

Enhancing education quality through the digital school concept: a case study on a junior high school in Sukoharjo

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Abstract. The use of technology in the field of education is a necessity. Now, the school is starting to implement the concept of digital school through the Information Communication Technology (ICT) program. The question is whether the program is effective enough to improve the quality of education. This study aims to describe the implementation of the digital school concept at Junior High School (Sekolah Menengah Pertama, SMP) Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo and to identify the impact of its implementation. The research shows that SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo implements the digital school concept through Information Communication Technology (ICT) programs, reducing the use of books, utilizing laptops as learning media, and digital-based governance systems. The positive impact is an increase in school quality, as evidenced by the increase in registrants every year, as well as ease in management and improvement of infrastructure. However, the high interaction of students with technology also has negative impacts, such as changes in values, norms, rules, and morals due to globalization from the internet.

Keywords: *Digital, School, Education, Quality.*

Abstrak. Penggunaan teknologi dalam dunia pendidikan menjadi suatu keniscayaan. Kini sekolah mulai menerapkan konsep *digital school* melalui program *Information Communication Technology* (ICT). Pertanyaannya adalah apakah program tersebut cukup efektif untuk meningkatkan kualitas pendidikan. Penelitian ini bertujuan untuk mendeskripsikan implementasi konsep *digital school* di Sekolah Menengah Pertama (SMP) Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo dan untuk mengidentifikasi dampak dari implementasi konsep *digital school* tersebut. Penelitian menunjukkan bahwa SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo menerapkan konsep *digital school* melalui program *Information Communication Technology* (ICT), pengurangan penggunaan buku, pemanfaatan laptop sebagai media pembelajaran, dan sistem tata kelola berbasis digital. Dampak positifnya adalah peningkatan kualitas sekolah yang terbukti dari bertambahnya pendaftar setiap tahun, serta kemudahan dalam manajemen dan peningkatan sarana prasarana. Namun, tingginya interaksi siswa dengan teknologi juga menimbulkan dampak negatif, seperti perubahan nilai, norma, aturan, dan moral akibat arus globalisasi dari internet.

Kata Kunci: *Digital, Sekolah, Pendidikan, Kualitas.*

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Introduction

Education has become one of the basic needs for all Indonesian citizens, so education is a national interest guaranteed by the 1945 Constitution Article 31 (E. Mulyasa 2019). But what needs to be a concern at this time, how educational institutions both public and private can provide the best quality and service to the community. Along with the times, educational institutions are required to provide education that can provide the best quality for its consumers. The World Bank released a report on the results of its survey, the surprising thing is that the quality of education in Indonesia is still relatively low. Evidenced by the finding that less than 28% of Worldtop20.org released a ranking of education in the world, the surprising thing is that Indonesia is ranked 67th out of 209 countries surveyed. Indonesia's ranking is in line with Albania at number 66 and Serbia at number 68 (Rambe et al. 2024; Zefanya Aprilia 2023).

PISA (Program for International Student Assessment) in 2022 published country rankings based on reading, science, and math skills that showed Indonesia ranked 68th out of 81 countries surveyed (Shilvina Widi 2023). In addition, the emergence of the phenomenon of the closure of public schools such as data from the Central Statistics Agency (BPS) in 2023 which states the decline in the number of students in public schools in the period 2016-2022, which was originally 22.43 million to 20.37 million. Meanwhile, private schools experienced an increase in the number of students of up to 520 thousand (Dwi Setyo Irawanto 2023). Of these three can provide an overview that the quality of education in Indonesia is still alarming and requires special handling from every stakeholder of existing educational institutions.

Strategies to improve the quality of education are one form of reform of education today. Where a school is managed in a structured and systematic manner in order to achieve quality education using the right strategy. Education quality improvement management can be defined as an innovation in organizing education that is expected to have a good impact in accordance with the demands of today's society (Rahardja et al. 2024; Wicaksana and Inayati 2023). There are interrelated components in improving the quality of education such as principals, teachers, employees, students, curriculum, infrastructure, student guardians and other parties. Qualified human resources are needed to be able to implement strategies appropriately to improve the quality of education (Mohamed et al. 2024). One of the efforts to improve the quality of education is through school innovation. The digital school concept is an innovation in education designed to improve the quality of learning and the effectiveness of school management (Wardani and Jinan 2024).

By integrating information and communication technology, digital school provides a more efficient, interactive and scalable education system. The presence of this concept is expected to be a solution to various challenges in the digital era, encourage active student participation, and facilitate teachers and education personnel in organizing the teaching and learning process more optimally (Ilyasa et al. 2024; Sulisworo et al. 2020). In addition, digital school provides an opportunity to create a more flexible and responsive learning environment. The learning process is no longer limited to conventional classrooms, but can be done online or hybrid, allowing students to learn anytime and anywhere. This technology also supports the implementation of a learning management platform (LMS), which makes it easier for teachers and schools to monitor student progress in real-time and provide access to various digital learning resources. Thus, digital school not only improves learning efficiency, but also prepares learners to face

technological dynamics and global challenges in the future (Ayu et al. 2023; Muh Alif Kurniawan et al. 2024).

This research was conducted at SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo. The school was chosen by the author because SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo is categorized as an urban school. In terms of urban schools are schools located in urban areas. The definition is still inaccurate, because not all schools in urban areas have good governance, so they cannot be categorized into urban schools. In this discussion, what is meant by an urban school is a school located in an urban area with good governance, then becomes a superior school (Mohamad Ali 2020). SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo is an urban school with an Islamic background that is well managed, so that this school has become a favorite school in Solo and its surroundings. One of the evidences that shows SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo is a favorite school is the high level of enthusiasm from the community at the time of admission of new students, so that every year SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo always gets new students in accordance with the available quota.

In 2022, Luthfina Riska Aprilia wrote an article entitled *The Effectiveness of Using Digital School Applications in Management of Online Civics Learning* published in *Edukatif: Journal of Education Science*. The problem behind Luthfina's research is that the Covid-19 pandemic that has hit Indonesia has caused learning to be carried out online, so it requires adequate facilities and infrastructure. In addition, online learning also requires teachers to be skilled in utilizing information and communication technology. The results of research conducted by Luthfina show that the concept of digital school is effective and is a medium used for distance learning. The results of the study were obtained by Luthfina based on questionnaires distributed to 36 students in class X (Aprilia and Mediatati 2022).

The similarity between the research conducted by Luthfina and the research conducted by the author is the topic discussed regarding digital schools implemented in formal schools. While the difference is that the research conducted by Luthfina only discusses the application of the digital school concept during learning, while the research conducted by the author discusses the digital school concept as a whole starting from the aspects of the implementation of teaching and learning activities, infrastructure facilities, human resource management systems, and various other aspects. Because there are still aspects that have not been discussed in detail in journals, the author is encouraged to conduct research by raising the topic of digital school as a school concept in an effort to improve the quality of education.

Methods

This research is classified as qualitative research, because the author tries to describe a phenomenon based on the current case, namely the low quality of education in schools. The phenomenon described by the author is a phenomenon that occurs in the field factually, without any engineering. Qualitative research is research that has the aim of describing a phenomenon or problem that befalls individuals or groups. In qualitative research, theoretical studies apply as guidelines when researchers conduct research, especially when collecting data in the field (Nana Syaodih Sukmadinata 2011). This research is classified as a type of field research, because the author enters the research environment with observation, interviews and document studies which are information collection techniques obtained from sources directly. This process takes

place continuously, without a definite set of guidelines and more following the development of situations and conditions in the field (Lexy J. Molleong 2009).

The approach used is a phenomenological approach. The definition of a phenomenological approach is an approach that reveals facts based on phenomena based on a person's experience that has been experienced (Wita and Mursal 2022). The author tries to reveal the concept of digital school at SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo as an effort to improve the quality of education, which is motivated by the phenomenon of the low quality of education today and the emergence of urban schools that have become favorite schools in the community. In this study, the research subjects were the principal and deputy head of curriculum at SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo. In addition, the author also collected data in the form of notes and documents as additional data in this study. Data collection techniques used observation, interview, and document study methods.

This research uses two data validity testing techniques, which consist of credibility and dependability tests. Data can be said to have credibility if it has high trust. This is characterized by the suitability of the reality in the field seen by the sources or informants in the study (Emzir 2014). Meanwhile, the dependability test in this study was carried out by auditing or rechecking the overall research results carefully and thoroughly. At the data analysis stage, the author chose to use an interactive model. According to Miles, Huberman and Saldana, the interactive model consists of data reduction, data presentation and data verification (Miles, Huberman 2014).

Results and Discussion

Profile SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo

SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo is a junior high school located on Jalan Cendana II RT 02 A RW III, Jl. Gempol, Gempol, Gumpang, Kec. Kartasura, Sukoharjo Regency, Central Java. The beginning of the establishment of SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo departed from the aspirations of the Muhammadiyah Kartasura Branch Leadership to establish a junior high school with a special program in the region. This desire received a positive response from the board of BPH SDIT Muhammadiyah Al-Kautsar, which at that time was also thinking about developing a further education level for SDIT graduates.

The groundbreaking of SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo was held on November 10, 2009, coinciding with Heroes' Day. The construction was carried out on an area of 1,200 m², which was obtained through a purchase from the family of Mr. Sastro Widodo with bailout funds from BTN Syariah amounting to Rp 600,000,000.00. The funds were not only used for land acquisition, but also to build four two-story classrooms. To repay the bailout, the construction committee solicited donations from benefactors in the form of monthly contributions. Every month, the committee has to pay Rp 14,450,000 in installments to BTN Syariah for five years.

The current number of students at SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo in the 2024/2025 academic year is 339 students. As shown in table 1.

Table 1: Number of Students for the 2024/2025 Academic Year
SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo

Class	Number of Classes	Number of Students		
		Male	Female	Total
Grade 7	4	64	53	117
Grade 8	4	59	68	127
Grade 9	3	54	41	95
Total	11	177	162	339

As a legal educational institution in Indonesia, SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo has a set of vision, mission, and goals that become the basis or guidelines in every work program implementation formulated by SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo. The vision, mission, and objectives of SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo are shown in table 2.

Table 2. Identity of SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo

Vision	Realizing an Islamic Generation with Achievement and Progress
Mission	<ol style="list-style-type: none"> 1. Instilling the correct Islamic faith; 2. Optimizing the understanding and practice of worship; 3. Forming a person with noble character; 4. Improving academic potential 5. Improving non-academic potential; 6. Improving information technology skills.
School Goals	<ol style="list-style-type: none"> 1. Achievement of belief and practice of the pillars of Islam and the pillars of faith; 2. Achievement of understanding and practice of worship according to HPT Muhammadiyah; 3. Formation of STAF character (Sidiq, Tabligh, Amanah, Fatonah); 4. Realization of the 5S culture (Smile, Greeting, Greeting, Polite, Polite); 5. Achievement of academic achievements at the City District and National levels; 6. The achievement of graduates who master the basic knowledge to continue to higher schools; 7. The formation of critical thinking skills; 8. The achievement of non-academic achievements at the Regency and National levels; 9. The formation of soft skills (communication & social intelligence); 10. The achievement of basic computer skills; 11. The achievement of multimedia skills.

Definition of Digital School

Digital School is an effort to reform education by transforming teachers' teaching practices and actualizing digital-based learning (Lubna, Suhirman, and Prayogi 2024). This concept focuses on increasing the capacity of schools through the utilization of the internet, so that the learning process can take place more effectively and transcend time and space constraints in real life. According to Baruc College in Razak, Digital School is an educational institution that uses various internet-based applications that are interconnected, allowing users to interact and conduct transactions electronically. Thus, Digital School can be defined as a school environment that adopts school resources and capacities in digital form. These applications support various aspects of the school, such as the academic field which includes education and research as the main focus, as well as supporting elements such as administration, curriculum, principals, teaching staff, students, and other facilities (Hernawati, Hafizh, and Rahardja 2024; Inayah et al. 2021).

In this context, the resources or capacity of digital schools can be realized through information systems (IS), including planning, curriculum, administration, data on learners, principals and others. All the information is integrated in a digital school database. In addition to data integration, schools are also equipped with Information and Communication Technology (ICT)-based facilities and infrastructure, where all infrastructure is connected to the internet with adequate capacity. The integration system is divided into two management components, namely the administrative sector and the academic sector, which play an important role in supporting the implementation of education. With the digitalization of school management, various processes can be done online, allowing transactions and access to information from anywhere and anytime.

Thus, it can be concluded that a digital school is a structured system that is able to change the capacity of schools through internet-based integration, enabling online interactions and transactions that can be done anytime and anywhere. Digital schools have superior quality compared to conventional schools that do not utilize technology or the internet, because all services and resources, such as libraries, can be accessed easily without being limited by time and place.

In its implementation, digital school fully incorporates digital technology in the learning process and school management. The implementation of digital schools brings a number of important benefits to education, including increased access to learning materials. Through digital platforms, students can access materials, assignments and other information anytime and anywhere, either by computer or mobile device. This expands the range of learning while supporting more flexible self-learning. Another advantage of digital schools is the improvement of operational efficiency in the school environment. Administrative processes, ranging from attendance, schedule setting, assignment collection, to assessment, can be done digitally. This makes it easier for teachers and school staff to carry out administrative tasks more quickly and accurately, and reduces dependence on the use of paper.

With more efficient management, time usually spent on administration can be redirected to more interactive and meaningful learning activities. Digital schooling also encourages better interaction and collaboration between students, teachers and parents. Digital platforms are often equipped with features such as discussion forums, chat rooms and video conferencing, which make it easier for students to collaborate on projects, ask questions directly to teachers or even discuss their progress with parents. This enriches the learning experience, as students can share

ideas and insights, while parents can more easily monitor their child's educational progress (Purwaningsih et al. 2024).

Schools can start by choosing an appropriate platform, such as a Learning Management System (LMS) or a communication application specialized for education. Schools also need to provide training for teachers and students so that this technology can be utilized optimally. In addition, schools need to ensure technological infrastructure, such as reliable internet networks and adequate digital devices. With careful preparation and effective utilization of technology, digital schools can have a significant positive impact on the quality of education in the school. While the digital school concept offers many advantages, its implementation also brings a number of drawbacks that need to be considered. One major obstacle is the reliance on adequate technology infrastructure. Many schools, especially in remote areas or with limited budgets, may not have access to stable internet or enough digital devices for all students and teachers. This can hinder the smooth flow of learning and result in an access gap between well-facilitated and less fortunate students.

Another drawback of implementing digital school is the potential decrease in direct social interaction between students, teachers and school staff. When most activities are conducted online, there are fewer opportunities for face-to-face interaction. This can have an impact on students' social skills, such as communicating effectively or working together in teams, which are generally developed through face-to-face interactions in a school environment. Without physical interaction, collaborative learning may also be less effective than in-person learning. In addition, digital school may increase the risk of distraction and dependence on technology among students. In a digital environment, students are more easily distracted by social media, games or other online content unrelated to learning. This can disrupt their concentration during the learning process. In addition, excessive use of technology can also have a negative impact on students' physical and mental health, such as vision problems, posture, or even stress from constant exposure to digital devices.

Quality of Education

The Ministry of National Education explains that the quality of education consists of several elements such as input, process and output. In another sense, the quality of education is based on the achievements of students in both academic and non-academic fields (Muhammadiyah and Hardjosoekarto 2021). Education quality is defined by Dzaujak Ahmad as the school's ability to manage school components professionally and effectively, thus adding value to a component based on the prevailing norms or culture (Aliyas, Lambe, and Widyastuti 2020). Based on these two opinions, it can be seen that the quality of education refers to two elements, namely the educational process and the results of education. To achieve a quality education process, it must be supported by various inputs such as methods in learning, infrastructure and various resources that can provide conduciveness in schools. Meanwhile, the output of education is declared quality if the results of learning have a high value.

Sudarwan Danim an education expert, explained that the quality of education can be known based on five factors, including input, process, output, impact, and public perception (Siswopranoto 2022). As shown in table 3.

Table 3. Factors that indicate the quality of education

Aspects	Description
Input	<p>Referring to the input, the quality of education can be seen from several sides such as:</p> <ul style="list-style-type: none"> a. The quality of education refers to the condition of human resources in schools such as educators, educational staff and students; b. Quality of education refers to whether or not material inputs such as books, curriculum, teaching aids, facilities and infrastructure are complete; c. Education quality refers to whether or not software inputs such as organizational structure, regulations and job descriptions are met; d. Quality of education refers to inputs that are ideals or expectations such as through vision, perseverance and motivation.
Process	Education is considered quality if it has the competence of human resources in schools to transform various types of inputs and conditions, thus realizing added value for students.
Output	Education is considered quality if the school can produce students who graduate with advantages in academic and non-academic fields.
Impact	Education is considered quality if it has a positive impact on the surrounding environment and society.
Public perception	Education is considered quality if the school has become a byword in the community because of its achievements and becomes a reference by parents to send their children to school without any intervention from any party.

Philip Crosby explains that there is categorization in the quality of education. Philip Crosby developed the concept as part of the Total Quality Management philosophy. Philip Crosby emphasized the importance of doing the job right from the start, thus reducing the need for improvement and ensuring high quality at every stage of the process (Saril 2019). As shown in table 4.

Table 4. Education quality category

Category	Description
Unacceptable Performance	This level indicates performance or results that do not meet standards or expectations. These results are clearly unacceptable and not in line with objectives or needs. In an educational context, examples may include circumstances where learners are not academically qualified or do not meet set abilities.
Improvable Performance	At this level, performance or results may not meet the standard, but there is still opportunity for improvement. It shows that errors or shortcomings can be found and corrected to achieve the desired standard. Such conditions can occur in educational institutions, where learners may not have understood all the material and require assistance or deeper understanding.
Acceptable Performance	This level indicates that the outcome or performance meets the minimum standards that have been set. While it may not be perfect, it is still acceptable. In an educational context, this could mean that learners have achieved an adequate level of competence or met the academic standards that have been set, although there is still room for improvement.
Excellent Performance	This is the highest level of quality, where performance or results exceed standards and expectations. The product or service is considered outstanding in terms of quality and customer satisfaction. In education, this includes situations where students not only achieve standards, but also demonstrate strong skills, deep understanding, and significant progress above what is expected.

Digital school can be referred to as an effort or strategy made to achieve good quality education. According to the Ministry of National Education, there are four impacts or benefits of education quality strategies in schools, among others: (1) Improve the competence of school principals, educators and education personnel with independence and initiative to manage and utilize available resources; (2) Increasing the sense of empathy of the entire school community and the community around the school in organizing education; (3) Increasing the responsibility of the school principal, student guardians, government and society regarding the quality of the school; (4) Realizing the birth of competition or healthy competition between schools in realizing the quality of education in accordance with the plan that has been set (Suseno et.al, 2023).

Implementation of Digital School Concept in SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo

Mr. Muhammad Rifqi Nugroho as the principal of SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo explained that the concept developed by SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo is currently a digital school. Previously, SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo had the concept of comprehensive guidance or assistance to children. In the concept of comprehensive guidance, students are accompanied intensively in academic, worship, character, social, and health aspects. However, along with the times, the

school has difficulty in explaining the meaning of comprehensive guidance to the community. This is because there is no appropriate measuring tool to measure success in character and social aspects.

Along with the times that resulted in all aspects of life being affected by digitalization, Mr. Muhammad Rifqi Nugroho and his staff formulated a concept for SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo, namely digital school. It is hoped that the digital school concept can have a positive impact on the development of SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo. The digital school concept is implemented gradually starting from school programs, learning activities, to school governance. One of the programs that implement the digital school concept at SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo is the ICT (Information and Communication Technology) class program.

Mr. Muhammad Rifqi Nugroho revealed that the Information and Communication Technology (ICT) program at school is an important part of realizing the digital school concept. This concept aims to integrate information and communication technology in every aspect of education, both in the learning process, school management, and interaction with the entire school community. Ibu Irma Rahmawati as the deputy head of curriculum also stated that with the ICT program, learning can be more effective and interactive by utilizing various digital platforms, such as Learning Management Systems (LMS), e-learning, virtual classes, and computer-based examinations. Digital schools allow students to access learning materials and resources flexibly anytime and anywhere. In addition, the program also equips students with digital skills that are highly relevant to the times, such as digital literacy and the use of productivity software.

In practice, digital school is supported by technological infrastructure, such as internet networks, smart devices, and learning applications. Teachers and students at SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo are also given training to be able to utilize technology optimally. On the other hand, Mr. Muhammad Rifqi Nugroho explained that the digital school concept supports integrated school management, where academic administration and student data are managed through a digital-based system to increase efficiency. Not only does it improve the quality of learning, this concept also facilitates collaboration between students and teachers through an online platform.

Students of SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo in carrying out the learning process have utilized laptop devices, so that the use of textbooks has been minimized. Therefore, teachers at SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo are required to create learning modules that can be accessed through laptop or tablet devices. The reason for implementing this policy is so that students at SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo can feel the culture of students whose learning has utilized technological devices, so that with this policy it is hoped that students of SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo when pursuing education at the university level are experts in utilizing information and communication technology devices in the learning process.

The use of laptops as learning media has many benefits that can support the teaching and learning process effectively and efficiently. First, access to information and learning resources becomes wider and more flexible. Students and teachers can access teaching materials from the internet, e-learning platforms, and learning applications anytime and anywhere. In addition, laptops also enable multimedia-based learning, such as interactive videos, simulations, or digital

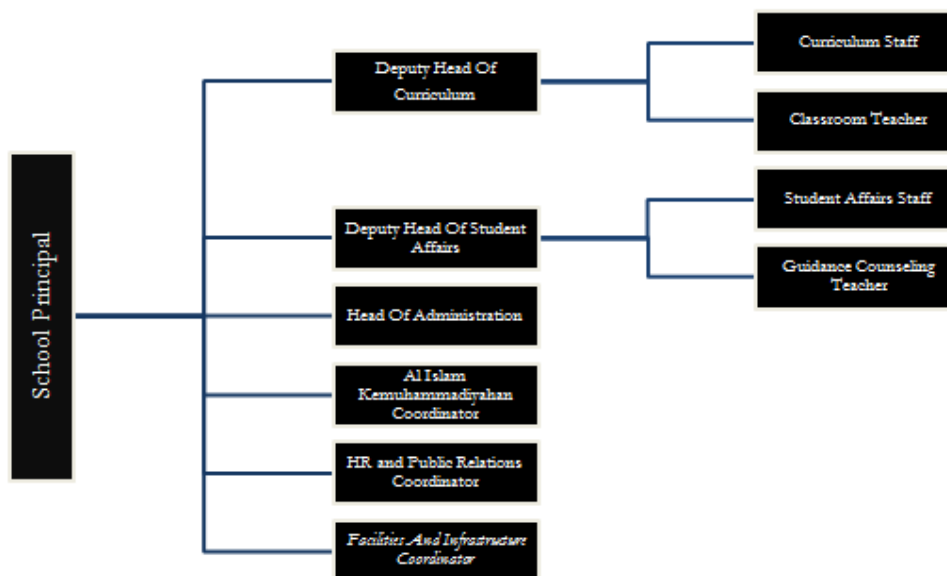
presentations, so that materials are easier to understand and attract students' interest. The effect of laptop use on student achievement has been tested, where students who utilize laptops or computers as learning media have better achievement than students who do not utilize laptops or computers in their learning (Alexandro and Situmorang 2021).

In governance, SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo has utilized data-based applications. Mrs. Irma Rahmawati mentioned that for the management of facilities and infrastructure, licensing, attendance, finance, and administrative systems have been based on applications. So that management becomes more effective and efficient. However, Mr. Muhammad Rifqi Nugroho revealed that although the governance of SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo has utilized the application, until now there are still developments in the system. It is hoped that SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo will have an independent system that can be managed to be utilized in various needs at school.

The implementation of the digital school concept at SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo provides evidence that the school has tried to realize a school that has good quality. Digital school can only be implemented in schools that are willing to prepare all the needs required in this concept. A quality school is not created spontaneously, nor is it solely based on the facilities owned. A quality school requires careful planning and implementation. The commitment of all school members and stakeholders is an integral part of creating a quality school. There are six requirements that must be met to become a quality school, including: 1) Providing a friendly and supportive classroom atmosphere; 2) Learners should be directed to do useful tasks; 3) Learners are required to complete tasks to the best of their ability; 4) Doing quality work that always gives satisfaction; 5) Learners are given learning and opportunities to evaluate their own work, and then asked to improve it; 6) Providing quality work is never a disadvantage (Heryanto, Supratno, and Roesminingsih 2023).

In implementing the digital school concept at SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo, it is supported by adequate human resources. The following is presented the organizational structure of SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo in figure 1.

Figure 1. The organizational structure of
SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo



The Impact of the Digital School Concept at SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo

The impact obtained by SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo after implementing the digital school concept, among others, the quality of the school has increased. Mr. Muhammad Rifqi Nugroho explained that every year SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo experiences an increase in terms of new student applicants. Because according to Mr. Muhammad Rifqi Nugroho, the quality of the school can be seen from how many people are interested in the school. Mr. Muhammad Rifqi Nugroho's expression is in line with Sudarwan Danim's theory which says that education is considered quality if the school has become a byword in the community because of its achievements and has become a reference for parents to send their children to school without any intervention from any party (Siswopranoto 2022).

The digital school concept makes school management or governance easier. This was conveyed by Mr. Muhammad Rifqi Nugroho who revealed that after the implementation of the digital school concept, schools can carry out management stages more effectively and efficiently. For example, attendance whose barcodes are affixed to every corner of the building, making it easier for attendance and return attendance. Mrs. Irma Rahmawati as the deputy head of the curriculum really appreciates the digital school concept implemented at SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo, because along with technological developments it will make life more effective and efficient.

With the concept of digital school, it requires SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo to build supporting infrastructure. This resulted in progress in terms of facilities and infrastructure at SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo. For example, a stable internet network, because one of the main keys to the success of digital school is a stable internet network. With a stable internet network, learning activities can run smoothly. Although there is a positive impact of implementing digital school in schools, it is necessary to realize that the use of information and communication technology also has negative impacts such as changes in values, norms, rules, and morals of life caused by globalization that easily enter through internet devices (Subagio and Limbong 2023).

Mrs. Irma Rahmawati also said that the digital school concept implemented by SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo has a positive impact on the progress of SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo. For example, the objectives of each program that have been formulated can be achieved effectively through the use of information and communication technology systems applied in this school. In addition, students become enthusiastic in the classroom when following the lessons delivered by the teacher because the utilization of digital devices provides interesting learning materials, such as audio and visual. This is in accordance with constructivist theory which states that learning occurs through interaction between students and the learning environment, so the concept of digital school with the utilization of technological advances can be a tool to enrich students' learning experiences and increase students' motivation in learning (Puja 2024).

To increase the benefits of implementing the digital school concept in schools, it can be done in several ways: First, providing regular training for teachers and staff to strengthen their ability to utilize educational technology optimally, so that they can design interactive and immersive digital learning. Second, improving technological infrastructure, such as faster internet networks and adequate digital devices, so that digital learning can run smoothly without technical barriers. Third, involve parents and the school community in the digital literacy program to create a positive supportive environment outside the classroom. It is also important to integrate a regular monitoring and evaluation system to ensure the effectiveness of the digital school program and make adjustments as needed. With this approach, the benefits of digital school can be continuously enhanced, providing engaging and relevant learning experiences for students and supporting the overall quality of school education.

Developing digital learning content that is curriculum-aligned and engaging for students can enrich their learning experience. This can be done by utilizing e-learning platforms, educational videos, interactive apps and project-based materials that challenge students' creativity. Collaborating with external parties, such as technology companies or universities, can also provide additional support in the form of resources, specialized training or supporting software. Strengthening the security of data and information systems in schools is also important to maintain the digital privacy and security of students and school staff. With these steps, the implementation of the digital school concept in schools will be more comprehensive, secure and able to have a greater positive impact on all stakeholders.

Conclusion

Digital School is an effort to reform education by transforming teachers' teaching practices and actualizing digital-based learning. This concept focuses on increasing the capacity of schools through the utilization of the internet, so that the learning process can take place more effectively and transcend time and space constraints in real life. Currently, SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo is implementing the digital school concept.

In its application, digital school is realized through several aspects such as the existence of ICT programs or classes, minimizing the use of books, utilizing laptops as learning media, and system-based school governance. In applying the concept of digital school, there are impacts obtained such as the quality of the school being improved as evidenced by the increase in new student registrants at SMP Muhammadiyah Al-Kautsar PK Kartasura Sukoharjo every year. The digital school concept also makes school management or governance easier and there is progress

in terms of facilities and infrastructure to support the digital school concept. However, the high interaction of students with digitalization also has a negative impact such as changes in values, norms, rules, and morals of life caused by globalization obtained from the internet.

References

- Alexandro, Rinto, and Nurwetty Miduk Arta Situmorang. 2021. "Dampak Pemanfaatan Laptop Sebagai Media Pendukung Belajar Terhadap Prestasi Mahasiswa." *Jurnal Imiah Pendidikan Dan Pembelajaran* 5(3):510. doi: 10.23887/jipp.v5i3.39216.
- Aliyas, Hasbi Lambe, and Elvika Widyastuti. 2020. "NineStars Education : Jurnal Ilmu Pendidikan Dan Keguruan Implementasi Manajemen Pendidikan Berbasis Sekolah Dalam Meningkatkan Mutu Pendidikan Agama Islam." *NineStars Education: Jurnal Ilmu Pendidikan Dan Keguruan* 1(2):105–14.
- Aprilia, Luthfina Riska, and Nani Mediatati. 2022. "The Effectiveness of Using Digital School Applications in Management of Online Civics Learning." *Edukatif: Jurnal Ilmu Pendidikan* 4(4):6101–9. doi: 10.31004/edukatif.v4i4.3610.
- Ayu, Regita, Anggi Afrina Rambe, Muhammad Nurfaizi Arya Rahardja, Annisa Ningtias Cevie Putri, Aceng Kosasih, and Agus Fakhruddin. 2023. "Exploring the Concept of Wahdatul Wujud Ibn Arabi: Potential Solutions for Juvenile Delinquency in Indonesia." *Kalimah: Jurnal Studi Agama Dan Pemikiran Islam* 21(1):49–62.
- Dwi Setyo Irawanto. 2023. "SD Negeri Ditinggalkan, Sekolah Swasta Diburu." *Datanes* 1.
- E. Mulyasa. 2019. *Manajemen & Kepemimpinan Kepala Sekolah*. Jakarta: PT Bumi Aksara.
- Emzir. 2014. *Metodologi Penelitian Kualitatif: Analisis Data*. Jakarta: Rajawali Pers.
- Hernawati, Sari, Muhammad Hafizh, and Muhammad Nurfaizi Arya Rahardja. 2024. "Adjusting the Ideal Islamic Religious Education Curriculum to the Development of AI-Based Technology." *Progresiva: Jurnal Pemikiran Dan Pendidikan Islam* 13(01):129–44.
- Heryanto, D., H. Supratno, and E. Roesminingsih. 2023. "Democratic Leadership Of The School Principle In Growing Teacher Professionalism." *Journal of Law and Sustainable Development* 11(7). doi: 10.55908/sdgs.v11i7.929.
- Ilyasa, Faisal Fauzan, Muhammad Nurfaizi Arya Rahardja, Mokh Iman Firmansyah, Achmad Faqihuddin, and Abdillah Muflih. 2024. "Implementation of ARKA Model (Aktivitas, Refleksi, Konseptualisasi, Aplikasi) in PAI Learning: Building 21st Century Competencies." *Al-Tadzkiyyah: Jurnal Pendidikan Islam* 15(1):179–95.
- Inayah, Khusnul, Eva Yuli Nor Farika, Ahmida Nurronia, Elya Umi Hanik, Program Pendidikan Guru Madrasah Ibtidaiyah, Fakultas Tarbiyah, and Iain Kudus. 2021. "Pengembangan Digital School System Dalam Menghadapi Era Society 5.0 Di Sekolah Indonesia Kuala Lumpur (SIKL)." *Journal of Educational Integration and Development* 1(3):2021.
- Lexy J. Molleong. 2009. *Metode Penelitian Kualitatif*. Bandung: PT Remaja Rosdakarya.
- Lubna, L., S. Suhirman, and S. Prayogi. 2024. "Hybrid Information Technology Learning Based on Project Work to Enhance Students' Design Thinking in Creating Digital Innovations." *International Journal of Learning, Teaching and Educational Research* 23(8):447–67. doi: 10.26803/ijlter.23.8.23.
- Miles, Huberman, Saldana. 2014. *Qualitative Data Analysis, A Methods Sourcebook*. Jakarta: UI Press.
- Mohamad Ali. 2020. *Menggerakkan Pendidikan Muhammadiyah*. Surakarta: Muhammadiyah Univesity Press.
- Mohamed, Zulkifley, Nor Hasbiah Ubaidullah, Noor Wahida Md Junus, Kasthuri Devi Angamuthu, and Ahmad. 2024. "Modelling Computational Thinking with Game-Based Learning among Primary School Students'." *International Journal of Evaluation and Research in Education* 13(6):4115–24. doi: 10.11591/ijere.v13i6.28395.
- Muh Alif Kurniawan, Fandi Akhmad, Diyah Puspitarini, and Zalik Nuryana. 2024. "The

- Dynamics of Utilizing Youtube to Enhance the Quality of Islamic Education Learning.” *At Turots: Jurnal Pendidikan Islam* 6(1):331–42. doi: 10.51468/jpi.v6i1.525.
- Muhammaditya, Nur, and Sudarsono Hardjosoekarto. 2021. “Divergensi Transformasi Digital Pengelolaan Bank Soal Menghadapi Era Masyarakat 5.0.” *Jurnal Pendidikan Dan Kebudayaan* 6(1):54–77. doi: 10.24832/jpnk.v6i1.1893.
- Nana Syaodih Sukmadinata. 2011. *Metode Penelitian Pendidikan*. Bandung: PT Remaja Rosdakarya.
- Puja, I. B. P. 2024. “The Mediating Role of Online Learning Motivation in the Influence of Service Quality, Social Media Usage, and Pedagogical Teaching Competence of Teachers on Student Learning Satisfaction.” *Cogent Social Sciences* 10(1). doi: 10.1080/23311886.2024.2396934.
- Purwaningsih, S., C. Riantoni, D. Ropawandi, and D. Novallyan. 2024. “Mapping Students’ Thinking Systems In Critical Thinking Based On Stem Project-Based Learning Experiences.” *Jurnal Ilmiah Ilmu Terapan Universitas Jambi* 8(1):136–44. doi: 10.22437/jiituj.v8i1.32027.
- Rahardja, Muhammad Nurfaizi Arya, Anggi Afrina Rambe, Miftahul Jannah Akmal, Annisa Ningtias Cevie Putri, Regita Ayu Dwietama, and Endis Firdaus. 2024. “Menuju Super Smart Era 5.0: Tantangan Baru Dan Pengembangan Kurikulum Pendidikan Agama Islam.” *Al-Hikmah: Jurnal Agama Dan Ilmu Pengetahuan* 21(1):65–82. doi: [https://doi.org/10.25299/al-hikmah:jaip.2024.vol21\(1\).16480](https://doi.org/10.25299/al-hikmah:jaip.2024.vol21(1).16480).
- Rambe, Anggi Afrina, Regita Ayu Dwietama, Muhammad Nurfaizi Arya, Endis Firdaus, and Rini Rahman. 2024. “Implementasi Pendidikan Karakter Dalam Kurikulum 2013.” *Al-Hikmah: Jurnal Agama Dan Ilmu Pengetahuan* 21(2):238–49.
- Saril, SARIL. 2019. “Total Quality Management (Tqm) Sebagai Wujud Peningkatan Mutu Pendidikan.” *Adaara: Jurnal Manajemen Pendidikan Islam* 9(2):963–72. doi: 10.35673/ajmpi.v9i2.430.
- Shilvina Widi. 2023. “Data Kualitas Pendidikan Siswa Di Indonesia Berdasarkan Hasil PISA 2022.” *DataIndonesia.Id* 1.
- Siswopranoto, Mokh. Fakhruddin. 2022. “Standar Mutu Pendidikan.” *Al-Idaroh: Jurnal Studi Manajemen Pendidikan Islam* 6(1):17–29. doi: 10.54437/alidaroh.v6i1.372.
- Subagio, I. Komang Adil, and Asnah Marlina N. Limbong. 2023. “Dampak Teknologi Informasi Dan Komunikasi Terhadap Aktivitas Pendidikan.” *Journal of Learning and Technology* 2(1):43–52. doi: 10.33830/jlt.v2i1.5844.
- Sulisworo, D., D. A. Kusumaningtyas, A. B. Anomeisa, and W. Rahmadhani. 2020. “Perceptions of Online Learning Experiences between Students in Urban and Remote Areas: Case Study in Indonesia.” *International Journal of Scientific and Technology Research* 9(2):4850–54.
- Suseno, M., M. Akbar, and A. Arifin. 2023. “Impact Evaluation of the Internal Quality Assurance Systems on the Teacher Learning Quality in Indonesia.” *Journal of Higher Education Theory and Practice* 23(13):62–70. doi: 10.33423/jhetp.v23i13.6318.
- Wardani, Risma, and Mutohharun Jinan. 2024. “Analysis of Islamic Religious Education Teacher Policy in the Islamic Religious Education Learning Process for Inclusive Class at Muhammadiyah High School 6 Surakarta.” *Journal of ICSAR* 8(1):180. doi: 10.17977/um005v8i1p180.
- Wicaksana, Faizal Adira, and Nurul Latifatul Inayati. 2023. “Inovasi Kepala Sekolah Dalam Mengembangkan Sekolah Berkemajuan Di SMK Negeri 2 Surakarta.” *At Turots: Jurnal Pendidikan Islam* 5(001):147–55. doi: 10.51468/jpi.v5i001.263.
- Wita, Gusmira, and Irhas Fansuri Mursal. 2022. “Fenomenologi Dalam Kajian Sosial Sebuah Studi Tentang Konstruksi Makna.” *Titian: Jurnal Ilmu Humaniora* 6(2):325–38. doi: 10.22437/titian.v6i2.21211.
- Zefanya Aprilia. 2023. “Bukan Cuma Teknologi Pendidikan RI Butuh Ini.” *CNBC Indonesia* 1.

