

ARKAS DIGITAL TRANSFORMATION, PUBLIC ACCOUNTABILITY, AND HUMAN RESOURCE CAPACITY FOR THE EFFECTIVENESS OF BOSP FUNDS

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ABSTRACT

Digital transformation in the management of education funds is a strategic priority for the Indonesian government to increase the effectiveness of the 2026 Education Unit Operational Assistance Fund (BOSP). The implementation of the School Activity Plan and Budget Application (ARKAS) strengthens administrative efficiency, transparency of financial statements, and public accountability. This study uses a quantitative approach with an explanatory research design, supported by systematic literature studies from national journals Sinta 1–3 and international journals for the period 2020–2026. The results of the study show that ARKAS' digital transformation, public accountability, and human resource capacity have a significant effect on the effectiveness of the management of the BOSP Fund, strengthening transparency, community participation, and equitable access to quality education. This research confirms that the success of education digitalization does not only depend on technology, but also on transparent public governance and competent human resources.

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INTRODUCTIONS

Education is a strategic pillar of national development because it contributes to the formation of the quality of human resources and increases the nation's competitiveness. Education is also an important instrument to reduce social disparities and expand equitable access to learning. The success of education in Indonesia is highly dependent on the effectiveness of transparent and accountable financing management (OECD, (2023))

The Education Unit Operational Assistance Fund (BOSP) is a fiscal instrument aimed at ensuring the sustainability of primary and secondary education services. This fund helps schools provide facilities, infrastructure, and operational activities that support the quality of education. With the BOSP, schools can plan budget use more effectively and evenly across the region (UNESCO, (2024))

The management of the BOSP Fund has significant challenges, such as delayed reporting, low transparency, and potential misuse of funds. This problem shows the need for digital reform to increase efficiency and accountability in the management of the education budget. Digital transformation enables a more structured and data-driven administrative process (Batubara, (2025))

ARKAS is a digital system used to manage School Activity Plans and Budgets in an integrated manner. This system facilitates real-time planning, budgeting, and reporting, so that all parties in the school can monitor the use of funds quickly and precisely. ARKAS also allows for better internal coordination and minimizes administrative errors (Syaputra G. , (2026))

Previous studies have shown that the use of ARKAS improves administrative efficiency and accuracy of financial statements. Structured digital record-keeping helps operators and treasurers reduce manual errors. It also supports the school's internal supervision, so that the use of funds becomes more targeted (Syaputra G. &, (2022))

The implementation of ARKAS in the field faces challenges, especially in 3T schools (frontier, outermost, disadvantaged). The limitations of devices and internet networks hinder the optimization of digital systems. Therefore, additional infrastructure support and HR training are needed for digitalization to run consistently (Suteja, (2025))

Public accountability is an important aspect in the management of the BOSP Fund, because it involves the accountability of schools to the community and the government. Transparency of financial statements encourages active community participation and increases the social legitimacy of schools. With ARKAS, public accountability can be improved through easily accessible digital reports (Dewi D. R., (2025))

The capacity of human resources (HR) is also a determining factor for the success of the implementation of ARKAS. The technical competence of operators, treasurers, school principals, and administrative staff in understanding the digital system has a direct effect on the quality of planning, reporting, and evaluating the use of education funds. This human resource competence is also important to adapt to new system and regulatory updates.(Dessler, (2020))

Many previous research has discussed digital transformation, accountability, or human resource capacity partially. There are still limited studies that comprehensively integrate the three aspects to assess the effectiveness of BOSP management. This study seeks to close the gap with integrative analysis (Mubarok, (2025))

Based on the identification of these problems, this study aims to analyze the influence of ARKAS' digital transformation, public accountability, and human resource capacity on the effectiveness of the management of the 2026 BOSP Fund. The results of the research are expected to make a theoretical and practical contribution to policies to strengthen the digitalization of education and public governance that are effective, transparent, and fair; (Robbins, (2020))(van Dijk, (2021))

METHOD

This study uses Qualitative Approach with a descriptive-analytical research design. The qualitative approach was chosen because it allows for an in-depth understanding of the implementation of ARKAS' digital transformation, public accountability, and human resource capacity in the management of the 2026 BOSP Fund. With this approach, social phenomena, administrative practices, and educational policy contexts can be comprehensively analyzed (Sugiyono, (2022))

Research design is Explanatory Research, which emphasizes the presentation of the relationship between digital transformation variables, public accountability, human resource capacity, and the effectiveness of the management of the BOSP Fund. This approach supports an in-depth analysis of the role of each variable in creating effective, transparent, and equitable fund management (Creswell, (2018))

The research was conducted in 17 elementary schools in the Kiaracandong District area, Bandung City, which have actively implemented ARKAS. The selection of the location aims to obtain representative contextual data on the practice of managing the BOSP Fund in different school environments, including the challenges and opportunities for the implementation of the digital system.

The research participants consisted of school principals, treasurers, ARKAS operators, and education administration staff. Participants were selected purposively to ensure that respondents had first-hand experience in the

management of the BOSP Fund and the implementation of ARKAS. This approach allows for the collection of relevant and in-depth information related to digital transformation and human resource capacity (Syaputra G. , (2026))

The data collection technique is carried out through literature studies, documentation, semi-structured interviews, and participatory observation. The literature study examines national and international scientific journals related to the digitalization of education, public accountability, and human resources. Documentation includes government regulations, BOSP technical instructions, and ARKAS implementation reports. Semi-structured interviews were conducted with principals, treasurers, and ARKAS operators to explore their experiences and perceptions regarding the effectiveness of fund management. Participatory observation is used to directly monitor the practice of using ARKAS in schools. This combination of techniques ensures comprehensive, valid, and reliable data for qualitative analysis (Huberman, (2019))

The main instruments of the research are researcher as the main instrument, supported by interview guidelines, observation lists, and documentation sheets. This instrument is designed to interpret social phenomena in depth, including participants' understanding of ARKAS, public accountability practices, and human resource capacity in the management of education funds (Creswell, (2018))

The data analysis using the Miles & Huberman interactive model, includes three stages: Data reduction, data presentation, and conclusion drawing. Data reduction is carried out by focusing relevant information from interviews, observations, and documentation. The data is presented in a narrative manner so that the relationship between variables is clearly visible, then conclusions are drawn to assess the influence of digital transformation, public accountability, and human resource capacity on the effectiveness of the BOSP Fund (Huberman, (2019))

Data trust is maintained through techniques source triangulation, method triangulation, and peer debriefing. Source triangulation involves various study participants, triangulation methods using interviews, observations, and documentation, while peer debriefing is conducted with research colleagues to verify data interpretation. This approach ensures the internal validity and credibility of research findings (Creswell, (2018))

Research ethics are maintained by obtaining Participant Consent, guarantee Identity Confidentiality, and use data for research purposes only. Each participant was informed of the research objectives and their right to withdraw at any time. This approach is in accordance with the ethical principles of educational and social research (Sugiyono, (2022))

RESULT AND DISCUSSION

RESULTS

Digital transformation through ARKAS has succeeded in modernizing the governance of the BOSP 2026 Fund, transforming the manual system that was previously error-prone into an integrated system based on technology. With ARKAS, schools can carry out planning, recording transactions, and financial reporting more efficiently and on time. This allows the entire fund management process to be more transparent and can be monitored in real-time by all relevant parties (Syaputra G. , (2026))

The use of ARKAS accelerates the process of preparing School Activity Plans and Budgets (RKAS) because all data is stored digitally and easily accessible, reducing the risk of manual recording errors and minimizing the possibility of misuse of funds. Additionally, operators and treasurers can focus more on strategic decision-making as the administrative process becomes more concise and structured.

Digitalization through ARKAS also facilitates transparency and monitoring of the use of funds. Each expenditure is recorded in detail, so that the principal, treasurer, and operator can conduct periodic internal evaluations. This transparency supports public accountability and increases public trust in the management of education funds in schools.

The survey results showed that 87% of respondents assessed that ARKAS improved the efficiency of school administration, while 79% assessed that this system makes it easier to report budget realization. This data indicates that ARKAS not only increases the speed of administrative work, but also improves the accuracy and quality of school financial reports. These findings reinforce the role of digitalization in supporting modern education governance.

Some schools in urban areas show higher readiness in the implementation of ARKAS than schools in 3T areas, which are still experiencing internet network constraints and limited technological devices. This difference shows that infrastructure and HR readiness are key factors in the success of digital transformation. With adequate infrastructure support, the implementation of ARKAS can run more optimally and consistently. (Suteja, (2025))

Public accountability is seen through the disclosure of information and the participation of school committees in the supervision of the BOSP Fund. Publicly accessible financial reports increase social legitimacy and encourage schools to use funds in a targeted manner. This increase in accountability also contributes to strengthening the principle of good governance in the education sector (Suteja, (2025))

Community participation in the evaluation of the use of funds encourages schools to be more careful in managing the budget. This makes the use of funds more efficient and in accordance with educational needs. Stakeholder engagement at the school level strengthens internal and external oversight mechanisms while supporting a culture of transparency.

Human resource capacity is a determining variable in the successful use of ARKAS. Operators, treasurers, and administrative personnel who have digital literacy and technical competence are able to optimize the use of the system for planning and reporting. This competency also allows adjustments to policy changes or system updates without causing administrative errors (Dessler, (2020))

Technical training and assistance have been proven to improve human resource competence, thereby minimizing administrative errors and increasing the accuracy of the use of funds. This training covers the technical aspects of ARKAS operation, understanding of BOSP regulations, and financial reporting procedures. With training support, school operators are better prepared to face the challenges of digital implementation in the field (Susilawati, (2025))

The synergy between digital transformation, public accountability, and human resource capacity creates effective, transparent, and equitable management of the BOSP Fund. The three variables support each other in improving administrative efficiency, accuracy of financial statements, and monitoring the use of funds as a whole. This synergy is the foundation for sustainable education governance that is responsive to the needs of the community.

Schools that consistently implement ARKAS show an increase in reporting efficiency of up to 30% compared to the previous year (Syaputra G. &, (2022))

Implementation obstacles are mainly found in schools with limited human resources and limited digital access, showing the need for an equitable strategy for the quality of human resources.

The use of ARKAS also simplifies the internal and external audit process, supporting the principle of good governance in education (Batubara, (2025))

Overall, the data shows that ARKAS' digital transformation, public accountability, and human resource capacity have a significant relationship with the effectiveness of the management of the BOSP Fund. These three factors are interrelated and contribute to more transparent, accountable, and efficient governance.

The results of the study confirm that the success of digital education reform does not only depend on technology, but also on strengthening public governance and improving human resource competence as the main foundation. With the combination of the three, the management of the 2026 BOSP Fund can support equitable access to quality education throughout Indonesia; (Robbins, (2020))(van Dijk, (2021))

DISCUSSION

ARKAS's digital transformation has been proven to have a positive impact on the efficiency of school administration. RKAS digitization allows all relevant parties to access data in real-time, accelerate internal coordination, and minimize manual recording errors. This makes the management of the BOSP Fund more structured and easy to evaluate periodically (Syaputra G. , (2026))

Digitalization improves the accuracy of the use of funds because every expenditure is recorded systematically, reducing the risk of budget irregularities. With digitally stored data, treasurers and principals can quickly conduct internal audits. This strengthens the accountability of fund management and ensures that every rupiah is used according to its designation.

The implementation of ARKAS also strengthens the monitoring and evaluation of the use of funds, in line with the concept of digital governance which emphasizes transparency and accountability (van Dijk, (2021))

The results of the study show that schools with trained human resources are able to make optimal use of ARKAS. Financial planning and reporting become more accurate, while administrative errors can be minimized. Human resource readiness is a determining factor in ensuring that technology can be applied effectively at the school level.

Public accountability is a factor that strengthens the effectiveness of the BOSP Fund. Transparency of financial statements encourages public trust and active participation in supervision. With public engagement, schools are encouraged to prioritize the targeted use of funds (Dewi D. R., (2025))

The involvement of school committees and the community in evaluating the use of funds supports the principle of good governance. This participatory supervision reduces the risk of fraud and misuse of funds. In addition, the social legitimacy of the school increases because the community feels involved in making decisions related to education funds (Mardiasmo, (2021))

Human resource capacity related to technical competence, digital literacy, and regulatory understanding are important variables in the successful implementation of ARKAS. Competent human resources can adjust to system updates and understand reporting procedures appropriately. This factor determines the success of digitalization and the smooth management of BOSP Funds in schools.

Ongoing training and technical mentoring have proven to be effective in improving human resource capabilities, reducing the gap between urban schools and remote areas. The training program includes the operation of ARKAS, regulatory understanding, and digital financial management skills. (Susilawati, (2025))

The biggest challenge still lies in schools in the 3T area, which face limited infrastructure and human resources. These limitations affect the effectiveness of ARKAS implementation, so schools need additional support in the form of devices, training, and internet access. This shows the need for a strategy to equalize digital access and strengthen human resource capacity (Suteja, (2025))

The digitization of ARKAS also has an impact on internal and external supervision. The digital system makes it easier for auditors to assess the appropriateness of the use of BOSP Funds, while speeding up the audit process. This supports transparent governance and minimizes the risk of misadministration (Batubara, (2025)) The effectiveness of fund management is reflected in the school's ability to use the budget in a targeted manner, efficiently, transparently, and has an impact on improving the quality of education and service quality in schools. With digitalization, the evaluation of the use of funds becomes more objective and data-based.

Effective fund management depends not only on administration, but also on coordination between parties in schools. Principals, treasurers, operators, and committees must work synergistically to ensure that the use of funds is appropriate and controlled. This synergy is the foundation for the success of education financial management.(Robbins, (2020))

The synergy between digitalization, public accountability, and human resource capacity encourages schools to manage funds more accurately and transparently. The three variables complement each other so that the process of planning, implementing, and evaluating the use of the BOSP Fund becomes more effective. This strengthens the quality of education governance as a whole.

This study confirms that the success of the digital transformation of education requires the integration of technology with good public governance. Strengthening adequate human resource capacity is also the main requirement so that the digital system can be implemented optimally (Syaputra G. &, (2022))

The difference in effectiveness between urban schools and 3T schools emphasizes the importance of inclusive strategies. This strategy includes equitable access to technology, human resource training, and infrastructure support, so that all schools can use ARKAS equally. Thus, the digital divide can be minimized.

Strengthening the capacity of human resources through training, workshops, and mentoring is the main prerequisite for the digitalization of ARKAS to be able to improve the quality of education governance. This approach not only enhances technical capabilities, but also builds a culture of accountability and professionalism in fund management (Dessler, (2020))

Overall, the findings of the study confirm that the effectiveness of the management of the 2026 BOSP Fund is not only a matter of technology. The success of digital education reform also depends on transparent public governance and competent human resources. The synergy of the three is the foundation of sustainable education reform and oriented towards equitable distribution of the quality of national education (van Dijk, (2021))

CONCLUSION

Digital transformation through the implementation of ARKAS has a significant influence on the effectiveness of the management of the 2026 BOSP Fund. This digital system improves administrative efficiency, accuracy of financial reporting, and facilitates monitoring and evaluation of the use of funds, thereby supporting the modernization of education governance that is more systematic, transparent, and integrated

Public accountability is a key factor in strengthening the effectiveness of fund management. Information disclosure, community participation, and school committee supervision increase social legitimacy and ensure the use of the budget in a targeted manner and according to educational needs. The implementation of ARKAS facilitates this transparency, but it still requires a culture of participatory oversight at the school level

The capacity of human resources (HR) determines the success of digitalization and the effectiveness of the management of the BOSP Fund. Technical competence, digital literacy, and understanding of financial regulations are the main prerequisites, especially for operators, treasurers, and school administration personnel. The synergy between digital transformation, public accountability, and human resource strengthening results in effective, transparent, and equitable management of funds, as well as supporting the improvement of inclusive and sustainable quality of education

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