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Comparative analysis of the use of SA-SAMS and other school administration software in rural schools

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Abstract

This study examines school preference to use the South African School Administration and Management System (SA-SAMS) over other administrative software solutions. The research aims to explore the benefits and challenges associated with SA-SAMS in school management. A qualitative research design was used, with data collected through interviews and analysed thematically. The study focused on five school administrators from the iLembe district, each representing a circuit within a district that consists of 441 schools. The population of the study includes school administrators responsible for managing school records, timetables, assessments, and compliance reporting. A purposive sampling technique was applied to select participants based on their experience with SA-SAMS. The findings indicate that schools prefer SA-SAMS because it integrates well with government education systems, ensures compliance with regulations, and supports essential administrative tasks like record-keeping and reporting. Participants highlighted that SA-SAMS helps align school management with the Department of Basic Education's requirements. However, the study also identified challenges, including difficulties in navigation, limited technical support, and system inefficiencies. Some administrators expressed concerns about the software's user-friendliness and emphasised the need for better training and improved technical assistance. The study concludes that while SA-SAMS is widely used due to its alignment with national education policies, enhancements are required to improve its usability and efficiency. The findings suggest that continuous technical support, user training, and system upgrades could improve its effectiveness in school administration. Enhancing SA-SAMS based on user feedback will help schools maximize its potential for efficient data management and administrative processes.

Keywords: *software, administration, management, technical support, user-friendliness*

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1. Introduction

In today's schools, good administration is important for smooth operations, proper use of resources, and making good decisions (Botha, 2020). In fact, many schools use administration software to help with tasks like student registration, keeping academic records, and managing finances (Smith & Brown, 2019). Technology is becoming more common in school administration, helping schools work more efficiently (Jantjies, 2021; Pentang et al., 2024). This is common in South Africa and other countries where different software options promise to make school management easier (Moyo et al., 2021). One of the most popular systems in South Africa is the South African School Administration and Management System (SA-SAMS). This software helps schools keep student and staff records, create reports, and communicate with education authorities (Department of Basic Education, 2022). However, some schools use other software instead of SA-SAMS (Naidoo, 2020).

Schools can choose from different software, including commercial programs and custom-made solutions (Peters & Dlamini, 2018). Some of these claims to be better than SA-SAMS, but there is little research comparing them (Nkosi & Van der Merwe, 2023). Understanding the advantages and disadvantages of SA-SAMS compared to other software can help teachers and school leaders choose the best system for their needs (Mthembu, 2020). This study looks at why schools in the iLembe district prefer SA-SAMS over other options, examining its benefits and challenges.

This study uses the Technology Acceptance Model (TAM), which explains why people accept and use new technology (Davis, 1989). According to TAM, people are more likely to use a system if they think it is useful and easy to use (Venkatesh & Bala, 2008). In this study, TAM helps explain why schools choose SA-SAMS over other software. If the school administrators believe SA-SAMS is helpful and simple to use, they are more likely to prefer it. TAM also shows that other factors, such as training, technical support, and government rules, affect how people accept technology (Marangunić & Granić, 2015). This means that schools may use SA-SAMS not just because of its features but also because of policies and support from the government. Understanding these factors can help improve school administration by making sure the best software is chosen and properly supported.

2. Literature Review

Previous research emphasises the importance of school administration software in streamlining administrative procedures and providing stakeholders with real-time data access (Soni & Kaur, 2019). SA-SAMS has emerged as a prominent player within South Africa's education sector due to its alignment with national educational policies and regulations. However, there is a lack of empirical studies directly comparing SA-SAMS with alternative software solutions, highlighting the need for further investigation (Pillay, 2020). School administration software plays a critical role in managing educational data, improving operational efficiency, and ensuring compliance with national regulations.

In South Africa, the SA-SAMS is widely used in schools to meet the requirements of the Department of Basic Education (DBE) for reporting and managing student data (Department of Basic Education, 2021). This software is integrated with national education databases, allowing schools to comply with government mandates such as tracking learner performance and generating reports for regulatory purposes (Ayo et al., 2016). However, while SA-SAMS has been adopted across many schools, studies have shown that it has limitations in terms of usability and efficiency. Teo et al. (2011) argue that the user interface of SA-SAMS is complex and not intuitive, which creates difficulties for both administrators and educators who are new to the system. This results in long training times and user frustration, which can reduce the overall effectiveness of the software. Rashid and Asghar (2016) also highlighted that user experience is a crucial factor in the success of software adoption, and when systems are difficult to navigate, it hampers their usability.

Another area of concern is the technical support provided to users of SA-SAMS. Al-Rawas et al. (2020) discuss how the software's support services have been inconsistent, leading to disruptions in its use. These disruptions negatively affect school operations, especially during critical periods such as exam periods, when administrative data needs to be accurately reported and managed. In contrast, alternative school administration software solutions, such as commercial off-the-shelf (COTS) systems and customised third-party solutions, have been proposed as potentially more efficient and user-friendly options. These alternatives tend to offer simpler user interfaces, more responsive technical support, and additional features such as real-time data analytics (Rashid & Asghar, 2016; Smith & Sandholts, 2021). These software solutions are designed to improve the user experience and streamline administrative tasks, making them more attractive to schools looking for more adaptable tools. Furthermore, some

of these systems provide advanced analytics that allow schools to make data-driven decisions regarding resource allocation, performance tracking, and strategic planning (Johnson & Smith, 2018).

Despite the advantages of alternative solutions, government mandates and policies often lead schools to continue using SA-SAMS. The Department of Basic Education has endorsed SA-SAMS as the standard for data collection, and schools are required to use it for reporting purposes. This regulatory pressure limits the ability of schools to explore other software solutions (Al-Rawas et al., 2020). Additionally, SA-SAMS' integration with national databases means that schools using this system have a clear path for compliance with government regulations, something that alternatives might not easily offer (Department of Basic Education, 2021).

While existing literature offers some insights into the functionalities and limitations of SA-SAMS (Teo et al., 2011; Ayo et al., 2016), there is a significant gap in comprehensive, comparative studies that directly compare SA-SAMS with alternative school administration software solutions. Much of the existing research focuses on the benefits of using SA-SAMS for compliance purposes but fails to explore how well the system performs in terms of usability, efficiency, and technical support compared to alternative solutions. Although alternative software solutions are recognised for their user-friendly interfaces and additional features, little research has been done to evaluate how these alternatives would perform in a South African school setting, especially considering the unique challenges of regulatory compliance and integration with national databases. The gap in the literature is thus twofold: (1) there is insufficient critical evaluation of SA-SAMS' usability and efficiency, and (2) there is a lack of research exploring the potential benefits and challenges of adopting alternative software solutions in South African schools.

The central problem addressed in this study is the continued reliance on SA-SAMS in South African schools despite its known limitations in terms of usability, efficiency, and technical support. Schools often face challenges with SA-SAMS' complex user interface, which makes it difficult for administrators and teachers to use effectively (Teo et al., 2011). Moreover, inconsistent technical support further exacerbates these challenges, making it hard for schools to resolve issues in a timely manner (Al-Rawas et al., 2020). However, despite these drawbacks, SA-SAMS remains the preferred choice for many schools. The reasons for this continued preference are multifaceted. Regulatory compliance is a key factor, as SA-

SAMS is specifically designed to integrate with government databases and support the DBE's reporting requirements (Ayo et al., 2016). Additionally, cost considerations, contractual obligations, and the long-term support provided by the government also contribute to the ongoing use of SA-SAMS (Al-Rawas et al., 2020). This study seeks to explore why schools persist in using SA-SAMS despite the availability of potentially more effective alternative software solutions.

3. Methodology

This study operates within an interpretivist paradigm, which emphasises understanding the social phenomena from the perspectives of the individuals involved. In this case, the study aims to explore the lived experiences of school administrators, capturing the subjective meanings they associate with the adoption and use of SA-SAMS. Interpretivism allows for an in-depth analysis of how these administrators make sense of their experiences, challenges, and perceptions surrounding the software.

This study adopts a qualitative research approach, as it is particularly suited for exploring in-depth experiences and perspectives. Qualitative research enables the researcher to gather detailed insights into the adoption and use of SA-SAMS in rural schools, which cannot be captured through quantitative methods (Creswell, 2014). The research follows a case study design, focusing on four rural schools in the iLembe District that use SA-SAMS for administrative tasks. The case study approach is appropriate due to the unique challenges faced by rural schools, including limited resources, poor infrastructure, and insufficient technical support (Smith & Sandholts, 2021). These schools, situated in a rural setting, offer a rich context for understanding the experiences of school administrators with SA-SAMS.

The population for this study consists of 441 school administrators in the iLembe District, each responsible for managing administrative tasks, including using SA-SAMS. This district is divided into five circuits, and each circuit is represented by a school administrator. From this population, five administrators were selected to participate in the study. These administrators were chosen based on purposive sampling, ensuring that they have relevant experience with SA-SAMS and other school management software. This sample size is justified by the goal of gaining detailed insights from administrators in different circuits of the district, allowing for a diverse representation of the challenges and experiences with SA-SAMS.

The research is conducted within the iLembe District, specifically focusing on rural schools. Rural schools in this district face particular difficulties, such as lack of technical support, inadequate infrastructure, and difficulties in adapting to new technologies. These factors make the rural setting ideal for exploring how administrators interact with SA-SAMS and the issues they face in using it.

Data collection was done through semi-structured interviews with the five selected school administrators. A purposive sampling technique was used to select one administrative clerk from each of the five circuits in Ilembe District, totaling five participants The interviews were designed to encourage participants to share their thoughts and experiences freely, focusing on their perceptions of SA-SAMS, its usability, and the challenges they face in using the system. Open-ended questions were used to facilitate detailed responses, allowing for a deeper understanding of the administrators' experiences and the factors influencing their software adoption decisions.

The data collected through the interviews was analysed using thematic analysis, as outlined by Braun and Clarke (2006). This method allows for the identification, analysis, and interpretation of patterns within the data. The interview transcripts were carefully coded to uncover recurring themes related to the adoption and use of SA-SAMS. The themes were then categorised to better understand the underlying factors influencing software adoption and the advantages and challenges of using SA-SAMS in comparison to alternative solutions. Through this approach, the study was able to identify three major themes that emerged from the data: the usability and efficiency of SA-SAMS, the role of technical support in adoption, and the challenges faced by administrators in rural schools.

This case study approach provides valuable insights into how SA-SAMS is used in rural schools within the iLembe District, shedding light on the specific challenges and advantages that come with using the software in this context.

Ethical clearance for this study was formally obtained from the University of Zululand, where the first author was enrolled as a postgraduate student, and the other two authors were academic staff members supervising the research. The ethical clearance process involved submitting a detailed research proposal to the university’s Research Ethics Committee, outlining the purpose, methods, and data handling procedures of the study. Key ethical principles such as voluntary participation, informed consent, confidentiality, and anonymity were strictly observed. Participants were informed about the nature and purpose of the study,

and they signed informed consent forms before data collection commenced. In compliance with the Protection of Personal Information Act (POPIA) in South Africa, all data were stored securely and used solely for academic purposes. Moreover, all identifying information was removed or coded to maintain the anonymity of schools and individuals. The study also avoided any conflict of interest and ensured that the involvement of staff members did not influence participant responses or compromise research integrity.

4. Findings

The findings of this study provide a comprehensive understanding of how school administrators in the iLembe District perceive and utilise SA-SAMS for administrative purposes, particularly in rural settings. Through in-depth interviews with five school administrators, the study explores three key themes: ease of use and usability, training and support, and cost and financial accessibility. These themes highlight the advantages and limitations of SA-SAMS in comparison to other administrative software solutions such as EduAdmin and QuickSchools. Despite the challenges identified, particularly in areas such as training and technical support, SA-SAMS emerged as the preferred choice for most administrators, largely due to its user-friendly interface, cost-effectiveness, and the government support it receives. The findings suggest that, while there are gaps in its implementation, SA-SAMS continues to be the most practical and accessible option for schools, especially those in rural areas where resources are limited.

4.1. Ease of Use and Usability

When it comes to the ease of use of administrative software, SA-SAMS was largely favored by the participants, with most agreeing that it is relatively simple to navigate for basic tasks. The software's integration with government databases and its straightforward approach to meeting regulatory requirements make it a preferred option for school administrators, especially in rural areas. As reported by Teo et al. (2011), user interface and usability are crucial factors influencing the success of administrative software adoption, particularly in resource-constrained environments.

> *"I find SA-SAMS fairly user-friendly. Even though the interface isn't the prettiest, it's straightforward enough for my school's needs. There are better-designed systems, but they are complicated for us to afford."* **Participant 3**

> *"At first, I struggled a bit, but now that I understand the basics, I feel it's easy to use. It doesn't have as many features as EduAdmin, but it covers the essentials."* **Participant 5**
>
> *"I think SA-SAMS is easy to use. For everyday tasks, it's simple, especially when you're just updating student attendance or other basic records."* **Participant 1**
>
> *"The system can be slow when you are pulling reports, but the basic functions like attendance and grades are manageable. It's easy to understand, and I can train new staff on it quickly."* **Participant 2**
>
> *"It could be easier to use, especially the reporting features, but it works for what we need. I think it's simpler than some other systems I've used in the past."* **Participant 4**

This theme suggests that while SA-SAMS might not be the most advanced in terms of user interface, it is sufficiently easy to use for routine administrative tasks. In comparison, EduAdmin and QuickSchools were noted for their user-friendly interfaces but were criticised for being more complicated for the average user and requiring extensive training. As noted by Rashid and Asghar (2016), simpler and more intuitive software is often more successful in low-resource settings, as it reduces the burden on already overworked staff.

One participant mentioned:

> *"EduAdmin is more polished, but it's harder to learn and doesn't align well with the government's data systems. We don't have time to learn a complex system when we just need to get our work done."*

This highlights the challenge that more advanced systems, like EduAdmin, present for rural schools, as they require significant time investment in training and adaptation, which may not be feasible for administrators who are already pressed for time.

4.2. Training and Support

Training and ongoing support were identified as key areas where SA-SAMS has both strengths and weaknesses. On one hand, SA-SAMS is provided with training, but there is a consensus that advanced training is lacking, leading to difficulties when administrators encounter more complex functions. Despite this, technical support from the Department of Basic Education (DBE) was praised for being accessible, even if not always immediate. According to Ayo et al. (2016), the availability of training and support are vital to ensuring the smooth integration and use of administrative software in educational settings.

> *"The support from DBE is good. Whenever we have issues, we can reach out. However, more detailed training on complex reports would help."* **Participant 5**
> *"SA-SAMS is easy once you've been trained, but there's not enough support for the more complicated tasks. We mostly rely on each other to figure out solutions."* **Participant 3**
> *"We had a one-time training session, but after that, we're mostly on our own. Sometimes I get stuck with reports, but I can call someone from the district for help."* **Participant 1**
> *"The training was good initially, but there aren't enough follow-ups. Sometimes we figure things out through trial and error."* **Participant 2**
> *"I received basic training, but anything beyond that I had to teach myself. It's not that hard, but it's frustrating not to get more detailed support."* **Participant 4**

The limited training is one of the drawbacks of SA-SAMS when compared to other software options like EduAdmin and QuickSchools, which offer better online support, tutorials, and more specialised training. As one administrator pointed out, *"EduAdmin has more online support, but you have to pay extra for the more personalised help. It's frustrating that we don't get ongoing support with SA-SAMS for things like generating specific reports."* This reflects the shortcomings of SA-SAMS in providing continuous and detailed support. As Smith and Sandholts (2021) argue, effective and consistent technical support can significantly improve software adoption rates and overall user satisfaction, which remains an area for growth in SA-SAMS.

4.3. Cost and Financial Accessibility

The cost-effectiveness of SA-SAMS is one of the most significant advantages cited by participants. As it is fully funded by the DBE, there are no associated costs for schools to bear, making it particularly advantageous for schools in rural areas with limited budgets. In comparison, both EduAdmin and QuickSchools require subscriptions and maintenance fees, which pose a significant barrier to their adoption, particularly for schools in underfunded areas. According to Johnson and Smith (2018), cost is one of the primary factors influencing the adoption of educational technologies, particularly in rural or low-income settings.

> *"The best thing about SA-SAMS is that it's free. We don't have to worry about licensing fees, which is a huge relief for us. If we had to pay for another system, it would be impossible."* **Participant 1**

> *"I like that SA-SAMS is government-supported. We don't have to spend any money, which is a big plus when we're working with a tight budget."* **Participant 2**
>
> *"I've heard that EduAdmin is good, but it's not realistic for us. We simply don't have the funds to pay for it year after year."* **Participant 3**
>
> *"SA-SAMS is free, and that's why we use it. If we had to pay for it, it would be difficult. There are other systems that might work better, but the cost would stop us from adopting them."* **Participant 4**
>
> *"We don't pay a cent for SA-SAMS, and that makes it the most viable option. If we could afford it, we might try something else, but it's the only one within our budget."* **Participant 5**

This theme highlights that while SA-SAMS is cost-free, making it an ideal option for resource-strapped rural schools, EduAdmin and QuickSchools require subscriptions that are difficult to justify given the financial limitations. As one administrator pointed out, *"The government supports SA-SAMS, and that's the only reason it works for us. Otherwise, we'd be forced to use outdated methods."* This underscores the financial feasibility of SA-SAMS, which remains a significant advantage over its competitors. Ayo et al. (2016) emphasise that cost is often a deciding factor in the choice of software, especially for schools with limited resources.

SA-SAMS remains the preferred software for most administrators in rural schools, largely due to its cost-effectiveness, ease of use, and government support. While there are areas where it could improve, such as advanced training and technical support, its lack of cost makes it indispensable for schools that are financially constrained. EduAdmin and QuickSchools, though more feature-rich and user-friendly, come with high costs that make them inaccessible for many schools, especially in rural areas. Therefore, SA-SAMS is the most practical and sustainable option for the majority of rural schools in the iLembe District, despite the limitations that exist in its current implementation.

5. Discussion

The findings of this study reveal that SA-SAMS continues to be the most widely adopted school administrative software in rural schools within the iLembe District, primarily due to its ease of use, cost-effectiveness, and government support. Most school administrators

preferred SA-SAMS over other alternatives like EduAdmin and QuickSchools for these reasons. The DBE provides free access to the software and technical support, which makes it an attractive choice for rural schools that face resource constraints (Ayo et al., 2016). Furthermore, the software's integration with national databases and its ability to ensure regulatory compliance with government mandates, such as the Annual Schools Survey (ASS), have made it indispensable for many schools. According to Teo et al. (2011), software that is designed to meet the regulatory needs of educational institutions is often more easily adopted, as compliance is a primary concern for administrators. This aligns with the experiences of the participants in this study, who highlighted the convenience and simplicity of SA-SAMS in fulfilling their administrative requirements. However, despite its widespread use, the software is not without its drawbacks, especially when compared to other solutions like EduAdmin, which some participants reported as offering a more intuitive user interface (Smith & Sandholts, 2021).

Despite the preference for SA-SAMS, the study revealed some recurring challenges that administrators face with the software, primarily in the areas of training and technical support. While SA-SAMS is easy to use and cost-effective, its lack of sufficient training resources was identified as a significant barrier to its optimal use. Some participants noted that they had not received adequate training to fully exploit the software's potential, which often led to frustration and inefficiency in its application. This finding is consistent with previous studies, such as those by Teo et al. (2011), which stress that training and technical support are crucial for the successful adoption of any administrative software. In contrast, EduAdmin and QuickSchools, though more expensive, were described by some administrators as offering better training programs and more accessible customer service, which enhances their usability and overall effectiveness. However, the cost and lack of government funding make these alternative solutions less viable for schools in the iLembe District. Thus, the challenge for SA-SAMS remains the need for improved training and ongoing support to ensure that its users can fully benefit from its functionalities, especially in rural settings where access to professional development resources is limited.

The cost-effectiveness of SA-SAMS was repeatedly highlighted by participants as a crucial factor in its continued use. In a district where financial constraints are significant, the free access provided by the DBE ensures that schools can continue to function without the additional financial burden of purchasing commercial software. EduAdmin and QuickSchools,

while offering features such as advanced data analytics and more customisable interfaces, were deemed less attractive due to their associated costs. This finding reflects the broader trend in educational technology adoption, where schools in resource-poor environments tend to prioritise affordability over more feature-rich solutions (Rashid & Asghar, 2016). Furthermore, the government's involvement in SA-SAMS provides schools with a sense of security and continuity, as they know that the software is backed by policy and funding. As Johnson and Smith (2018) suggest, when educational software is aligned with government mandates, schools are more likely to adopt it due to the reliability and long-term support it offers. Therefore, while there are some clear benefits to alternative software options, SA-SAMS's financial accessibility and regulatory compliance continue to make it the preferred choice for many rural schools.

6. Recommendations

Based on the findings of this study, it is recommended that the Department of Basic Education (DBE) take active steps to improve the training and support systems for SA-SAMS users in rural schools. Training programs should be more robust and accessible, with a focus on helping administrators fully understand and utilise all the features of the software. This could be achieved through regular workshops, online tutorials, and the provision of local support teams easily accessible to rural schools. As noted by Teo et al. (2011), comprehensive training and technical support are vital for the successful implementation of any educational software. By ensuring that administrators are well-equipped with the necessary skills and knowledge, the DBE can enhance the overall effectiveness of SA-SAMS and ensure that it meets the evolving needs of school administrators in rural areas. Additionally, the DBE could consider integrating a feedback mechanism that allows administrators to report issues and suggest improvements, ensuring that the software remains relevant and responsive to their needs.

Another key recommendation is that the DBE consider exploring collaborations with commercial software providers, such as EduAdmin and QuickSchools, to bring more affordable, feature-rich options to rural schools. While SA-SAMS remains the most cost-effective solution, incorporating the best features of alternative software, such as data analytics and more user-friendly interfaces, could improve the administrative experience for school managers. However, these features should be made affordable and accessible to ensure that

schools in rural areas are not financially burdened. This could involve negotiating bulk discounts or seeking public-private partnerships to provide these services at subsidised rates. As Smith and Sandholts (2021) suggest, offering a range of software options with varying levels of sophistication and cost could ensure that schools of all sises and in different geographical locations can choose the most appropriate solution for their needs.

The findings of this study have several implications for administrative clerks in rural schools using SA-SAMS for school management. Given the ease of use and government support associated with SA-SAMS, administrative clerks can continue to rely on this software for day-to-day school administration, with minimal financial burden, as it is provided free of charge by the Department of Basic Education (DBE). However, the gaps in training identified by the study indicate that administrative clerks may not be fully equipped to maximise the software's potential, which could hinder their productivity and efficiency. Therefore, the findings suggest that administrative clerks will benefit from enhanced training programs that focus on the advanced features of SA-SAMS and provide ongoing technical support. By addressing these gaps, administrative clerks will be able to perform their duties more effectively and improve the overall efficiency of school management. Moreover, the potential integration of more user-friendly and feature-rich software, such as EduAdmin or QuickSchools, could offer them an alternative that might better address the specific needs of rural schools. Therefore, for administrative clerks to thrive in a digital age, it is crucial that they receive the necessary support and access to tools that enhance both their skills and their capacity to manage school data efficiently.

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The author declares the use of Artificial Intelligence (AI) in writing this paper. In particular, the author used Quillbot in searching for appropriate literature, summarizing key points, and paraphrasing ideas. The author takes full responsibility in ensuring proper review and editing of content generated using AI.

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