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Data Digitization Strategy through A Google Site-based School Data Collection Site at SMP Negeri 1 Montasik

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Abstract

This research aims to examine data digitalization strategies through the Google Site-based school data collection site at SMP Negeri 1 Montasik. The research method used is descriptive research with a qualitative and quantitative approach (mixed method). Data was collected through questionnaires, interviews, and observations. The research results show that the implementation of a Google Site-based school data collection site at SMP Negeri 1 Montasik has increased data management efficiency, accelerated the data collection and processing process, and increased data accuracy. Benefits include operational efficiency, deeper data analysis, easy access to information, and better decision-making. However, this research also identified several challenges and obstacles faced, including limited staff knowledge and skills, technical and infrastructure constraints, and resistance to change among teachers and administrative staff. Based on the findings of this research, the recommendations given are to improve staff training and education in the use of school data collection sites, improve technological infrastructure, and implement effective communication programs to overcome resistance to change. Apart from that, it is also important to encourage collaboration between teachers and administrative staff, as well as carry out regular evaluation and monitoring of the implementation of the Google Site-based school data collection site. It is hoped that this research can contribute to the development of a data digitization strategy through a Google Site-based school data collection site at SMP Negeri 1 Montasik and provide insight to other schools about the benefits, challenges, and recommendations related to using this strategy.

Keywords: Strategy, Data Digitalization, Google Site

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INTRODUCTION

In the digital era that continues to develop, the use of information technology has become something that cannot be separated in various areas of life, including the education sector (Ruddamayanti, 2019). Education is one sector that is greatly influenced by the development of information and communication technology. The use of technology in education not only facilitates access to a wider range of information and learning resources but also allows for more efficient and accurate data processing. Data digitization facilitates better collaboration between schools, parents, and external stakeholders. Integrated and accessible data provides a strong basis for dialogue, partnership, and coordination in efforts to improve the quality of education (Qashdina, 2018). This is the same as Siregar's (2019) statement, which states that with easy access to academic data and other related information, students can be more actively involved in planning and making decisions about their education. They can set goals, measure progress, and contribute to their own learning planning.

According to Mustofa (2018), by digitizing data, human errors in manual processes can be reduced. Dienillah (2018) also stated that the archive/data digitization process is useful for securing, saving, and preserving information, both physically and the information content in it, so that it can be used in the future. This is in line with Fernanda (2021). Data digitization has a number of advantages and benefits, including allowing fast and easy access to information stored in digital format, allowing it to be changed and updated easily without compromising the integrity of the original data, allowing it to be easily expanded and adapted to growing information needs, facilitating collaboration between individuals and teams by enabling shared access to centralized data, and allowing it to be easily analyzed using advanced data analysis tools and techniques.

Digital data can be text, images, sound, or a combination of the three. Data digitization involves the use of information technology to convert, edit, and store data in digital format. (Muhasim, 2017). According to Andani (2018), data digitization refers to the process of changing data that was originally in physical or analog form into a digital format that can be easily managed, stored, and accessed via electronic devices. By digitizing data, schools can reduce their dependence on manual processes that are time-consuming and prone to errors.

Research from Purnamasari (2023) regarding the development of interactive media based on the Google Site website for learning mathematics on fractions shows that the research results show that interactive media based on the Google Sites website for learning mathematics on fractions was developed using the ADDIE model, which includes analysis, design, development, implementation, and evaluation. Based on the results of research data, it has been concluded that the development of interactive media based on the Google Sites website for learning mathematics with fraction material is very feasible and effective for use in learning. Apart from that, research from Sari (2022) regarding the development of website learning media based on Google Sites to improve the ability to identify Pancasila values also shows that website media based on Google Sites is suitable for use to increase the ability to identify Pancasila values. It is hoped that Google Sites-based website media can be further developed by teachers or

advanced researchers. Also, research from Setyawan (2019) regarding the development of Google Site Media in Classical Guidance at SMAN 1 Sampung found that Google Site web media was accepted and suitable as classical guidance media. To get wider benefits, it is recommended to arrange media for other material content.

SMP Negeri 1 Montasik is one of the junior high schools with state status located in Montasik sub-district, Aceh Besar district, Aceh province, Indonesia. This school is trying to develop a digitalization system that aims to save paper usage so that it is more environmentally friendly and efficient. At SMP Negeri 1 Montasik, efforts to digitize data were carried out through the implementation of a school data collection site based on Google Sites. A Google Sites-based school data collection site is a platform specifically designed to help schools collect, store, manage, and analyze school data efficiently. However, in-depth research still needs to be carried out to examine data digitization strategies through the Google Sites-based school management site at SMP Negeri 1 Montasik.

With this research, it is hoped that it will be known to what extent the implementation of a Google Sites-based school management site has provided benefits in data processing at SMP Negeri 1 Montasik. Apart from that, this research will also identify challenges and obstacles that may hinder the adoption of a Google Sites-based school data collection site and provide recommendations for maximizing the benefits of data digitization through a Google Sites-based school data collection site at SMP Negeri 1 Montasik.

Through a deeper understanding of data digitization strategies and the implementation of a school data collection site based on Google Sites, it is hoped that SMP Negeri 1 Montasik and other schools can optimize the use of information technology to increase efficiency, accuracy, and effectiveness in managing educational data.

METHOD

This research will use qualitative and quantitative approaches. Mixed research is a research approach that combines qualitative research with quantitative research (Creswell, 2018). Meanwhile, according to Sugiyono (2019), mix methods are research methods that combine two research methods at once, qualitative and quantitative, in a research activity so that more comprehensive, valid, reliable, and objective data will be obtained. A qualitative approach was used to gain an in-depth understanding of the perceptions, attitudes, and experiences of research participants regarding the implementation of a Google Site-based school data collection site and the benefits of data digitization. A quantitative approach is used to collect numerical data that can be measured statistically to test hypotheses and get a general idea of the effectiveness of data digitization strategies on this site. The research procedure that will be used is mixed research (mixed methods). Mixed research combines the collection and analysis of qualitative and quantitative data in one study. This approach allows researchers to gain a comprehensive and in-depth understanding of the phenomenon under study.

The population of this study was all students, teachers, and administrative staff at SMP Negeri 1 Montasik. According to Handayani (2020), population is the totality of each element to be studied that has the same characteristics; it could be individuals from a group, an event, or something to be studied. The research sample will be selected using random sampling techniques. The number of samples taken will be determined based on consideration of relevant statistical needs. (1 principal, 7 teachers, 6 parents, 7 community members, 5 students, and 5

education staff) The total sample in this study was 30. According to Arikunto (2019), the sample is part of the population, which is the source of data in research, where the sample is part of the number of characteristics possessed by the population.

Instruments Data collection will be carried out using several techniques, namely: (1) questionnaires, Questionnaires are given to respondents in the form of questionnaires and then answered for data collection. (Ansori, 2020). Questionnaires will be used to collect quantitative data from students, teachers, and administrative staff regarding perceptions, experiences, and benefits of data digitization through the Google-based school data collection site. The questionnaire will contain questions with certain answer choices that can be measured and analyzed statistically. (2). An interview is a conversation with a specific purpose carried out by two parties. Namely, the interviewer asks questions and the interviewee provides answers to those questions with the aim of constructing people, events, organizations, feelings, motivations, demands, concerns and so on (Moleong, 2018). Interviews will be conducted with several participants selected purposefully to gain an in-depth understanding of the implementation of the Google site-based school data collection site and the benefits of data digitization. Interviews will be recorded and analyzed qualitatively. (3). Observations, in this study, passive participant observation was used, that is, the researcher came to the location of the activity of the person being observed but was not involved in the activity (Fernandes, 2018). Observations will be carried out to directly observe the data digitization process and the use of the Google site-based school data collection site at SMP Negeri 1 Montasik. Observations will include participatory observation and non-participatory observation.

Data analysis will be carried out using an approach appropriate to the type of data collected, namely: (1). According to Riyanto (2020), quantitative analysis is research based on the philosophy of positivism to examine certain populations or samples and random sampling by collecting data using instruments. Data analysis is statistical in nature. Quantitative data obtained from the questionnaire will be analyzed statistically using techniques such as descriptive analysis, hypothesis testing, and regression analysis. (2). Qualitative analysis, According to Nurdin (2019), qualitative analysis is a research method based on philosophy that is used to research scientific conditions (experiments) where the researcher is the instrument. Data collection techniques and qualitative analysis place more emphasis on meaning. Qualitative data obtained from interviews and observations will be analyzed thematically by identifying patterns, themes, and categories that emerge. This analysis will involve data coding, thematic grouping, and in-depth interpretation.

Through research methods that include qualitative and quantitative approaches, mixed research designs, random sampling, and the use of appropriate data collection and analysis techniques, it is hoped that this research can provide a comprehensive understanding of data digitization strategies through the Google site-based school data collection site at SMP Negeri 1 Montasik and the benefits derived from its implementation.

FINDING AND DISCUSSION

The process of implementing the Google site-based school data collection site at SMP Negeri 1 Montasik was successful. The school has trained staff and teachers on the use of the Google site-based school data collection site and provided the necessary technical support. It

was found that the use of the Google site-based school data collection site has increased efficiency in collecting, storing, and managing data in schools. Most respondents considered that the implementation of a Google-based school data collection site had made the data processing process easier and saved time. Digitizing data at SMP Negeri 1 Montasik is an important step in facing the era of information technology. By utilizing digital technology, schools can increase efficiency, transparency, and accuracy in data management.

Data digitization eliminates the need for space-consuming physical storage and allows data to be stored in electronic format. The process of finding and using data becomes faster and more efficient. Administration data, such as student data, teacher data, and other administrative data, can be easily accessed and managed. With digitally stored data, work that previously took a long time, such as archiving and searching for data, can be completed in seconds. In addition, reducing the use of paper and pens can save costs on buying paper, printer ink, and writing equipment. Digital data can be structured well and is more accurate than physical data. With the right security system, data can be protected from unauthorized access. Data backups can also be performed regularly, reducing the risk of losing important information. With well-recorded data, schools have access to the information they need to make decisions based on facts. Data analysis can also help schools identify trends and patterns, enabling smarter, more informed decisions.

Digitizing data at SMP Negeri 1 Montasik also allows better collaboration between teachers, students, and parents. Information can be easily shared and updated in real-time, enabling more interactive project collaboration, discussions, and learning. Digital systems allow the use of algorithms and data analysis to evaluate student performance more accurately. This can help teachers understand students' strengths and weaknesses in more depth, allowing for the development of more effective teaching strategies. Data digitization introduces students to technology from an early age, helping them develop important technology skills for the future. The use of educational software and applications can also improve students' digital literacy. With more efficient and automated administrative processes, teachers can reduce their administrative workload. This allows them to focus on teaching and curriculum development, creating a better learning experience for students.

With these benefits, digitizing data in schools not only increases administrative efficiency but also improves the quality of teaching, learning, and the overall educational experience. This is similar to the lines of Qashdina (2018) and Siregar (2019). The use of technology in education not only facilitates access to a wider range of information and learning resources but also allows for more efficient and accurate data processing. Data digitization facilitates better collaboration between schools, parents, and external stakeholders. Integrated and accessible data provides a strong basis for dialogue, partnership, and coordination in efforts to improve the quality of education. With easy access to academic data and other related information, students can be more actively involved in planning and making decisions about their education. They can set goals, measure progress, and contribute to their own learning planning.

Respondents stated that digitizing data through the Google-based school data collection site provided significant benefits in terms of efficiency, accuracy, and data accessibility. The most striking benefit is the ability to perform data analysis quickly and obtain more in-depth information about student performance. Teachers revealed that the benefits of digitizing data through the Google-based school data collection site helped in more effective learning planning and better decision-making. This is in line with Bienillah (2020) and Fernanda (2021), who

believe that the process of data archiving and digitization is useful in securing, storing, and preserving information both physically and in its content for possible future use. Digitizing data has a number of advantages and benefits, including allowing quick and easy access to information stored in digital format, which can be easily modified and updated without affecting the integrity of the original data, can be easily expanded and adapted to growing information needs, and facilitates collaboration between individuals and groups in a way that allows common access to centralized data that can be easily analyzed using advanced data analysis tools and techniques.

The research results show that the implementation of a Google Site-based school data collection site at SMP Negeri 1 Montasik has succeeded in increasing the efficiency and effectiveness of data management in schools. The use of Google Site-based school data collection sites in data digitization has accelerated the data collection and processing process, reduced the risk of human error, and increased data accuracy. Teachers and administrative staff feel real benefits from the ability of the Google Site-based school data collection site to carry out more in-depth data analysis. The benefits obtained from digitizing data through the Google Site-based school data collection site are very important in increasing the effectiveness of data management activities at SMP Negeri 1 Montasik. Operational efficiency increases, decision-making is supported by accurate data analysis, and data accessibility becomes easier. These benefits have a direct impact on more effective lesson planning, monitoring student progress, and improving the overall quality of education.

CONCLUSION

Based on the results of research on data digitalization strategies through the Google Site-based school data collection site at SMP Negeri 1 Montasik, the implementation of the Google Site-based school data collection site at SMP Negeri 1 Montasik has succeeded in increasing the efficiency and effectiveness of data management at school. The use of a Google Site-based school data collection site at SMP Negeri 1 Montasik in data digitization speeds up the process of collecting, storing, and processing data, as well as increasing data accuracy. Digitizing data through the Google Site-based school data collection site at SMP Negeri 1 Montasik provides significant benefits for students, teachers, and administrative staff. Perceived benefits include operational efficiency, deeper data analysis, easy access to information, and better decision-making. Data digitization at SMP Negeri 1 Montasik has had a significant positive impact on the world of education. This transformation not only changes the way schools manage information but also improves the quality of teaching, learning, and the student experience. From administrative efficiencies to increased student engagement, the benefits of data digitization are far-reaching. Teachers can focus on teaching and mentoring, while students and parents get better access to academic information.

Not only that, data digitization also introduces students to technology, helping them develop skills that are much needed in this digital era. The use of technology not only makes teaching easier but also creates a dynamic and interactive learning environment.

Thus, data digitization at SMP Negeri 1 Montasik is not just a technological innovation but also the foundation for the future of education. With thoughtful and sustained

implementation, education can become more inclusive, efficient, and relevant, preparing future generations to face global challenges with the confidence and skills required.

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