

## SCHOOL MANAGEMENT DIGITALIZATION STRATEGY TO IMPROVE EDUCATION QUALITY AT STATE VOCATIONAL SCHOOL 2 GUNUNGSITOLI

Fajar Otolius Telaumbanua<sup>1</sup>, Eliagus Telaumbanua<sup>2</sup>,  
Suka'aro Waruwu<sup>3</sup>, Syah Abadi Mendrofa<sup>4</sup>

<sup>1,2,3,4</sup>Universitas Nias, Indonesia

E-mail: [fajartelaumbanua0@gmail.com](mailto:fajartelaumbanua0@gmail.com)<sup>1</sup>, [eliagust@unias.ac.id](mailto:eliagust@unias.ac.id)<sup>2</sup>,  
[sukawaruwu414@gmail.com](mailto:sukawaruwu414@gmail.com)<sup>3</sup>, [syahabadi.mendrofa@gmail.com](mailto:syahabadi.mendrofa@gmail.com)<sup>4</sup>

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### Abstract

*This study aims to analyze the digitalization strategy of school management in improving the quality of education at SMK Negeri 2 Gunungsitoli. This research is motivated by the importance of digital transformation in the world of education, particularly in efficient, adaptive, and technology-based school management. The research method used is descriptive qualitative with data collection techniques through interviews, observation, and documentation. The research informants consisted of the principal, vice principal, teachers, and administrative staff. The results of the study indicate that the digitalization strategy has begun to be implemented through the use of technology in the learning process, the development of teachers' digital skills, and the integration of technology-based educational platforms. However, in its implementation, the school faces various obstacles, such as limited school internet (Wi-Fi) quota and low digital competence of some teachers. To overcome these obstacles, the school conducts internal training, utilizes offline learning media, and improves digital infrastructure. The conclusion of this study shows that the digitalization of school management contributes significantly to improving the quality of education, especially in terms of learning effectiveness, administrative efficiency, and strengthening teacher and student competence in the digital era.*

**Keywords:** *Digitalization Strategy, Education Quality, Digital Transformation*

### INTRODUCTION

Education management is also the main pillar in developing quality human resources. So the Indonesian government continues to encourage the use of technology in the learning process to overcome the challenges of the industrial revolution 4.0 (Wena 2020). According to Rifa Hanifa Mardhiyah in Nunung et al (2025:1) "By implementing technology in elementary schools, it is hoped that students will have more resources for learning, more digital skills, and learn to use computers from an early age."

Thus, the quality of education improves by implementing a digitalization strategy by managing education that focuses on quality. According to Ritonga in Nunung et al (2025:2), "The use of technology as an effort to improve the quality of education is reflected in various government policies and programs." These policies include providing infrastructure, teacher training, and developing student competencies in utilizing digital devices. Digital technology

makes education more accessible through various platforms that can be used anytime and anywhere. The use of technology is also very necessary in schools and various platforms so that technological developments not only have wider access to educational resources, but they can also learn digital literacy skills, which are very important in today's era.

As in Subrot's previous research in (Yelli Ari Subekti 2025:1) Digitalization of education has presented various opportunities and challenges for the education system, especially in improving the quality of schools. Digitalization also provides a great opportunity to improve the quality of education, especially through distance learning and the use of digital technology in the learning process using technological tools available at SMK Negeri 2 Gunungsitoli. In addition, the use of digital technology in schools can also improve the quality of learning through more innovative methods, such as the use of projectors used by teachers to display videos from YouTube related to learning or display the material to be discussed.

A phenomenon that occurs at State Vocational School 2 Gunungsitoli is that there are still teachers who still do not understand the increasingly developing digitalization, especially for teachers who still do not have expertise in digitalization, let alone the increasingly developing digital transformation. So that this affects the quality of education in the implementation of digital-based digitalization, both in terms of learning effectiveness, the quality of school management and improving the quality of education. So in this case the school is able to provide a more in-depth application of digitalization, one of which is through training and related to the use of technology to improve the quality of education. This requires State Vocational School 2 Gunungsitoli to continue to find solutions in digital transformation, including in the increasingly developing curriculum. With this problem, it needs to be addressed, so that it can improve the quality of education at State Vocational School 2 Gunungsitoli.

## **2. THEORY**

### **Digitalization Strategy**

In the context of education, a digitalization strategy refers to the application of information and communication technology (ICT) to improve the learning process, school management, and access to educational resources. According to (Ramadhan et al. in Pupuk Setiyono et al. 2025:1), the development of information and communication technology has shifted the learning paradigm from teacher-centered to technology-based and increased educational accessibility. According to (Azis in Pupuk Setiyono et al 2025:2) digital era learning strategies include developing models, innovation, and evaluating learning with digital media.

According to Rosiana Mufliva et al. (in Pupuk Setiyono et al. 2025:2), the appropriate use of digital technology, such as the Merdeka Mengajar platform, plays a crucial role in building quality education and realizing the vision of Pancasila students. By utilizing digital technology, students and teachers can access learning materials flexibly, anytime, anywhere.

The obstacles that schools usually face in implementing digitalization of school management can be divided into several aspects according to Nuryadi (2021), including:

1. Limitations of Technology Infrastructure
2. Human Resources (HR)
3. Funding
4. Management and Policy
5. School Culture and Participation
6. Data Security

There are several indicators for digitalization strategies in digitalization development according to Pupuk Setiyono et al (2025:3)

1. Use of technology in the learning process,
2. Digital skills development for teachers,
3. Implementation of a technology-based learning platform that allows online access to materials

### **Digital Transformation**

According to Ririn Purwani et al. (2025:6), this transformation has had a positive impact on the efficiency and effectiveness of educational institutions, especially in an era that greatly influences the basis of interactions between teachers and students. With the advent of online learning platforms, collaboration and communication have become more transparent. According to Hasnida Sindi Septian et al (2024:4-6) Some key aspects of educational transformation in the digital era are access and flexibility, interactive learning, collaboration and communication of technological advances, utilization of artificial intelligence (AI) and educational analysis, ethical and security challenges, teacher training and application of technology, and manufacturing strengthening.

According to Fajar & Ratri et al. in Ririn Purwani Iet al. (2025:4), data digitalization has become a greater focus on aspects of learning and teaching. Educational management is essentially a process of structuring educational institutions that involves human and non-human resources in moving them to achieve educational goals effectively and efficiently. This structuring process will involve the implementation of several management functions which educational management experts often refer to as POAC (Planning, Organizing, Actuating, and Controlling) (Usman in Edy Siswanto, 2024).

### **Implementation of Digital-Based Curriculum**

According to Prihatini et al. (2023:4), a digital education curriculum can effectively improve the quality of education and students' learning experiences. In its implementation, a digital-based curriculum involves the use of various digital tools and resources, such as learning videos, simulations, and interactive applications. This allows students to learn independently and explore subject matter in a more flexible manner.

### **School Management**

Sabariah (2024:2) Educational management is a management process in carrying out educational tasks by utilizing all resources efficiently to achieve goals effectively. Nabila in Pupuk Setiyono (2025:2) states that "The strategy for developing school digitalization,

which includes the use of technology in learning, has been adopted by many schools throughout the world, including Indonesia." School digitalization is a key strategy in facing educational challenges in the digital era. The integration of information and communication technology, including online learning platforms and educational applications, can increase student engagement and access to learning resources.

(Sabariah 2022:1) The aim of this research is to determine school management in improving the quality of education, including: (1) School program planning; (2) Implementation of school programs and (3) Obstacles they face.

### **Quality of Education**

According to Fuadi (in Rahmawati 2021:1), "The quality of education is a key factor in improving business quality and therefore strengthening competitive advantage." The quality of education encompasses various aspects, including the curriculum, learning process, and student learning outcomes. According to Subroto et al. in (Yelli Ari Subekti, 2025:1), "The digitalization of education has presented various opportunities and challenges for the education system, particularly in improving school quality."

The primary goal of improving the quality of education is to create a generation with sound knowledge, skills, and attitudes. This includes developing student character, enhancing critical thinking skills, and adapting to change. According to research by Hidayah (2021), "Schools that focus on improving the quality of education can increase student achievement by up to 35% in national exams." Furthermore, another goal of educational quality is to create an inclusive and supportive learning environment for all students.

### **3. RESEARCH METHOD**

This study uses a qualitative research approach. All research findings will be summarized and described in a discourse format. This research provides a comprehensive overview of digitalization strategies and educational quality improvement. Qualitative research employs several data collection techniques, including observation, interviews, and documentation studies.

The data sources in this study consist of two types: primary and secondary data. Primary data were obtained directly from respondents through interviews, observation, and documentation. Meanwhile, secondary data were obtained from official documents related to education policies, school annual reports, and relevant literature on digitalization in education. According to Miles & Huberman (in Mudjiono, 2021), the data analysis used in this study involved three stages: data reduction, data presentation, and conclusion drawing and verification.

### **4. RESULTS AND DISCUSSION**

#### **Results**

Utilization of digital technology (projectors, laptops, internet, presentation apps, Google Classroom, WhatsApp Groups) since the COVID-19 pandemic. Most teachers have adapted, but some teachers are still less able to use digital media. Teachers at SMK Negeri 2 Gunungsitoli have begun utilizing technology-based media in teaching and learning

activities since the COVID-19 pandemic. The media used include projectors, laptops, internet, presentation apps, and digital learning platforms such as Google Classroom and WhatsApp Groups. However, the implementation of digital learning is not evenly distributed. Some teachers are still not proficient in using digital technology. Other obstacles lie in infrastructure, such as the lack of a school Wi-Fi network and limited supporting devices, so the digital-based learning process is not optimal.

Based on research conducted through interviews, observations, and documentation at SMK Negeri 2 Gunungsitoli, digitalization strategies in school management have been gradually implemented to improve educational quality. This effort is evident in the use of technology-based learning media such as projectors, Google Classroom, WhatsApp Groups, and video conferencing platforms like Zoom and Google Meet.

The student graduation rate at SMK Negeri 2 Gunungsitoli has been very high in recent years, exceeding 95%, and has even shown an increase in the past three years. This achievement is supported by the implementation of an educational curriculum and the use of digital platforms that simplify the learning process, assessment, and monitoring of student progress. Digitalization has significantly contributed to improving learning effectiveness, fostering student learning independence, and supporting teachers in developing materials, thus directly positively impacting the stability and improvement of student graduation rates.

The educational process at SMK Negeri 2 Gunungsitoli combines conventional methods and digital technology to improve the quality of learning. Learning outcomes are evaluated through written exams and vocational practice performance assessments, with criteria such as creativity, accuracy, and understanding. The use of digital platforms such as Google Classroom supports assignment submission, assessment, and monitoring of student progress. With the combination of academic evaluation and practical skills, student learning outcomes reflect their readiness for the world of work.

Based on the results of interviews with the principal, vice principal, teachers and administrative staff, it was discovered that:

1. There is a strong commitment from school leaders to drive digital transformation, but its implementation still faces technical and competency barriers.
2. Teachers generally have a passion for learning and adapting, although not all of them are able to use digital platforms to their full potential.
3. School infrastructure remains a major limiting factor, hampering the expansion of digitalization strategies to all aspects of school management.
4. Students respond positively to the use of technology, but digital access outside of school remains limited, especially for students from low-income families.

However, the implementation of digitalization strategies has not been fully equitable. There are still gaps in technology proficiency among teachers, as well as limited access to digital infrastructure such as Wi-Fi, computer devices, and interactive learning media. In the context of improving education quality, digitalization is key because it supports flexible, interactive learning processes that are tailored to the needs of today's students.

Support from school principals and collaboration with external institutions and the Department of Education are positive steps, but implementation still requires strengthening through ongoing training and the provision of adequate facilities. Overall, the digitalization

strategy implemented has demonstrated a positive impact on increasing graduation rates and preparing graduates for the workforce.

Meanwhile, the results of previous research found by Muhammad Shofi Mubarak (2024), "Quality-Based School Strategic Management in the Digital Era: Facing Challenges and Utilizing Opportunities" The results of the study show that despite many challenges, such as a lack of adequate resources and training for teachers, there are also significant opportunities to improve the quality of education through technology. This study found that the implementation of responsive and adaptive strategic management can help schools in facing challenges and utilizing existing opportunities.

### **Obstacles to Digitalization Strategy in Improving Education Quality**

The main obstacles faced in implementing the digitalization strategy at SMK N 2 Gunungsitoli include:

1. Limited technological infrastructure, such as the lack of Wi-Fi networks, lack of computer equipment, and projectors not being available in all classrooms.
2. Lack of training and digital literacy for teachers, where some teachers, especially senior ones, feel unsure about operating digital platforms.
3. Student access to technology, especially students from underprivileged families who do not have devices or internet quotas for online learning.
4. Unstable internet connection, especially for students in remote or outlying areas.

### **Efforts to Resolve Constraints**

To overcome these various obstacles, the school has made a number of efforts, including:

1. Organizing internal training and digitalization workshops for teachers in stages.
2. Propose the procurement of technology facilities to the Education Office and through BOS funds.
3. Establishing cooperation with DU/DI to improve teacher capacity and digital learning facilities.
4. Providing moral and technical support to teachers who are not yet familiar with technology through a peer coaching system.
5. Raising quota and equipment assistance for underprivileged students through CSR programs or government programs.

### **Strategy Efforts Undertaken by State Vocational School 2 Gunungsitoli**

Some concrete strategies implemented by SMK Negeri 2 Gunungsitoli to support the digitalization of school management include:

1. Implementation of digital platforms such as Google Classroom and WhatsApp Group for communication and learning.
2. Integration of school information management systems, such as digitization of grades, attendance, and academic reporting.
3. Utilization of visual and interactive learning media in the classroom, such as learning videos, presentations, and infographics.
4. Implementation of digital-based evaluation methods, such as online quizzes, e-portfolios, and digital projects.

5. An open management approach, where the principal and vice principal open up discussion spaces between teachers to share good practices in digitalization.

### **Effective Communication**

Effective communication is a crucial component in supporting the implementation of digitalization. At SMK Negeri 2 Gunungsitoli, communication between teachers, students, and school management has begun to develop through:

1. Use of WhatsApp groups and Google Classroom as online communication media.
2. Routine coordination between teachers and school management regarding the implementation of the digitalization program.
3. Digital delivery of information such as schedules, assignments, and academic announcements.

However, communication effectiveness can still be improved with digital communication soft skills training and a more integrated school information system.

### **CONCLUSION**

Based on the results of research that has been conducted regarding the digitalization strategy for school management at SMK Negeri 2 Gunungsitoli, the following conclusions were obtained:

1. School Management Digitalization Strategies to Improve Educational Quality SMK Negeri 2 Gunungsitoli has implemented several digital strategies in school management to support educational quality improvement. These strategies include the use of digital platforms such as e-learning, online academic and administrative data collection applications, and the use of social media for communication and publication.
2. In its implementation, there are several obstacles faced, including limited technological infrastructure (such as internet networks and digital devices), low digital literacy of some teachers and staff, and limited funds to support the procurement of digital facilities.
3. SMK Negeri 2 Gunungsitoli has made various efforts to overcome existing obstacles, including conducting regular training and workshops to improve the digital competence of teachers and staff, collaborating with external parties to support the procurement of infrastructure, and gradually improving information technology infrastructure.

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