

Principal Leadership Strategy in The Digital Era at Muhammadiyah 1 Kartasura Middle School

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ABSTRACT

Strategy and leadership head school is very important in institution education For Determining what strategy and leadership are will have an impact on the junior high school, because there are senior teachers, and for study about matter new matters related to technology will definitely need time. For Can learning and adapting. Research objectives. This For know How planning, implementation , monitoring, and evaluation of school programs , in particular in utilization Technology Information For learning . Research This nature descriptive qualitative through with observation and interviews. Research results. This school has implemented technology programs information For increase students' multimedia skills, starting from word, creating presentations, and making short videos, and finding effort improvement digital competence of teachers through training, making learning media , coding, and collaboration digital -based between teachers across eye learning. Then, collaboration digitally based general Already done for example that is there are teachers who want to make A presentation consisting of social studies, mathematics, and teknologi informasi (IT) teachers, then they can collaborate to make one material presentation that includes the third lesson mentioned. As for the challenge, that is, senior teachers need time to adapt and learn new things related to technology. The solution that is held is training in a general way. The contribution study give a description of an empirical strategy management based on technology, effective information, to increase teacher digital competency and skills of students at school.

Keywords: Principal Leadership, Digital Era, Muhammadiyah 1 Kartasura Middle School

Introduction

Leadership is a crucial part of turning the wheels of an organization (Riska, 2021). Without a leader, it will be difficult for an organization to determine its direction. The principal is one of the leaders in educational institutions, where

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the principal is one of the policy makers at the school (Apriana, 2019). (Kurniawan et al., 2023). Law No. 40 of 2021 concerning the assignment of teachers as principals "regulates the qualifications and assignments of principals, which must now include digital competencies."

The concept of leadership in education cannot be separated from the concept of leadership in general. In general, the term "leadership" is often equated with "management," but there are significant differences between the two. Leadership can actually be achieved anywhere because leadership is the process of influencing others to do something to achieve a specific goal (Rosidah, 2021). (AULIA PUTRI AIDAH et al., 2024) . The concept of leadership involves influencing other individuals in the relationship between those who lead and those who follow. Therefore, leadership can be considered a combination of art and science in gaining cooperation from others to achieve common goals and realize the desired vision. (Maolana et al., 2023)

School strategy is an important guideline for schools to achieve the goals of improving school quality and further development. The right strategy can influence the success of a school in achieving its goals. To develop the right strategy, schools need information about factors within the school that can support success in achieving goals. (AULIA PUTRI AIDAH et al., 2024) . The ideal leadership of a school principal in the digital era is leadership that follows the flow of technological developments. The principal must play a role in influencing, mobilizing, and guiding his subordinates to implement educational programs that are in line with technological developments in the era of the 4.0 revolution (Jannah, 2020). (Taupik & Fitriani, 2021)

The rapid advancement of information technology requires leaders to organize their organizations for competitive transformation and global competition (Zubaidah & Putra, 2022). Digital technology has become a key pillar of modern learning, demanding transformations in teaching methods, school management, and teacher competencies. Amidst these changes, teachers face the challenge of mastering digital literacy and integrating technology into the learning process. This is increasingly relevant given the role of teachers as agents of change responsible for preparing students to face future challenges. Digital transformation in the education sector has become a global priority, particularly following the Covid-19 pandemic, which forced educational institutions to shift from traditional learning to digital technology-based learning. (Zimmer et al. 2021; Kasim & Surya, 2025).

Digital leadership combines elements of technological capabilities (e-skills), digital emotional intelligence, and the ability to adapt to disruption and the complexity of the digital environment. Digital leaders are required to create a collaborative work environment, strengthen team trust through effective virtual communication, and encourage continuous learning through digital media. A principal is a professional or teacher whose task is to lead a school to make it a place of interaction between classroom teachers and students attending classes. A successful principal understands that the existence of a school is the success of a complex organization and is able to carry out the role of principal. Educational leadership is crucial because principal leadership has a significant impact on the quality of education (Nasution et al., 2022).

From the statement above, the researcher is interested in researching, studying, and examining how the principal's leadership strategy in the digital era is implemented at SMP Muhammadiyah 1 Kartasura. The purpose of this study is to provide knowledge related to the principal's leadership strategy in the digital era. The principal's leadership strategy is very important in a school institution because it has a big influence on the success of the educational institution in achieving previously agreed goals.

Method

This research is descriptive qualitative field research. The main problem is the principal's strategy in implementing digital era learning at SMP Muhammadiyah 1 Kartasura. The methods used in this study are observation, interviews, and documentation with the principal. This study attempts to describe the strategy and importance of implementing digital era learning at SMP Muhammadiyah 1 Kartasura.

The data collection techniques used in this study were observation, interviews, and documentation. For observation, the researcher asked questions related to the Principal's Leadership Strategy in the digital era at SMP Muhammadiyah 1 Kartasura. The main objective was to uncover the meaning, context, and complexity of the situation under study, rather than measuring variables quantitatively (Hardani et al., 2020). This qualitative research can describe the Principal's Leadership Strategy in the Digital Era at SMP Muhammadiyah 1 Kartasura.

This was conducted at Muhammadiyah 1 Kartasura Middle School. subject of study. This is the head of Muhammadiyah 1 Kartasura Middle School, due to his here considered more understanding related to leadership strategy heads of schools in the digital age.

This field study research, which is descriptive qualitative research. This qualitative study with the main problem strategy head school in the implementation of digital era learning at Muhammadiyah 1 Kartasura Middle School. The methods used in the study are observation, interviews, and documentation with the head school. Research: This tries to describe the strategy and its importance in implementing digital learning at Muhammadiyah Middle School

Results

Result of the study. This shows some findings, namely, Management at Muhammadiyah 1 Kartasura Middle School, development of collaboration digital-digital-based between teachers, implementation of activities like socialization, training, and also practice in a direct way, challenges in the implementation of digital, and indicators of success.

Management at Muhammadiyah 1 Kartasura Middle School

Management consists of planning, implementation, monitoring, and evaluation. Planning is the process of selecting and establishing goals, strategies,

methods, budgets, standards, or guidelines for the success of an event. The planning carried out by SMP Muhammadiyah 1 Kartasura usually refers to the results of the annual evaluation, which includes a comprehensive program evaluation carried out at the end of the school year. And after that, at the beginning of the new school year, usually before mid-June, the school will hold a planning meeting to compile the work program for the next year. This planning is carried out by considering the results of the previous year's evaluation so that the next program is more effective and relevant. Then the results of the evaluation are improved and compiled into a plan.

The evaluation was conducted to assess whether information technology at SMP Muhammadiyah 1 Kartasura, such as Google Classroom, multimedia, coding, and devices like LCDs and smart TVs, was being utilized in teaching and learning activities, as well as to supervise their use. The school has also begun implementing coding-based learning, which is currently integrated into informatics and is not yet a mandatory subject.

Development of collaboration and digital-based communication between teachers

According to Mrs. Yayuk Nur Rahayu, as Head of Muhammadiyah 1 Kartasura Middle School, there has also been the development of digital-based collaboration between teachers, for example, in the manufacturing material presentation integrated between Social Studies, Mathematics, and Information Technology. Collaboration. This aims to employ material learning from various perspectives in science at a time to increase teachers' ability in the use of digital media, which can be seen in use application of learning in a way appropriate.

Implementation training

According to Mrs. Yayuk Nur Rahayu, as the Head of Muhammadiyah 1 Kartasura Junior High School already organizes activities like socialization, training, and also practice in a way, and at Muhammadiyah 1 Kartasura Middle School, there are also eye Coding lessons, also including evaluation to know how far coding can be implemented. Currently, coding is not yet become eye lesson mandatory at SMP 1 Muhammadiyah 1 Kartasura, but still integrated into the lesson informatics technology program information school The aim for increase students' multimedia skills, starting from typing in Microsoft Word, creating video education, and compiling presentations. Thus, there is superiority alone in the program.

In improving digital competition, the school stage training includes general training in creating learning videos and coding training. Even after training Still there are still teachers who do not have control skills. Teachers are encouraged to study with other teachers who are proficient. The head school instructed that teachers who are not capable take advantage of technology to study with fellow teachers. The principal school plays an active role by giving instructions for teachers who have control of technology to help fellow teachers who are still having difficulty adapting to new technology.

The main challenges that exist at Muhammadiyah 1 Kartasura Middle School Although the digitalization program has been running well, a major

challenge at SMP Muhammadiyah 1 Kartasura is the disparity in teachers' technological skills, particularly between senior and junior teachers. Senior teachers generally take longer to adapt to new technologies, while junior teachers adapt more quickly.

Success Indicators at Muhammadiyah 1 Kartasura Middle School

As for the indicators of success at Muhammadiyah 1 Kartasura Middle School, they are as follows;

1. Completeness of infrastructure
2. Teachers master the use of infrastructure and applications that will be applied in learning.
3. Children are wiser in using technology (reduced exposure to unethical content)

Discussion

The strategy that planned and systematic. The head school must be capable of integrating digital technology into the learning process without sacrificing pedagogical aspects and values fundamental to education. (Rosauli Siahaan, 2024). Digital leaders not only utilize technology as a tool to help, but also make it part of their leadership strategy to create more efficient, responsive, and adaptive organizations. Head schools that implement strategies to guide teachers and students in effectively adopting technology. (April et al., 2025). In the era of globalization, this head school must make teacher quality more important again. Don't they lose with the development of the globalization era, especially with the No know method use tool Technology? As the era of globalization progresses, technological tools become increasingly sophisticated. (Yanti1 et al., 2024).

In developing digital learning management, principals must integrate school policies, digital training for teachers, and data-driven evaluation systems. Leadership traditionally becoming a digital leader includes planning, supervision, automation, real-time monitoring, and stakeholder engagement through tracking digital communication. (Wijaya & Nuraini, 2025). Management consists of planning, implementation, monitoring, and evaluation. Planning is the process of selecting and establishing goals, strategies, methods, budgets, standards, or guidelines for the success of an event. The planning carried out by SMP Muhammadiyah 1 Kartasura usually refers to the results of the annual evaluation, which includes a comprehensive program evaluation carried out at the end of the school year. And after that, at the beginning of the new school year, usually before mid-June, the school will hold a planning meeting to compile the work program for the next year. This planning is carried out by considering the results of the previous year's evaluation so that the next program is more effective and relevant. Then the results of the evaluation are improved and compiled into a plan.

The digital era is an era in which all aspects of life, including the learning process, increasingly utilize digital media. Literature studies show that the evolution in educational leadership is a result of the rapid development of Advanced Information Technology (IT), such as the internet, email, and video

conferencing. This evolution requires school leaders to be proactive in implementing technology (Prayuda, 2022). Digital learning requires the readiness of learners and teachers to communicate interactively using information and communication technologies (ICTs), such as computers/laptops with the internet, smartphones with applications, and others. To achieve this, collaboration from various parties is certainly needed. The development of the world of education is currently facing a very crucial period, not only in efforts to provide quality and optimal educational services, but also in technological developments (Pada et al., 2022). According to Ms. Yayuk Nur Rahayu, the Principal of SMP Muhammadiyah 1 Kartasura, digital-based collaboration between teachers has also been developed, for example, in the creation of integrated presentation materials between Social Studies, Mathematics, and Information Technology teachers. The principal emphasized the importance of collaboration and communication among stakeholders in technology integration. (Rosmini et al., 2024). This collaboration aims to enrich learning materials from various scientific perspectives while improving teachers' abilities in using digital media, this can be seen in the appropriate use of learning applications. The evaluation was conducted to assess whether information technology at SMP Muhammadiyah 1 Kartasura, such as Google Classroom, multimedia, coding, and devices such as LCD and smart TVs, has been utilized in teaching and learning activities, as well as supervision of their use. The school has also begun implementing coding-based learning, which is currently still integrated into informatics subjects and has not yet become a compulsory subject.

As leaders in educational institutions, principals play a crucial role in designing appropriate strategies. Effective principals in digital leadership will be able to develop comprehensive strategies to integrate technology into the curriculum and create a culture of innovation in schools. This involves developing human capacity, including training and professional development for teachers to ensure they have the skills needed to teach in the digital era. (Sterrett et al. 2020; Silalahi, 2025)

According to Mrs. Yayuk Nur Rahayu, as the Principal of SMP Muhammadiyah 1 Kartasura, activities such as socialization, training, and direct practice have been held, and at SMP Muhammadiyah 1 Kartasura, there is also a Coding subject, which is also followed by an evaluation to determine the extent to which coding can be applied. Currently, coding is not yet a compulsory subject at SMP 1 Muhammadiyah 1 Kartasura, but is still integrated into informatics lessons. This school's information technology program aims to improve students' multimedia skills, from typing in Microsoft Word, making educational videos, to compiling presentations. Thus, there are distinct advantages in the program.

To improve digital competency, schools hold general training such as video production and coding. If, after the training, some teachers still lack these skills, they are encouraged to learn with other teachers who are already proficient. Principals instruct teachers who are not yet proficient in utilizing technology to learn with their colleagues. Principals play an active role by instructing teachers who are already proficient in technology to assist colleagues who are still struggling to adapt to new technologies. In this regard, principals serve not only as managers but also as drivers of educational innovation, creating impactful

solutions amidst the dynamics of contemporary education. Government policy support focused on ongoing training for principals and educators will be key to achieving more targeted and inclusive educational goals going forward. (Nalurita, 2022).

For digital leadership to be effectively implemented, principals must be able to address structural challenges, such as limited infrastructure and gaps in technological literacy among educators (Angga & Iskandar, 2022). Collaborative approaches with the education office, utilizing online training, and optimizing digital applications such as e-learning or digital reporting are important strategies that must be continuously strengthened. In the longer term, digital leadership will be a key requirement for schools to be able to compete in the era of the industrial revolution 4.0 and society 5.0 (Kurniawan et al., 2023). Although the digitalization program has been running well, a major challenge at SMP Muhammadiyah 1 Kartasura is the difference in teacher ability levels in mastering technology, especially between senior and younger teachers. Senior teachers generally take longer to adapt to the use of new technologies, while younger teachers are quicker to adapt to new information technologies.

Digital leadership also plays a crucial role in organizations, fostering innovation and driving transformation through a clear vision that motivates employees to embrace change (Basu, 2024). (Feni Hadi Wibowo & Prodi, 2025). Vision is a description realistic about the future you want realized in terms of a certain time. A leader who is also expected can build culture strong organization, with thoughts, attitudes, and behaviors that support the achievement of the vision that has been set. (Margana et al., 2024). Means for communicating the reason existence organization in terms of goals and tasks, principles, shows the framework of the relationship between the organization with stakeholders (sources), Power humans, organizations, consumers /citizens, and other related parties, and states the target main performance organization in the sense of growth and development. While the mission is arranged as a continuation from vision and in essence is a strategy and activity development within something organization. The statement in the mission provides more details compared to with vision (Anisa & Rahmatullah, 2020; Kamaludin, 2022). The mission contains the tasks or roles of an organization. The mission also becomes the basis for dividing tasks among all members of an organization to actively participate in carrying out tasks according to their respective roles. The steps to align the vision and mission begin with a deliberation process involving the principal, teachers, and the school committee to change the vision and mission to suit current developments. The latest vision is 1) creating independence, 2) being environmentally aware, 3) mastering science and technology, and 4) having good morals. The vision and mission are then socialized to parents at the beginning of the school year and to all students so that all students can participate in realizing the established vision and mission. (Students, 2025).

Indicators are visible signs or clues. Experts have debated extensively about indicators as indicators of competency achievement; some argue that indicators must be measured, while others argue that important indicators can be observed without being measured. However, they agree that indicators indicate whether students have learned the competency. This sign is necessary because it is difficult

to determine whether students have the ability directly (Nurwidia & Utami, 2023). Indicators of educational program success are measures or criteria used to assess the extent to which a program is achieving its goals and objectives. These indicators help measure the effectiveness of the program, especially educational programs, and provide useful information on how to improve it in the future (Sukmadinata, 2016). (Zahroh & Hilmiyati, 2024). The indicators of success at SMP Muhammadiyah 1 Kartasura are as follows:

1. Completeness of infrastructure
2. Teachers master the use of infrastructure and applications that will be applied in learning.
3. Children are wiser in using technology (reduced exposure to unethical content)

The three points above are indicators of success at Muhammadiyah 1 Kartasura Middle School.

Conclusion

Principal leadership in the digital era plays a crucial role in determining the direction and quality of education in schools. Principals serve not only as policymakers but also as driving forces in integrating technology into all aspects of school activities. At Muhammadiyah 1 Kartasura Junior High School, the leadership implemented focuses on digital transformation, emphasizing improving teacher and student competencies through the use of information and communication technology. The leadership strategies implemented cover integrated planning, implementation, monitoring, and evaluation with programs based on technology. Head schools play an active role in designing vision and mission-relevant schools with the demands of the digital era, as well as ensuring all component schools understand and participate in making it happen. Programs such as teacher training in creating digital learning media, teaching coding, as well as the implementation application online learning applications, become proof of real adaptive leadership to current development. Apart from that, collaboration between teachers in manufacturing digital-based learning is also an important strategy to increase the quality of learning. However, in its implementation, obstacles were still encountered, such as differences in the level of technological mastery between senior and junior teachers. To address this, the principal encouraged a culture of collaborative learning among teachers and provided ongoing training so that all educators had adequate digital competencies. Overall, the principal's leadership strategy at SMP Muhammadiyah 1 Kartasura demonstrated success in directing the educational institution towards effective digital transformation. Visionary, collaborative leadership, and a focus on improving digital competencies are key to facing the challenges of education in the era of Industrial Revolution 4.0 and society 5.0.

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