messaging applications that facilitate communication, such as WhatsApp, are highly favored by students. Additionally, the popularity of social media platforms like TikTok, YouTube, and Instagram also reflects students' interest in creativity, seeking entertainment, as well as obtaining information and video content. Although Facebook has the lowest number of users in this survey, there is still a group of students who use the platform for specific purposes.

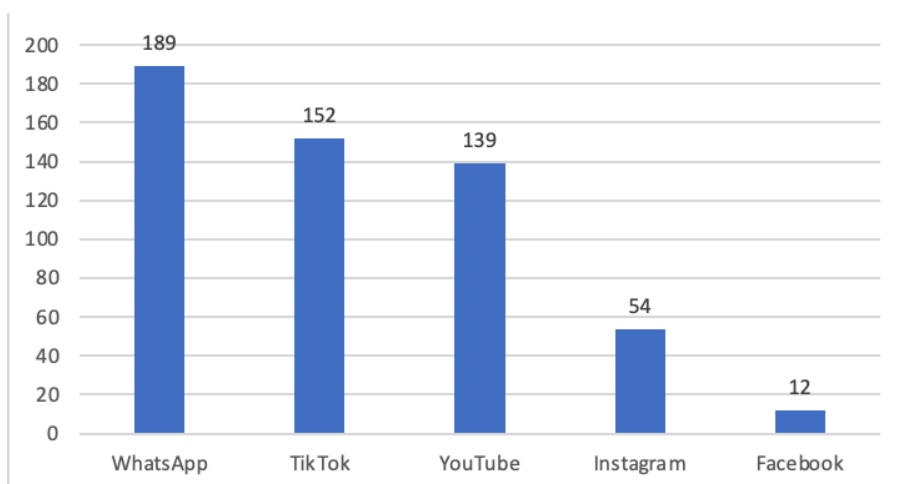


Figure 1. Primary Applications Graph of Elementary School Students

The variety of applications used by elementary school students in Java Island reflects the strong prevalence of smartphone usage in their daily lives. This data provides a deeper understanding of their preferences in using technology, which can contribute to educational planning and the authenticity of social interactions in early childhood education environments. As previously explained, the WhatsApp application has a very close affinity with students. This can be concluded from the number of student respondents, which reached 189, who use this application in the research context in Java Island. The use of WhatsApp by elementary school students reflects the significant impact this application has on their daily lives.

WhatsApp has become one of the most popular and widely used instant messaging applications worldwide. Its success stems from its efficient communication capabilities, user-friendly interface, and flexibility in various aspects, such as sending text messages, voice messages, video calls, and sharing documents. Therefore, it is not surprising that elementary school students in Java Island use WhatsApp to communicate with friends, family, and even teachers.

The involvement of students in using WhatsApp demonstrates this application's ability to become a vital platform in connecting people in their daily lives. The features provided can facilitate easier and more convenient interpersonal communication. However, it is also important to remember the significance of guiding and controlling students' usage of this application, ensuring that they use WhatsApp wisely and understand the ethics and security of online communication. In an educational context, students' use of WhatsApp can provide new opportunities in information dissemination, learning, and collaboration between students and teachers. With a deeper understanding of WhatsApp's popularity among students, appropriate actions are needed to optimize the potential of this application in supporting teaching and learning activities and fostering positive interactions among students and their educational environment.

The use of WhatsApp by elementary school students reflects changes in their communication behavior and trends. This application provides convenience and accessibility that allow students to connect with peers, family, or study groups. Through group chat features, students can participate in academic discussions, group assignments, or even virtual meetings. WhatsApp also provides opportunities for students to easily share images, videos, and files, providing them with a practical way to learn from each other and collaborate.

Applications equivalent to WhatsApp (AS) such as Skype (US), Discord (US), Telegram (Russia), WeChat (China), Line (Japan), Kakao Talk (Korea), MS Teams (US), and Gmeet (US) are surpassed in priority. Communication applications like these are already equipped with features such as video conferencing, web seminars (webinars), screen sharing, and channels. The use of WhatsApp as the highest-rated application by students indicates that students, as users, have not fully explored the maximum potential of smartphones, for example, for knowledge acquisition or work orientation beyond the context of communication with close friends alone. The communication they engage in tends to be limited to text communication with known close friends only. Although WhatsApp has been developed with social media platforms like Telegram's channels or video, the use of channels or video in learning is still not significant. This is slightly different from platforms like TikTok and YouTube, which are often used in the context of learning, for example, using video as a medium to explain a learning concept. Media platforms like YouTube, TikTok, IGTV, and Facebook videos have algorithms that allow servers to offer videos relevant to user preferences. If a user searches for tennis sports videos, for example, the server algorithm will offer a number of sports videos relevant to tennis. If a user searches for videos about technology, agriculture, entertainment, the server algorithm will offer videos relevant to that search.

It is advisable to consider the selection of standard communication platforms based on domestic applications with security considerations to prevent potential exploitation violations. If countries worldwide use their own domestic application platforms, then major countries like Indonesia actually have significant potential to develop applications such as communication, video, social media, mapping, operating systems, and so on. China has implemented local applications throughout its country, using Baidu or Harmony OS for nationwide use. Consequently, the potential for big data exploitation can be minimized.

WhatsApp also provides benefits for students in terms of social aspects and emotional support. They can chat with their friends, share experiences, and seek support when facing challenges or difficulties in their daily lives or at school. Through features like status and stories, students can express themselves and become part of their digital identity. However, it is important to remember that the use of WhatsApp by elementary school students also needs to be monitored and guided wisely. Parents, educators, and relevant stakeholders should collaborate to teach students digital ethics, privacy, and online security. Additionally, it is important to monitor the influence of this application on students' concentration,

productivity, and mental health if not regulated in balance. Overall, the results of this research indicate the importance of understanding the use of smartphones by elementary school students, especially in the context of using WhatsApp. This research provides a deeper insight into how students integrate technology into their daily lives and the impact of that technology on their education and social interactions.

Conclusion

Regarding the WhatsApp application, the results of this research indicate that this communication application has a very close relationship with elementary school students in Java Island. In the survey, 189 student respondents used the WhatsApp application, showing the significant impact this platform has on their daily lives. This indicates that instant messaging applications like WhatsApp are highly favored by students as the primary tool for communication. Students as users have not fully explored the full potential of smartphones, for example, in the context of learning or work. If smartphones were used for learning contexts, students might more frequently use videos (YouTube, TikTok, IG TV, FB video) to observe or watch learning contexts.

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