



Optimizing Dapodik Data Management in the Digital Era: Case Study of SMA Negeri 1 Krian

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Abstract: This article aims to analyze the management of Dapodik digital administration data at SMA Negeri 1 Krian. The research method used is descriptive qualitative, with data collection through observation, interviews, and documentation. The results showed that Dapodik data management involves planning, organizing, implementing, and controlling. However, there are several obstacles such as data discrepancies, slow servers, and system changes. Scientific findings indicate the importance of improving system efficiency and the accessibility of school operators in correcting data independently. In conclusion, optimizing Dapodik data management requires system improvements and capacity building for school operators.

Keywords: Data Management, Educational Administration, Digital Transformation

Introduction

In the increasingly advanced digital era, data management has become a crucial aspect in various sectors, including education (Arif et al, 2024). Effective and efficient data management allows educational institutions to make the right decisions, improve service quality, and achieve the set goals (Jayanthi et al, 2022) (Irwan et al, 2024). The Basic Education Data (Dapodik) is an important instrument for the Indonesian government to collect, manage, and utilize education data nationally (Musakirawati, et al, 2023) (Fitrian et al, 2024). The purpose of Dapodik data management is to provide accurate, valid and up-to-date information on various aspects of education, ranging from data on students, teachers, to facilities and infrastructure (Handayani et al, 2024). The benefits of good Dapodik data management are to support the planning, budgeting, and evaluation of education programs, as well as to increase the accountability and transparency of education management (Diantari, 2024).

However, the implementation of Dapodik in Indonesia is not free from various problems and challenges. Based on data released by the Ministry of Education and Culture, there are still a number of schools that experience difficulties in managing Dapodik data, such as data mismatches, delays in filling, and lack of understanding by school operators (Harahap, 2022). This phenomenon shows that there is a gap between expectations and

reality in managing Dapodik data in the field. The role of the community, especially schools, is very important in facing this digital era. Schools need to increase human resource capacity, improve technological infrastructure and build a data-aware culture to ensure optimal Dapodik data management (Rosana, 2022) (Sholichah et al, 2023).

Several studies have shown that effective Dapodik data management can improve the efficiency and effectiveness of education programs. For example, research conducted by (Sinaga et al, 2024) shows that schools with good data management systems tend to perform better in terms of student achievement, teacher quality and financial management. However, another study (Shakira, 2024) found that many schools still face obstacles in managing Dapodik data, such as limited resources, lack of training, and technical issues. Dapodik data management is an information management theory, which emphasizes the importance of collecting, storing, processing, and disseminating accurate and timely information to support decision-making (Faridah, 2023). The importance of using information and communication technology (ICT) to improve the efficiency and effectiveness of information management (Tiara, 2023).

Dapodik should be an accurate and reliable source of data to support education policy-making. However, in practice, there are still many data that are invalid, incomplete or not up-to-date. This gap shows the importance of an in-depth study of the factors affecting Dapodik data management and the efforts that can be made to overcome them. The purpose of this study is to analyze Dapodik data management at SMA Negeri 1 Krian, identify factors that influence data management, and provide recommendations to improve the effectiveness of Dapodik data management. The basic concept used in this research is data management, which includes data collection, storage, processing, and dissemination.

Methodology

This research uses a descriptive qualitative approach to analyze Dapodik data management at SMA Negeri 1 Krian. The descriptive qualitative method was chosen because it aims to understand and describe the phenomenon of data management in depth and comprehensively (Creswell et al, 2010). This research focuses on extracting information from various data sources to provide a detailed and contextualized picture of Dapodik data management practices at the school. The type of research used is a case study. Case studies were chosen because they allow researchers to explore in depth a phenomenon in a real-world context. In this research, a case study is used to understand how SMA Negeri 1 Krian manages Dapodik data, the challenges faced, and the strategies used to overcome these challenges. Observation was conducted to directly observe the Dapodik data management process at SMA Negeri 1 Krian. Observations included observing data entry activities, data validation, data synchronization, and the use of Dapodik data for decision making. In-depth interviews were conducted with various parties involved in Dapodik data management, such as the principal, Dapodik operators, teachers, and administrative staff. The interviews aimed to gather information about their perceptions, experiences and expectations regarding Dapodik data management.

Documentation was conducted by collecting various documents related to Dapodik data management, such as Dapodik guidebooks, Dapodik reports, decision letters, and other documents. Documentation aims to complement and validate the data obtained through observations and interviews.

Data analysis was conducted qualitatively using the content analysis technique Miles et al., (2014). The content analysis technique was used to identify important themes that emerged from observation, interview and documentation data. The data analysis process includes:

1. Data reduction, summarizing and focusing data relevant to the research objectives.
2. Data Presentation, presenting data in the form of narratives, tables, and graphs to facilitate understanding.
3. Drawing Conclusions, drawing conclusions based on data that has been analyzed and presented (Miles et al, 2014).

Result and Discussion

A. Dapodik Data Management Process at SMA Negeri 1 Krian

SMA Negeri 1 Krian is one of the public high schools located in Sidoarjo Regency. This school has a long history and has contributed a lot in educating the nation's life. SMA Negeri 1 Krian has a vision to become a superior school that produces qualified graduates with noble character and global insight. To achieve this vision, the school continues to improve the quality of education, including in terms of Dapodik data management. Based on the results of observations, interviews and documentation, the Dapodik data management process at SMA Negeri 1 Krian includes several stages, namely:

1. Data collection: Data were collected from various sources, such as student data, teacher data, facilities and infrastructure data, and financial data. Student data is obtained from enrollment forms, report cards, and other documents. Teacher data is obtained from teacher biodata, certificates, and other documents. Facilities and infrastructure data is obtained from the school inventory. Financial data is obtained from school financial reports.
2. Data inputting: The data that has been collected is then inputted into the Dapodik system by the Dapodik operator. The data inputting process is done manually using a computer.
3. Data Validation: Data that has been inputted is then validated to ensure the accuracy and completeness of the data. Data validation is carried out by Dapodik operators by comparing the data in the Dapodik system with the original data.
4. Data Synchronization: Data that has been validated is then synchronized with the Dapodik central server. The data synchronization process is carried out periodically to ensure that the data on the Dapodik central server is always up to date.
5. Data Usage: Dapodik data is used for various purposes, such as planning, budgeting, program evaluation, and decision making. Dapodik data is also used for reporting to local and central government.

Dapodik data management at SMA Negeri 1 Krian involves a series of steps starting from planning, organizing, implementing, and controlling. In planning, data on students and education personnel are collected from manual documents and inputted into the system by operators appointed by the principal. Organizing involves the principal as the main person in charge and the operator who is authorized to synchronize the data with the school account connected to the central server. Implementation involves digitizing documents, inputting and synchronizing data that must be done regularly, with training support for operators so that they are always prepared for system updates.

Control was conducted through routine checks and timely synchronization to ensure that the data was accurate, especially before the disbursement of BOS funds. Evaluation was conducted by school principals through monitoring operator performance and revalidating data errors. However, obstacles such as data mismatches with the Disdukcapil system, slow servers, and system changes often hampered the management process, so it was necessary to improve efficiency in the system. Through internship activities at SMA Negeri 1 Krian, it can be concluded that Dapodik management runs quite well in terms of data connectivity between schools and Disdukcapil, but still faces several obstacles. The main problem arises from discrepancies in the data of Family Cards (KK) and birth certificates of students and GTK, such as differences in spelling or abbreviations that cause invalid data and fall into the residual category. This slows down data synchronization, coupled with frequent updates to the Dapodik system, which makes it difficult for operators to manage.

B. Analysis of Factors Affecting Dapodik Data Management

Dapodik data management at SMA Negeri 1 Krian is influenced by internal and external factors. Internal factors include the quality and quantity of human resources (HR) of Dapodik operators, availability and quality of technological infrastructure, clarity and consistency of policies and procedures, and awareness and support from all school members. External factors include changes in government policies related to Dapodik, the availability and quality of technical support from local and central government, and support and participation from the community.

Table 1. Analysis of Factors Affecting Dapodik Data Management

Factor	Dimension	Indicator	Research Findings	Analysis
SDM	Quality	Education level, training, experience	Operators have an adequate education level but lack specialized Dapodik training.	More intensive training is needed to improve operators' competencies.
	Quantity	Number of operators	The number of operators is limited, resulting in a high workload.	Additional operators or more efficient task distribution is necessary.
Infrastructure	Availability	Number of computers,	The number of	Improving internet quality

Factor	Dimension	Indicator	Research Findings	Analysis
		internet network	computers is sufficient, but the internet network is often slow.	is necessary to speed up data entry and synchronization.
	Quality	Computer specifications, internet speed	Computer specifications are adequate, but internet speed needs improvement.	Investment in better technological infrastructure is required.
Policy	Clarity	Availability of SOPs, guidelines	SOP and guidelines are available but not well socialized.	Increased dissemination of SOPs and guidelines is needed to ensure all parties understand and implement them properly.
	Consistency	Implementation of SOPs, evaluation	SOP implementation is inconsistent, and evaluations are rarely conducted.	SOP implementation must be more consistent, and regular evaluations should be conducted to identify issues and find solutions.
Culture	Awareness	Understanding the importance of Dapodik	Understanding of Dapodik's importance is still low among teachers and staff.	Awareness of the importance of Dapodik must be increased through socialization and training.
	Support	Participation in data entry, moral support	Participation in data entry is low, and moral support is limited.	Increased participation and moral support are needed through effective communication and incentives.
Government Policy	Changes	Frequency of policy changes	Policy changes occur frequently, making adaptation difficult.	The government needs to reduce the frequency of policy changes and provide better socialization.
Technical Support	Availability	Assistance from the education office, training	Assistance from the education office is limited, and training is inadequate.	Increased support from the education office and more adequate training are needed.
Social Environment	Support	Community participation in supervision, providing feedback	Community participation in supervision and feedback is still low.	Increasing community participation is necessary through communication forums and reporting mechanisms.

Source: Processed by researchers, 2024

Based on the table, Dapodik data management at SMA Negeri 1 Krian is influenced by various factors. In terms of human resources, the existing operators have a sufficient level of education, but require special training related to Dapodik to improve competence. The number of operators is also limited, resulting in a high workload, so additional

operators or efficient division of tasks is needed. The existing infrastructure, such as the number of computers, is sufficient, but the quality of the internet network needs to be improved as it is often slow, so investment in better technology infrastructure is important. In terms of policies, SOPs and guidelines are available, but they are less socialized, so they need to be improved so that all parties understand and implement them properly. The implementation of SOPs is also less consistent and evaluations are rarely conducted, so they need to be implemented more consistently and evaluated regularly to find solutions. Organizational culture also plays an important role, where the understanding of the importance of Dapodik is still low among teachers and staff, so socialization and training need to be improved. In addition, participation in data entry and moral support are lacking, so effective communication and rewards are needed. Frequent changes in government policies also make it difficult to adapt, so the government needs to reduce the frequency of changes and provide better socialization. Technical support from the education office is also limited and needs to be improved. Finally, community participation in monitoring and providing feedback is low, so communication and reporting forums need to be improved.

This study is in line with research conducted by which found that the quality of human resources and technological infrastructure are important factors in Dapodik data management. However, this study also found that policies and procedures and organizational culture also affect Dapodik data management. This difference shows that contextual factors also need to be considered in Dapodik data management. Dapodik data management at SMA Negeri 1 Krian involves various stages and is influenced by various factors. Improving the quality of human resources, technological infrastructure, policies and procedures, and organizational culture needs to be done to improve the effectiveness of Dapodik data management.

Conclusion

Based on the research and discussion, Dapodik data management at SMA Negeri 1 Krian is a complex process influenced by internal and external factors. The main problems include limited human resources, inadequate technological infrastructure, and lack of awareness and support from the school community. Recommendations to overcome these problems are increasing the capacity of human resources through training, investing in technological infrastructure, developing clear policies and procedures, and increasing awareness through socialization. This study was limited to one school and used qualitative methods, so the results cannot be generalized. Future research is recommended to use quantitative or mixed methods for more objective results and focus on the impact of Dapodik management on education quality.

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Conflict of Interest Statement:

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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