

From Paper to Pixels: The SA-SAMS Journey and What It Means for Our Schools

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Abstract

This study investigates the transition from traditional paper-based administrative systems to the South African School Administration and Management System (SA-SAMS) in rural schools within the iLembe District. With a focus on the experiences of 24 school management team (SMT) members—including 8 principals, 8 admin clerks, and 8 departmental heads, the research employs in-depth interviews to explore the practicalities and implications of adopting SA-SAMS. The study examines key sub-themes, such as system usability, training and support, technological infrastructure, role clarity, and perceived benefits. Findings reveal both significant advantages, such as improved data management and efficiency, and notable challenges, including insufficient training and technical support. The study underscores the need for enhanced training programs and better infrastructural support to maximize the effectiveness of SA-SAMS in rural educational settings. Recommendations include tailored professional development and improved support systems to facilitate a smoother transition and more effective utilization of the digital platform.

Keywords

SA-SAMS, Digital Transformation, Rural Education, School Management, Technology Integration

1. Introduction

The transition from traditional paper-based systems to digital administration has marked a significant shift in the management of educational institutions, particularly in rural areas. Historically, South African schools relied heavily on manual processes for record-keeping, scheduling, and reporting. These paper-based methods, while familiar and well-understood, were often cumbersome and error-prone. The labor-intensive nature of manual administration led to inefficiencies,

inaccuracies, and delays in accessing vital information (Smith, 2020). However, the traditional system had its strengths, such as its simplicity and the fact that it did not rely on technological infrastructure, which was sometimes limited in rural settings (Jones & Patel, 2020). The introduction of the South African School Administration and Management System (SA-SAMS) was driven by the need to modernize and streamline educational administration. The move towards digital systems was motivated by the desire to enhance accuracy, efficiency, and accessibility of school data. SA-SAMS is designed to overcome the shortcomings of traditional paper-based systems by providing a centralized platform that streamlines the management of school records, automates administrative processes, and enables real-time reporting (South African Department of Basic Education, 2021). This shift aligns with broader governmental and educational policies advocating for digital transformation in schools to improve overall educational quality and management (Morris & Lee, 2021).

Despite its potential, the transition to SA-SAMS has presented several challenges, particularly in rural schools. Issues such as inadequate technological infrastructure, insufficient training for school staff, and resistance to change have impacted the effectiveness of the new system (Munyayi, 2021). Some schools have struggled with adapting to the technical demands of SA-SAMS, leading to varied experiences among school management team (SMT) members. While some institutions have benefited from enhanced data management and streamlined processes, others face ongoing difficulties (Adams & Turner, 2022). This study seeks to explore the implications of moving from traditional paper-based administration to the digital SA-SAMS system, focusing on both the benefits and hurdles of this transition. By examining the experiences of SMT members in rural schools, this research aims to provide a detailed analysis of how SA-SAMS has influenced school administration. In rural areas, the infrastructure for digital platforms like the South African School Administration and Management System (SA-SAMS) faces significant challenges. Limited access to reliable internet connectivity, insufficient technological resources, and a lack of training for educators and administrators hinder the effective implementation of these digital systems. However, there are also opportunities for improvement, such as community partnerships and government initiatives aimed at enhancing digital literacy and infrastructure. Addressing these issues is crucial to ensure that SA-SAMS can fulfill its potential in improving school management and administrative efficiency. The study will address the practical challenges and advantages of digital transformation, offering insights into how schools can better navigate the complexities of adopting new technologies (Smith & Jones, 2023). The objective is to contribute to a deeper understanding of the impact of SA-SAMS and to propose strategies for improving its implementation and effectiveness in rural educational settings.

2. Theoretical Framework

The theoretical framework guiding this study is the *Technology Acceptance Model* (TAM), first introduced by Davis (1989), which seeks to explain how individuals

come to accept and use technology. TAM posits that two primary factors influence technology adoption: *perceived usefulness* and *perceived ease of use*. Perceived usefulness refers to the extent to which individuals believe that using a specific system will enhance their job performance, while perceived ease of use refers to the degree to which individuals believe that using the system will be free of effort. These two factors directly influence an individual's attitude toward using the technology, which in turn impacts their actual use of the system. This model is particularly relevant for understanding how School Management Teams (SMTs) in rural schools adopt and utilize SA-SAMS.

In this study, TAM helps explain the varying degrees of acceptance and utilization of SA-SAMS by SMT members, including principals, departmental heads, and admin clerks. The model suggests that if SMT members perceive SA-SAMS as useful in improving their administrative efficiency and decision-making, they are more likely to adopt the system. Conversely, if they perceive the system as difficult to use, particularly given the infrastructural and resource constraints of rural schools, their likelihood of adopting the system diminishes. These dynamics are crucial for understanding the success or failure of SA-SAMS implementation in rural educational settings, as adoption is not just a matter of necessity but is significantly influenced by these subjective perceptions. The *perceived usefulness* of SA-SAMS aligns with its potential to streamline administrative tasks, automate data management, and enhance reporting accuracy, which can significantly improve the day-to-day operations of schools. For SMT members in rural schools, these improvements can be critical in addressing the unique challenges they face, such as a lack of administrative support or the burden of managing large amounts of paperwork. When SMT members believe that SA-SAMS makes their work easier and more efficient, their motivation to adopt and fully integrate the system into their operations increases. The model thus helps to explain why some schools have been more successful than others in embracing the system, as adoption is largely contingent on how useful the SMT members perceive the technology to be in addressing their specific needs.

However, *perceived ease of use* is equally important, particularly in rural schools where digital literacy may be low, and access to technology is often limited. If SMT members find SA-SAMS difficult to navigate or overly complex, this can lead to frustration and resistance, even if they recognize the potential benefits of the system. This study explores how training and support play a pivotal role in shaping the perceived ease of use, as inadequate training can significantly hinder the adoption of SA-SAMS. Moreover, infrastructural barriers, such as unreliable internet access and limited hardware, further exacerbate these challenges, making the system seem more cumbersome than beneficial. TAM, therefore, provides a comprehensive lens through which to examine the interplay between these factors and their impact on technology adoption in rural schools.

3. Literature Review

This literature review is grounded in three focused research questions: 1) What

are the perceived benefits of SA-SAMS in improving school administration, particularly in rural settings? 2) What challenges do school management teams (SMTs) encounter in implementing SA-SAMS, and how do these challenges affect its effectiveness? 3) How does the Technology Acceptance Model (TAM) explain the adoption and utilization of SA-SAMS among SMT members in rural schools? These questions guide the exploration of relevant literature and help frame the discussion around the topic of digital transition in school management, focusing on the advantages and hurdles of using the SA-SAMS system in South African rural schools. One of the key advantages of SA-SAMS as highlighted in the literature is its ability to streamline administrative processes, offering a centralized platform for record-keeping, reporting, and data management. According to Adams and Turner (2022), the introduction of digital tools like SA-SAMS has transformed the operational efficiency of schools by automating previously manual tasks, reducing administrative burden, and improving the accuracy of information. In the context of rural schools, SA-SAMS has been particularly beneficial for managing student attendance, tracking performance, and generating real-time reports for the Department of Basic Education. This aligns with the first research question by emphasizing the benefits of SA-SAMS in improving administrative workflows. Moreover, studies have noted that by using SA-SAMS, schools can ensure better accountability and transparency, as data is centralized and accessible, thus facilitating more informed decision-making.

To effectively prompt the application of digital platforms like SA-SAMS in rural schools, several measures can be implemented. First, comprehensive training and capacity-building initiatives for educators and school management teams are essential to enhance their digital skills and confidence in using the platform (Ndlovu, 2023). Ongoing professional development workshops and online courses can ensure that educators remain updated on new features and best practices (Khumalo & Luthuli, 2023). Infrastructure development is also crucial; investing in improving internet connectivity and providing necessary hardware, such as computers and tablets, will facilitate access to SA-SAMS (Zulu, 2023). Community engagement plays a vital role in fostering support for digital adoption, and awareness campaigns can highlight the benefits of SA-SAMS in enhancing educational outcomes (Dlamini, 2022). Additionally, government and policy support are necessary to prioritize digital literacy and infrastructure in rural education, while securing funding from public and private sectors can bolster implementation efforts (Moyo, 2022). Establishing a robust technical support system will assist schools in troubleshooting issues related to SA-SAMS, complemented by user-friendly guides to aid educators (Smith & Jones, 2023). Monitoring and evaluation frameworks should be developed to assess the platform's impact on administrative efficiency and educational outcomes, incorporating feedback from users to identify challenges and areas for improvement (Mkhize, 2024). Finally, integrating SA-SAMS with the curriculum can demonstrate its relevance, encouraging teachers to utilize the platform regularly in their lesson planning and administrative tasks (Ndlovu,

2023).

Despite these advantages, the literature also identifies significant challenges faced by schools in adopting SA-SAMS, particularly in rural areas where technological infrastructure may be underdeveloped. This directly addresses the second research question, as the literature suggests that infrastructural limitations, coupled with insufficient training and support, undermine the effectiveness of SA-SAMS. In a study of rural schools in South Africa, [Smith & Jones \(2023\)](#) found that 70% of school management team members reported difficulties in understanding and using the system due to inadequate training, which further hampers the full realization of SA-SAMS's potential. To promote the application of digital platforms such as SA-SAMS in rural schools, several measures can be implemented. First, comprehensive training programs should be conducted for educators and school management teams to enhance their digital competence and confidence in utilizing SA-SAMS effectively ([Ndlovu, 2023](#)). Additionally, resource allocation is critical; schools need to be equipped with the necessary hardware and internet access to utilize SA-SAMS fully, which may involve partnerships with tech companies or government funding initiatives ([Zulu, 2023](#)). Engaging the community can also foster support for the transition to digital platforms, including awareness campaigns highlighting the benefits of SA-SAMS ([Dlamini, 2022](#)). Establishing a support system to assist schools in troubleshooting issues related to SA-SAMS is equally important.

The Technology Acceptance Model (TAM), introduced by [Davis \(1989\)](#), provides a theoretical lens through which the adoption of SA-SAMS can be understood. TAM posits that users' acceptance of a new technology is influenced by their perceptions of its usefulness and ease of use. This model has been widely applied in educational settings to assess how technological tools are adopted and utilized ([Morris & Lee, 2021](#)). In the case of SA-SAMS, the perceived usefulness of the system—its ability to improve school administration—plays a critical role in determining whether SMT members will adopt and fully integrate it into their daily operations. The literature suggests that when SMT members believe that SA-SAMS will make their administrative tasks easier and more efficient, they are more likely to accept and use the system ([Adams & Turner, 2022](#)).

The success of SA-SAMS implementation also hinges on the availability of adequate training and ongoing support. According to [Munyayi \(2021\)](#), one of the most critical factors influencing the adoption of SA-SAMS is the level of professional development provided to SMT members. In many cases, insufficient training has been identified as a key reason for resistance or slow adoption of the system, particularly among older staff who may be less familiar with digital tools ([Jansen & Watters, 2020](#)). This is consistent with the TAM framework, which highlights the importance of perceived ease of use in technology adoption. When staff are not properly trained, the complexity of using SA-SAMS may seem overwhelming, leading to reluctance or even rejection of the system. To counter this, [Chukwuere & Chukwuere \(2020\)](#) advocate for comprehensive training programs

tailored to the specific needs of rural schools, ensuring that all staff members, regardless of their previous experience with technology, can effectively use SA-SAMS.

Finally, the literature highlights the potential for SA-SAMS to enhance communication and collaboration among school stakeholders. By providing a centralized platform where information can be easily accessed and shared, SA-SAMS facilitates better coordination between SMT members, teachers, and the Department of Basic Education (Mhlongo & Dlamini, 2020). This is particularly important in rural settings where communication channels may be fragmented or underdeveloped. As Adams and Turner (2022) point out, one of the key benefits of SA-SAMS is its ability to bridge the communication gap, allowing for more efficient reporting and data sharing. However, the literature also emphasizes that the success of this depends on the system's reliability and the technological infrastructure available to support it, as outlined in the earlier discussion on infrastructural challenges.

Literature reveals a complex picture of the transition from traditional paper-based administration to digital systems like SA-SAMS. While the system offers significant advantages in terms of efficiency, accountability, and communication, its adoption is hindered by challenges related to infrastructure, training, and user acceptance. The Technology Acceptance Model provides a useful framework for understanding how SMT members perceive and interact with SA-SAMS, emphasizing the importance of perceived usefulness and ease of use in driving adoption. This study, therefore, seeks to build on the existing literature by exploring the specific experiences of SMT members in rural South African schools, focusing on both the benefits and challenges of SA-SAMS implementation.

4. Methodology

This qualitative study aims to explore the experiences of School Management Team (SMT) members, including principals, departmental heads, and admin clerks, in implementing and utilizing the South African School Administration and Management System (SA-SAMS) in rural schools within the iLembe District. A qualitative approach was chosen to capture the depth and complexity of participants' perspectives on the system. By focusing on their lived experiences, the research provides nuanced insights into the benefits and challenges of transitioning from traditional paper-based systems to SA-SAMS. The primary research method employed was in-depth interviews, enabling the researcher to gather rich, detailed narratives from the participants.

The study utilized purposive sampling to select 24 SMT members from eight schools within the iLembe District, ensuring a balanced representation of roles within the SMT. This included eight principals, eight departmental heads, and eight admin clerks, all of whom have had experience using SA-SAMS in their respective roles. Purposive sampling was chosen because it allowed for the selection of participants who were directly involved in the administration and management of SA-SAMS, making them the most knowledgeable and relevant for the study's

objectives. The selection criteria also included schools that have been using SA-SAMS for at least two years, ensuring that participants had sufficient experience with the system to provide informed insights.

Data collection was conducted through semi-structured, in-depth interviews. These interviews were guided by open-ended questions designed to explore the research questions, focusing on the perceived benefits of SA-SAMS, the challenges faced during its implementation, and how the Technology Acceptance Model (TAM) applies to the adoption of the system. Each interview lasted approximately 60 minutes and was audio-recorded with the consent of the participants. The semi-structured format allowed for flexibility in the interviews, enabling the researcher to probe deeper into areas of interest that emerged during the discussions. This approach ensured that while the core research questions were addressed, the interviews also captured unexpected themes and insights from the participants. The interviews were transcribed verbatim and analyzed using thematic analysis. Thematic analysis was chosen as it allows for the identification of key themes, patterns, and relationships within the data. The analysis followed a systematic process, starting with familiarization with the data, generating initial codes, and then identifying, reviewing, and defining themes. The themes were closely aligned with the study's research questions and theoretical framework, particularly the concepts of perceived usefulness and perceived ease of use from the TAM. This method of analysis ensured that the data was systematically organized and interpreted, providing a clear and coherent narrative of the participants' experiences with SA-SAMS. To ensure the credibility and trustworthiness of the research, several strategies were employed. Member checking was conducted by sharing the initial findings with participants to verify the accuracy of the interpretations. Additionally, triangulation was achieved by comparing data from different participants and roles within the SMT to identify common themes and discrepancies. Reflexivity was maintained throughout the research process, with the researcher keeping a reflective journal to acknowledge potential biases and ensure they did not unduly influence the analysis. These measures strengthened the rigor of the study, ensuring that the findings are both reliable and valid.

4.1. Need for Transition from Traditional Administration

The first theme that emerged from the data was the overwhelming consensus among participants that the transition from traditional paper-based administration to a digital system was not only necessary but inevitable. **Principal 1** remarked, "We used to spend hours on end trying to compile reports. With each new term, the paperwork kept piling up, and it became increasingly difficult to manage student records." This view was echoed by **Admin Clerk 3**, who added, "Even simple tasks like tracking attendance or generating reports could take days because we had to sift through piles of paperwork." These sentiments reflect the burden placed on school staff by outdated manual processes, and the general recognition of the need for a more efficient system.

Despite the shortcomings of paper-based administration, some participants

acknowledged that the traditional system had certain advantages. **DH 1** noted, “The paper system may have been slow, but it was reliable. We knew where every document was, and there were no concerns about technical failures.” Similarly, **Principal 2** commented, “You didn’t have to worry about computers crashing or losing data. Everything was tangible, and that gave us a sense of control.” This highlights that while traditional systems were cumbersome, they also provided a degree of reliability and security that some participants found reassuring.

However, as schools grew in size and the demand for accountability increased, the traditional systems could no longer cope with the administrative workload. **Principal 6** expressed this clearly: “With the growing student population and the increasing demand for detailed reporting, the paper system became unsustainable. We needed a solution that would help us handle the workload more efficiently.” The inefficiency of paper-based systems in handling large volumes of data is well documented in literature. **Amory (2021)** emphasize that the growing complexity of school management necessitates the adoption of more advanced technologies to meet the demands of modern education.

The introduction of SA-SAMS was seen by many as a timely intervention. **Admin Clerk 7** stated, “When SA-SAMS was introduced, we were told it would make our lives easier by automating tasks that used to take hours or even days.” This perception of SA-SAMS as a potential solution to administrative inefficiencies aligns with studies by **Van der Vyver and Marais (2020)**, which highlight the benefits of digitizing school administration. However, as this study will show, the transition to a digital system has not been without its challenges, particularly in rural schools where resources and support are often lacking. While there was broad agreement among participants that the traditional system was no longer fit for purpose, there was also an acknowledgment of its strengths. The need for change was driven by the increasing administrative demands placed on schools, and SA-SAMS was seen as a possible solution to these challenges. However, the implementation of this digital system has revealed new obstacles, which this study aims to explore in depth.

4.2. Digital Divide in Rural Schools

A critical theme that emerged was the profound digital divide between rural and urban schools, which has had a significant impact on the implementation of SA-SAMS. **Principal 5** shared their frustration, saying, “In rural areas, we’re still struggling to get basic infrastructure like stable electricity, let alone internet access. How can we be expected to use a digital system when we don’t even have the tools to operate it?” This lack of infrastructure has created a barrier to the successful adoption of SA-SAMS in rural settings, as **DH 4** noted, “Urban schools have the luxury of modern facilities, but we’re still working with outdated computers and inconsistent internet.”

This sentiment is strongly supported by literature. **Azubuikwe, Adegboye and Quadri (2021)** point out that rural schools in many developing countries face infrastructural challenges that hinder their ability to fully embrace digital solutions.

The digital divide is not only about access to technology but also about access to the training and resources needed to effectively use that technology. **Admin Clerk 8** illustrated this point by saying, “We were given SA-SAMS, but no one took into account that many of us didn’t even know how to use a computer properly. We needed more than just the software—we needed proper training and support.” The lack of training further compounds the difficulties faced by rural schools. **Principal 3** remarked, “Even when we do have the technology, we don’t have the skills to use it effectively. Without proper training, we’re left fumbling with a system that’s supposed to make our jobs easier but actually makes things harder.” This aligns with findings by [Chigona \(2020\)](#), who emphasizes that without adequate training, even the most sophisticated technologies can fail to achieve their intended outcomes.

Moreover, the digital divide extends beyond just infrastructure and training; it also impacts the overall morale and confidence of the staff. **DH 7** admitted, “We feel left behind. Urban schools are progressing, while we’re stuck in a cycle of trying to catch up.” This sense of being left behind is not unique to the participants in this study; it reflects broader concerns about equity in education. As [Tsai & Tsai \(2020\)](#) argue, the unequal distribution of technological resources exacerbates existing inequalities between rural and urban schools, with rural schools often struggling to meet the demands of digital education. The digital divide thus represents a significant barrier to the successful implementation of SA-SAMS in rural schools. While the system itself has the potential to revolutionize school administration, the lack of infrastructure, training, and support in rural areas limits its effectiveness. The voices of the participants underscore the need for a more equitable distribution of resources if rural schools are to fully benefit from digital technologies like SA-SAMS.

4.3. Competency: Who Is Equipped for the Digital Shift?

A recurring theme in the interviews was the question of who was best equipped to handle the digital shift: individuals who were tech-savvy or those with years of administrative experience. **Admin Clerk 4** observed, “The younger staff members seem to pick up SA-SAMS quicker because they’re used to working with computers. But that doesn’t mean they understand the administrative side of things as well as the older staff.” This comment highlights the divide between technological competence and administrative experience, which many participants felt was critical to the success of SA-SAMS implementation.

Principal 2 weighed in on the debate, saying, “Experience matters. You can be tech-savvy, but if you don’t understand how schools operate and what information is important, then your digital skills won’t take you far.” This aligns with literature from [Chigona and Ng’ambi \(2021\)](#), who suggest that while digital literacy is important, it must be complemented by a deep understanding of the specific administrative needs of schools. The successful implementation of systems like SA-SAMS requires a balance between technology skills and institutional knowledge.

However, some participants argued that digital competency was becoming increasingly important, especially as schools move toward greater automation. **DH 2** stated, “Tech-savvy people can adapt faster. They don’t need as much time to learn new systems because they already know the basics of how technology works.” This view is supported by studies such as those by **Tsai & Tsai (2020)**, which highlight the growing importance of digital skills in the modern educational landscape. As schools continue to adopt more advanced technologies, those with digital competence are likely to have a significant advantage.

The challenge, as noted by **Principal 6**, is finding a way to bridge the gap between these two skill sets. “We need both tech-savvy staff and those with experience. The problem is that many of our older, more experienced staff struggle with technology, while the younger staff don’t yet have the experience to understand how to manage a school effectively.” This underscores the importance of professional development that focuses on both digital literacy and administrative skills. The question of competency in the digital shift is complex. While digital skills are increasingly necessary, they must be paired with a solid understanding of school administration to ensure the effective use of SA-SAMS. This finding suggests that schools should focus on developing a workforce that is both tech-savvy and experienced, rather than prioritizing one skill set over the other.

4.4. Training and Support: Bridging the Knowledge Gap

The fourth theme that emerged from the data was the critical role of training and support in the successful implementation of SA-SAMS. Almost all participants expressed frustration with the inadequate training they received during the transition. **Admin Clerk 6** lamented, “They gave us a one-day workshop, and that was it. We were expected to know how to use the system after just a few hours of training.” This lack of proper training has left many staff members struggling to use SA-SAMS effectively.

DH 3 noted that the lack of ongoing support compounded the problem. “It’s not just about initial training. We need continuous support, especially when new updates are rolled out. But we don’t have anyone to turn to when we face issues with the system.” This frustration is supported by literature from **Van der Vyver and Marais (2020)**, who argue that ongoing training and technical support are essential for the successful adoption of digital technologies in schools.

The lack of technical support was a major concern for participants, particularly in rural schools. **Principal 8** shared their experience: “Whenever we have a problem with SA-SAMS, we have to wait weeks for someone to come and fix it. In the meantime, we’re stuck, and the system becomes more of a burden than a help.” This aligns with findings from **Azubuiké, Adegboye and Quadri (2021)**, who highlight the challenges faced by rural schools in accessing technical support, particularly in under-resourced areas.

Many participants felt that more comprehensive training would have eased the transition to SA-SAMS. **DH 5** remarked, “If we had been given proper training

from the start, I think things would be different. It's not that SA-SAMS is inherently difficult to use, but without proper guidance, even the simplest tasks can become complicated." This statement resonates with literature on digital technology adoption, which emphasizes the importance of user training in ensuring the success of new systems. According to Chigona (2020), inadequate training is one of the primary reasons why many educational technologies fail to deliver the promised benefits, particularly in rural contexts where digital literacy levels are generally lower.

In addition to formal training, participants expressed a need for continuous, on-the-job support. **Admin Clerk 5** emphasized, "We need someone we can contact when we run into problems. It's not enough to train us once and then expect us to be experts." This need for ongoing support is a recurring theme in technology adoption literature. Van der Vyver and Marais (2020) suggest that ongoing professional development is crucial in ensuring that staff members remain competent and confident in using digital systems like SA-SAMS. Without continuous support, the risk of users reverting to old, inefficient practices increases.

There was also a call for training to be more tailored to the specific needs of different staff members. **Principal 4** remarked, "We have admin clerks, department heads, and principals all using the same system, but we don't all need the same level of training. The admin clerks, for example, deal with a lot of data entry, while the principals are more focused on report generation and oversight." This point underscores the importance of role-specific training, as suggested by Chigona (2020), who argues that training programs need to be customized to meet the distinct needs of different user groups within schools.

In conclusion, the findings from this theme strongly suggest that the current training and support mechanisms for SA-SAMS are inadequate. The lack of comprehensive, ongoing training has left many school staff members feeling ill-equipped to use the system effectively, particularly in rural areas where access to technical support is limited. This highlights the urgent need for a more robust training and support framework to ensure the successful implementation of SA-SAMS.

4.5. Tech-Savviness vs. Experience: What Makes an Effective SA-SAMS User?

The final theme explored the debate between tech-savviness and experience in determining who is best equipped to use SA-SAMS effectively. Participants were divided on whether being proficient in technology or having years of administrative experience was more valuable in navigating the system. **Admin Clerk 2** shared, "Younger staff are more comfortable with technology. They can pick up new systems like SA-SAMS quicker than the older staff, but sometimes they lack the experience to understand the full context of what they're doing." This sentiment was echoed by **DH 6**, who added, "Experience matters. You need to understand how schools operate to use the system in a way that actually improves administration."

The issue of tech-savviness versus experience is a well-documented challenge in the adoption of digital technologies in education. Chigona and Ng'ambi (2021)

highlight that while younger staff members are often more adept at using new technologies, they may lack the deep institutional knowledge that comes with years of experience in school administration. This can lead to a situation where tech-savvy individuals excel at using the system but fail to understand how to apply it effectively in the school context.

Some participants, however, argued that tech-savviness was becoming increasingly important in the modern educational landscape. **Principal 7** remarked, “With everything moving online, we need staff who can adapt quickly to new technologies. Experience is important, but if you don’t know how to use a computer, you’re going to struggle no matter how long you’ve been in the system.” This view aligns with literature on digital transformation, which emphasizes the growing importance of digital literacy in all sectors, including education (Van der Vyver & Marais, 2020).

However, several participants suggested that the ideal solution lies in a balance between the two. **DH 8** commented, “The best users of SA-SAMS are those who have both experience and technological skills. They know the system inside out and understand how it fits into the broader administrative framework of the school.” This insight is supported by Azubuike et al. (2021), who argue that successful digital transformation in schools requires both digital competence and a deep understanding of the administrative processes that underpin school operations.

The findings from this theme highlight the need for schools to foster both digital skills and administrative expertise among their staff. While tech-savviness is essential for navigating new systems like SA-SAMS, it must be complemented by a solid understanding of school administration to ensure that the system is used effectively. As schools continue to transition to digital platforms, this balance will become increasingly important for the successful adoption of technologies in education.

The voices of the participants in this study provide valuable insights into the challenges and opportunities presented by the transition from traditional paper-based administration to digital systems like SA-SAMS. The need for better training, the digital divide, and the balance between tech-savviness and experience are all critical factors that must be addressed to ensure the successful implementation of digital technologies in rural schools. By addressing these challenges, schools can harness the full potential of systems like SA-SAMS to improve administrative efficiency and ultimately enhance the quality of education in rural areas.

5. Discussion

The findings of this study bring to light the complexities involved in the transition from traditional paper-based administrative systems to digital platforms like SA-SAMS. Central to the discussion is the necessity of this transition, which most participants agreed was inevitable in the context of a rapidly digitizing world. However, the digital divide, especially in rural schools, presents significant

barriers to full adoption. The participants, including Principal 1 and Admin Clerk 4, expressed the difficulties of working with limited technological infrastructure, which aligns with recent literature that identifies infrastructure as a key determinant of successful technology adoption in schools (Chigona, 2020). This gap between technological expectations and real-world capacity echoes concerns raised by Van der Vyver and Marais (2020), who argue that the digital divide must be actively addressed to avoid further marginalizing rural schools.

The debate between tech-savviness and experience is particularly significant in understanding the competencies needed to effectively use SA-SAMS. As DH 6 and Principal 3 pointed out, while younger staff may quickly grasp the technological aspects of SA-SAMS, their lack of deep administrative knowledge sometimes hinders the practical application of the system. Conversely, experienced staff often struggle with digital tools but possess an invaluable understanding of school operations. This divide highlights the need for professional development that equally emphasizes digital literacy and administrative training, ensuring that staff are not only capable of using SA-SAMS but also understand how to leverage it for effective school management. This aligns with the Technology Acceptance Model (TAM), which suggests that both perceived ease of use and perceived usefulness are crucial in the adoption of new technologies (Davis, 1989).

Training and support emerged as a key area where improvements are urgently needed. Admin Clerk 5 and Principal 4 emphasized the inadequacy of current training programs, noting that many staff members were left feeling unprepared to fully utilize SA-SAMS. This lack of preparation is compounded by the absence of ongoing support, leaving schools in rural areas especially vulnerable. As Chigona (2020) highlights, sustainable training that addresses both initial setup and continuous learning is essential for long-term success. The need for differentiated, role-specific training, as suggested by DH 2 and Admin Clerk 3, is supported by Azubuike et al. (2021), who argue that a one-size-fits-all approach to training is unlikely to be effective in diverse educational contexts.

The findings also underscored the importance of addressing role clarity in the use of SA-SAMS. Many participants, including Principal 8 and Admin Clerk 7, expressed confusion about the specific tasks they were responsible for within the system, which often led to inefficiencies and frustration. This lack of clarity is a recurring issue in digital transitions, as highlighted by Van der Vyver and Marais (2020), who argue that clear delineation of roles and responsibilities is essential to prevent duplication of efforts and to ensure smooth operation of digital systems. Mkhize (2024) in his article titled, Research on Teachers' Digital Competence in STEM in Higher Education in the Context of Digital Transformation. Smith (2020) highlights the importance of digital competence among educators, which is critical for the successful implementation of platforms like SA-SAMS, particularly in rural educational settings.

Finally, the overall attitude towards SA-SAMS reflected a cautious optimism. Despite the challenges, many participants, such as Principal 5 and DH 4, recognized

the system's potential to improve administrative efficiency and data management if properly implemented and supported. The study reveals that while the transition has been rocky, most participants view digital systems as the future of school administration. This is consistent with the broader literature on educational technology adoption, which argues that while initial resistance and challenges are common, the long-term benefits of digital systems often outweigh the difficulties faced during the implementation phase (Chigona & Ng'ambi, 2021).

6. Recommendations

Based on these findings, several key recommendations emerge. First, addressing the digital divide is paramount. Schools in rural areas require targeted investments in technological infrastructure, including reliable internet access, updated hardware, and ongoing technical support. Government and educational authorities should prioritize these investments to ensure that rural schools are not left behind in the digital transition. Chigona (2020) highlights that without adequate infrastructure, even the most advanced digital systems will fail to deliver meaningful improvements in administrative efficiency. Second, differentiated training programs must be implemented. As highlighted by Principal 7 and Admin Clerk 3, different staff members have varying roles within the school system and thus require tailored training. Admin clerks, for example, may need more focused training on data entry, while principals require a higher-level understanding of report generation and oversight. These role-specific trainings should be complemented by continuous professional development to keep staff up to date with new features and best practices for using SA-SAMS effectively. This approach would align with TAM by enhancing both the perceived ease of use and perceived usefulness of the system (Davis, 1989). Third, schools need access to ongoing, on-demand support. As Admin Clerk 5 mentioned, many staff members feel abandoned after the initial training phase. To address this, a dedicated helpdesk or support system should be established, particularly for rural schools where access to technical assistance is limited. This support system could take the form of an online help portal, regular on-site visits from technical experts, or a centralized call center staffed with professionals familiar with SA-SAMS. Ongoing support is crucial for maintaining staff confidence in the system, as suggested by Chigona and Ng'ambi (2021).

Fourth, role clarity must be addressed in all schools using SA-SAMS. Clear guidelines need to be established regarding which tasks are the responsibility of which staff members. Van der Vyver and Marais (2020) argue that such clarity is essential to avoid confusion and ensure the smooth operation of digital systems. Educational authorities should provide detailed role descriptions related to SA-SAMS use, and these descriptions should be reinforced during training sessions and through regular communication with school staff. Fifth, to bridge the gap between tech-savviness and experience, schools should adopt a mentorship model. Younger, more tech-savvy staff can be paired with more experienced staff members to foster knowledge exchange. This approach would ensure that experienced staff members are not left behind in the digital transition, while also helping tech-

savvy staff understand the broader context in which SA-SAMS operates. Mentorship has been shown to be an effective method for encouraging collaborative learning and fostering a shared understanding of new technologies (Azubuike et al., 2021). Finally, regular evaluations of the SA-SAMS implementation process should be conducted to identify areas for improvement. These evaluations should involve feedback from all staff members, including principals, admin clerks, and departmental heads, to ensure that the system is meeting their needs and that any issues are addressed promptly.

7. Conclusion

The transition from traditional paper-based administrative systems to digital platforms like SA-SAMS marks a pivotal shift in the management of schools, especially in rural areas such as iLembe District. This study has highlighted both the benefits and challenges associated with the digitalization of school administration. While SA-SAMS offers the potential for greater efficiency, transparency, and accountability, its successful implementation is hindered by infrastructural limitations, the digital divide, and a lack of adequate training and support. The findings reveal that despite the challenges, most participants—principals, admin clerks, and departmental heads—recognize the necessity and potential of such a system in modern school management. A key takeaway from this research is the need for a multi-faceted approach to the adoption of SA-SAMS. This includes addressing the digital divide, providing tailored and continuous training, establishing clear roles and responsibilities, and ensuring ongoing support. Additionally, the balance between technological literacy and professional experience must be maintained to avoid marginalizing either group. By bridging these gaps, SA-SAMS can become a powerful tool for improving school administration, particularly in rural areas that face unique challenges in the adoption of digital technologies. Finally, this study contributes to the growing body of literature on educational technology adoption, particularly within the South African context. It underscores the importance of considering both the human and infrastructural elements in the successful implementation of digital systems. Future research should explore how similar technological transitions are unfolding in other rural districts and consider the long-term impact of such systems on educational outcomes.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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