

The Leadership of School Leader in Managing the Use of Information Technology Media (Smartphones)

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Abstract: The development of information technology has had a significant impact on the field of education, including in the use of smartphones by students. On one hand, smartphones have the potential to serve as effective learning tools; on the other hand, they can cause distractions, addiction, and misuse. This study aims to examine the strategic role of school principals in managing smartphone use in schools. The research was conducted using a library research method by analyzing various up-to-date literature sources. The findings indicate that the leadership of school principals plays a crucial role in shaping policies, providing educational guidance, overseeing implementation, and collaborating with stakeholders. Transformational and democratic leadership styles are considered the most effective in fostering a responsible digital culture. School principals must also serve as role models and change agents in promoting digital literacy and media ethics within the school environment. In conclusion, the successful management of smartphone use heavily depends on the quality of leadership that is adaptive, participatory, and grounded in educational values.

Keywords: Educational leadership, information technology, smartphone, digital literacy

1. Introduction

The Industrial Revolution 4.0 has brought significant changes to various aspects of life, including the field of education. One of the most evident impacts of this transformation is the increasing use of information and communication technology (ICT) in the learning process, especially through smartphones. Amid these changes and advancements, the head of the educational institution plays a crucial role in managing the use of smartphones to ensure they remain productive and support the achievement of educational goals.

Various previous studies have discussed the role of school principals as educational leaders. Research by (Hanifah, 2022) emphasizes the importance of transformational leadership, which can motivate and empower teachers and students to optimally achieve educational goals. In addition, (Rusmana et al., 2023) stated that effective educational leadership reflects the strategic ability of school principals to create a productive and ethical learning environment. These studies provide a foundation for understanding that the leadership of school principals plays a crucial role in shaping organizational behavior and decision-making that supports technological adaptation, including smartphone management within the school environment.

The scientific novelty presented in this article focuses on how school principals should carry out their roles in formulating policies, shaping culture, and overseeing the use of smartphones within the school environment. This research raises important issues concerning educational leadership in the digital era.

The main issue being focused on is: What is the form of leadership exhibited by the head of the educational unit in managing the use of smartphones as a learning medium? This article aims to examine the strategic role of the head of the educational unit in managing the use of smartphones in schools through a review of relevant and up-to-date literature.

2. Research Questions

Based on the background described above, this study formulates the following problems:

- a. What form of policy is formulated by the head of the educational institution in regulating smartphone use in schools?
- b. What strategies does the head of the educational institution use to provide education and build digital literacy among school members?
- c. What are the mechanisms for monitoring and evaluating the implementation of the smartphone usage policy carried out by the head of the educational institution?
- d. How does the head of the educational institution collaborate with teachers and parents to support the healthy and responsible use of smartphones?
- e. How do the exemplary behavior and leadership style of the head of the educational institution influence the creation of a positive digital culture within the school environment?

3. Research Objectives

Based on the problem formulation, the objectives to be achieved in this research are as follows:

- a. To identify the policies implemented by school principals regarding the use of smartphones as a learning medium.
- b. To analyze the strategies for mentoring and digital literacy education conducted by school principals.
- c. To examine the mechanisms for monitoring and evaluating the implementation of smartphone use policies in schools.
- d. To assess the collaborative role of school principals with teachers and parents in shaping a healthy digital culture.
- e. To explain the importance of role models and leadership styles of school principals in creating a digitally responsible learning environment.

4. Literature Review

The leadership of school principals is one of the main factors in determining the direction and quality of educational institution management. In the context of modern education, the role of the principal is not limited to administrative aspects but also includes influencing school culture, motivating teachers and students, and managing educational technology. (Usman, 2019) explains that leadership is the process of influencing a group of people to achieve common goals. Therefore, school principals are expected to be visionary leaders who are adaptive to the times, including in facing the challenges of technology use, such as smartphones, in the school environment.

Various leadership theories have been developed to explain effective approaches in the educational context. Transformational leadership theory has become one of the most widely used approaches because it emphasizes the importance of inspiration, motivation, individual attention, and the transformation of organizational values (Hanifah, 2022). Educational leaders who apply this style are able to create a conducive learning environment and encourage the development of character and digital literacy in students. In addition, the democratic leadership style is also considered important because it encourages active involvement of all parties in the decision-making process (Rusmana et al., 2023).

From an Islamic perspective, leadership is a trust that must be carried out with full responsibility and justice. The head of an educational unit, as the leader of an educational institution, has a moral responsibility not only to improve academic achievements but also to foster the character and digital behavior of students. As emphasized in Surah An-Nisa, verse 58: "Indeed, Allah commands you to deliver trusts to whom they are due, and when you judge between people, to judge with justice," and the hadith of the Prophet SAW: "Each of you is a leader, and each of you will be asked about his leadership." (HR. Bukhari). Thus, the head of an educational unit must uphold the trust of education to the best of their ability.

In information technology management, particularly smartphones, school heads need to formulate clear and educational internal policies. (Agung, 2024) emphasizes that smartphone usage policies should consider educational and character aspects, such as time management, types of allowed applications, and educational sanctions. Previous studies have shown that the existence of strict rules is not always effective without adequate supervision and understanding from both students and teachers.

In addition to policies, digital literacy is an important aspect in managing smartphone usage. (Mustofa & Budiwati, 2019) emphasized that digital literacy and media ethics should be integrated into the curriculum and school culture. This literacy includes the technical ability to use digital devices, as well as an understanding of the ethics of information usage, cybersecurity, and media responsibility. (Mashuri et al., 2022) added that digital literacy encompasses cognitive and ethical abilities that enable individuals to use technology wisely.

Supervision and evaluation of policy implementation are also the responsibility of the head of the educational unit. (Firman, 2023) states that the head of the educational unit must establish an academic supervision system that not only monitors the learning process but also students' digital behavior. Periodic evaluation is necessary to assess the effectiveness of the policy and adjust it to the dynamics occurring on the ground.

The collaboration between schools and parents is a crucial pillar in supporting the healthy use of smartphones. (Asmurti et al., 2018) and (Ningsih et al., 2017) found that parental supervision of smartphone use at home plays a

significant role in shaping students' digital discipline. School principals need to establish two-way communication with parents, communicate school policies transparently, and involve them in the character-building process of students.

The personal and professional characteristics of the head of an educational institution also play a crucial role in the success of digital leadership. (Asmira et al., 2024) states that an effective head of an educational institution possesses a strong personality, broad insight, and the ability to build positive relationships with all members of the school community.

In addition, the aspects of integrity, capability, and acceptability, as explained by (Hapudin et al., 2023), are key criteria in assessing the quality of leadership within the educational environment.

By integrating various leadership theories and empirical findings, it can be concluded that the role of school principals in managing smartphone use is highly complex and demands a holistic approach. Principals need to formulate adaptive policies, provide continuous guidance, carry out consistent supervision, build partnerships with parents, and serve as role models in the wise use of technology. Only through this comprehensive approach can educational goals in the digital era be optimally achieved.

5. Research Methodology

5.1 Research Design

To generate deep and relevant understanding, this study employs the library research method. Library research is a method of discovering knowledge through literature review, conducted by reading, studying, and analyzing various sources such as academic books, journals, articles, and other relevant documents (Zed, 2008). The data analysis used is qualitative analysis with content analysis techniques, focusing on key topics related to the leadership of education unit heads and the management of information technology media, particularly smartphones. Based on a specific procedure, a systematic review is then conducted to identify patterns, concepts, and relevant findings, thereby enabling the development of a deep and contextual understanding of the issue being examined.

5.2 Data and Data Sources

In this study, the data used is qualitative in nature and obtained through a library research approach. The primary data consists of information, concepts, theories, and previous research findings relevant to the topic of educational leadership and the management of information technology use, particularly smartphones. The data sources used include:

- a. National scientific journals discussing educational leadership theories, transformational and democratic leadership styles, as well as the integration of technology in the learning process
- b. Academic books and educational references that explain basic concepts of leadership, educational supervision, digital literacy, and character development in schools.
- c. Previous research findings containing empirical studies related to the influence of leadership on the use of information technology in educational settings.

5.3 Research Instrument

In library research-based studies, the instruments used are not measurement tools such as questionnaires or interviews, but rather conceptual aids and literature analysis techniques. The main instrument in this research is:

- a. Literature Analysis Guide. This instrument is a list of thematic categories used to examine the content of various literature sources
- b. Content Analysis Technique. This study employs content analysis to extract important information from relevant literature. Each source is analyzed based on its relevance to the research focus and categorized according to themes, such as transformational leadership theory, empirical studies on the use of ICT in schools, or educational technology policy practices
- c. Literature Selection Criteria. Only sources published within the last ten years (2015–2024) are prioritized, particularly those discussing educational leadership and technology integration. This aims to maintain the relevance and timeliness of the study in the context of education in the digital era.

6. Findings and Discussion

The leadership of the head of the educational institution plays a central role in addressing the challenges of smartphone use within the school environment. In today's digital era, the use of information technology is unavoidable, including in the field of education. However, without proper management, smartphones can potentially have negative impacts on student discipline and the quality of learning. Therefore, a type of leadership is needed that is not only administrative, but also educational, participatory, and visionary.

This section discusses the results of the literature review on five key aspects that reflect the leadership strategies of school principals in managing the use of smartphones: usage policies, digital literacy education, monitoring and evaluation, collaboration with stakeholders, and leadership by example:

6.1 School Principal's Policy on Smartphone Usage

The school principal has full authority to formulate and establish internal policies regulating the use of smartphones within the school environment. These policies aim not only to limit the use of devices but also to guide the educational and productive utilization of smartphones. According to (Agung, 2024), effective policies include setting usage time,

permitted types of applications, and educational sanctions for violations. These regulations must also consider a balance between students' freedom to learn and control over the potential misuse of technology.

(Laili, 2023; Sobirin, 2018) adds that a good policy must touch on all aspects of educational management, including administration, academics, student affairs, and school social relations. The head of the educational unit acts as a strategic leader who not only prepares the regulatory framework but also ensures that the policy is understood, accepted, and implemented by all members of the school community. The policy socialization process becomes an important part of fostering collective awareness of the importance of responsible technology use.

6.2 Digital Literacy Education and Media Ethnics

The policy on smartphone usage will not be effective without in-depth education on digital literacy. School leaders are responsible for providing understanding to students, teachers, and parents on how to use smartphones safely, wisely, and ethically. (Mustofa & Budiwati, 2019) explain that digital literacy includes the ability to access, evaluate, and use information responsibly in the digital era. This literacy encompasses cognitive, technical, and moral dimensions that form the foundation of students' digital behavior.

(Mashuri et al., 2022) emphasize that media ethics is crucial in the context of education, including values such as not spreading hoaxes, respecting digital privacy, and interacting politely in the virtual world. School leaders can integrate digital literacy education through co-curricular activities, teacher training, and character strengthening within the curriculum. This literacy-based approach expands the meaning of technology management from mere supervision to a process of internalizing values.

6.3 Supervision and Evaluation of Policy Implementation

Once the policy is established and education is provided, school leaders need to conduct ongoing supervision and evaluation to ensure that the policy is being effectively implemented. (Firman, 2023) states that supervision is carried out through academic supervision and monitoring of student behavior, both directly and through teachers and school staff. School leaders are also required to build a reporting and reflection system to assess the effectiveness of the policy and evaluate any emerging challenges.

(Laili, 2023; Sobirin, 2018) emphasizes that supervision should be educational rather than merely repressive or punitive. This approach creates a constructive supervisory climate, where students feel monitored but also guided. Evaluation of policy implementation should also involve all stakeholders, including teachers, students, and parents, so that school leaders receive objective and comprehensive feedback before making adjustments or improvements to the existing regulations.

6.4 Collaboration with Teachers and Parents

One of the key pillars in managing smartphone usage in schools is collaboration between the school leader, teachers, and parents. The school leader cannot work alone in supervising students' digital behavior, as the students' learning environment is also shaped at home. A study by (Asmurti et al., 2018), supported by (Ningsih et al., 2017), shows that parental involvement in monitoring smartphone usage significantly affects children's digital behavior. Therefore, the school leader must build partnerships through open communication and regular dialogue with parents.

This collaboration also involves teachers, particularly class teachers and guidance counselors, in detecting and addressing deviations in smartphone usage. The school leader acts as a coordinator, uniting the roles of each party so that policies can be implemented consistently both at school and at home. Through forums such as parent meetings, circular letters, or mutual agreements, the school leader can strengthen the collective commitment to creating a safe and healthy digital environment for students.

6.5 Role Modeling and Leadership Style of School Leader

In addition to policies and supervision, personal role modeling by the educational unit head is a key factor in the successful management of information technology use. The educational unit head must serve as a model for responsible and productive technology use, both in administrative activities and in teaching. (Hanifah, 2022) states that transformational leadership style can ignite motivation and commitment among school members toward a shared vision, including in the use of technology.

(Rusmana et al., 2023) add that a democratic leadership style, which provides space for participation and dialogue, can improve compliance and a sense of ownership toward the policies made. In the context of Islamic education, the role model of the educational unit head also has moral and spiritual dimensions, as explained in QS. An-Nisa: 58 and the Prophet's (SAW) hadith on the responsibility of leaders. By setting a concrete example in the wise use of technology, the educational unit head not only manages but also educates through their attitudes and behavior.

7. Conclusion

The leadership of school principals plays a crucial role in managing the use of smartphones within the school environment. Principals must be able to formulate policies, provide education, and conduct supervision and evaluation of the use of information technology media. An effective leadership approach will create a school culture that is adaptive to technology while remaining within the bounds of ethics and educational objectives.

Continuous training should be provided for school principals and teachers in ICT management, as well as further research with a field-based approach to evaluate the effectiveness of smartphone usage policies implemented by school principals at various educational levels.

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Conflict of Interest

The authors declare no conflicts of interest.

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