



## Impact of Technology and Digitalisation on Sports Administration in Akwa Ibom: Adoption, Barriers and Organisational Outcomes

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### Abstract

Digital transformation is reshaping sports administration globally, yet adoption patterns remain uneven across subnational contexts. This study examined the impact of technology and digitalization on sports administration in Akwa Ibom State, Nigeria, with specific focus on adoption levels, barriers, and perceived impacts. A descriptive survey design was employed, and data were collected through a structured questionnaire administered to 218 respondents, of which 197 valid responses were analyzed. The instrument covered adoption of digital platforms (scheduling, athlete data management, facility booking, and performance monitoring), barriers to digitalization (skills, cost, infrastructure, policy, resistance), and perceived impacts on efficiency, facility utilization, and athlete development. Responses were rated on a four-point Likert scale, and data were analyzed using frequency counts, percentages, means, and standard deviations. Findings showed a moderate level of digital adoption (grand mean = 2.86), with digital communication tools most widely utilized while athlete data and facility management systems remained underused. Barriers were found to be high (grand mean = 3.20), with cost, poor internet connectivity, and lack of digital skills as major constraints, while resistance to change was least significant. Perceived impacts were strongly positive (grand mean = 3.25), particularly in communication, efficiency, and performance monitoring. The study concludes that sports administration in Akwa Ibom is at a transitional stage of digitalization, requiring targeted investments, policy support, and capacity building to maximize the benefits of technology.

**Keywords:** Digitalization, Sports Administration, Technology Adoption, Organizational Efficiency, Athlete Development, Akwa Ibom State

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### 1. Introduction

The 21st century has witnessed unprecedented digital transformation across multiple sectors, including education, health, governance, and sport. In sport specifically, the integration of digital technologies has reshaped how organizations are structured, how decisions are made, and how athletes, administrators, and fans interact (Hanelt *et al.*, 2021) <sup>[11]</sup>. From cloud-based scheduling platforms and athlete data management systems to advanced facility booking applications and wearable performance monitoring devices, digitalization has become a critical enabler of efficiency, transparency, and innovation in sport administration worldwide. These technologies have reduced administrative redundancies, improved athlete performance tracking, enhanced facility utilization, and created new revenue streams through digital engagement with stakeholders (Ratten, 2020) <sup>[21]</sup>.

Globally, evidence indicates that sport organizations adopting digital tools report improved operational efficiency and stronger stakeholder engagement (Filo *et al.*, 2015) <sup>[8]</sup>. In advanced economies, elite sport bodies now rely heavily on performance analytics, bioinformatics, and integrated data platforms to guide athlete training, injury prevention, and fan engagement strategies (Pizzo *et al.*, 2019) <sup>[20]</sup>. However, in developing countries, particularly within sub-Saharan Africa, the adoption of such

technologies has been inconsistent. While there is growing interest in applying digital innovations in sport, challenges such as inadequate infrastructure, high costs, limited technical expertise, and institutional inertia have slowed their diffusion (Onifade & Ayodele, 2021) <sup>[19]</sup>.

Nigeria reflects this paradox. On one hand, the country has a vibrant sporting culture and a growing population of digitally connected youths; on the other, its sport institutions struggle with systemic challenges such as poor infrastructure, low investment, and a lack of skilled digital personnel (Ojo, 2018) <sup>[17]</sup>. Although some Nigerian states are experimenting with ICT-enabled governance and service delivery, little is known about the extent to which such digitalization efforts have penetrated sport administration at subnational levels. Most available studies focus either on elite sport performance or national-level policy debates, leaving a significant research gap in state-level contexts where much of grassroots sport development occurs (Adegbite & Adesina, 2022) <sup>[11]</sup>.

Akwa Ibom State provides a compelling case for study. The state has invested substantially in sports infrastructure, including the Godswill Akpabio International Stadium, and has consistently promoted itself as a hub for sporting excellence in Nigeria. At the same time, Akwa Ibom is aligning with broader national and global agendas that emphasize ICT integration and digital innovation in public service delivery (Ekong & Udo, 2020) <sup>[7]</sup>. Against this backdrop, the question arises: to what extent are digital technologies being adopted in the administration of sports within Akwa Ibom State, what barriers constrain their effective use, and what impacts are observable on organizational performance and athlete development?

Understanding these dynamics is not only of academic interest but also of practical importance for policymakers, sport administrators, and private stakeholders seeking to leverage technology to enhance sport outcomes. Empirical evidence from Akwa Ibom can provide insights into how subnational sport systems in Nigeria and similar contexts across Africa are engaging with the global trend of sport digitalization. Moreover, identifying barriers such as cost, digital skills gaps, and infrastructural constraints can inform targeted interventions to strengthen organizational readiness and maximize the benefits of digital adoption. This study, therefore, seeks to investigate the impact of technology and digitalization on sport administration in Akwa Ibom State.

## Research Questions

1. What is the extent of adoption of digital platforms in sports administration in Akwa Ibom State?
2. What barriers hinder the adoption of technology and digitalization in sports administration?
3. What impact does digitalization have on organizational efficiency, facility utilization, and athlete development in Akwa Ibom State?

## Literature Review

### Digital transformation in sport: Scope and Drivers

Digital transformation is increasingly recognized as a structural change process that redefines the strategies, processes, and interactions within organizations across different sectors. In sport, this transformation has been accelerated by the convergence of cloud computing, mobile applications, artificial intelligence (AI), and the Internet of Things (IoT). Scholars argue that sport organizations are no longer merely adopting tools to automate existing practices;

instead, digitalization is reshaping the very logic of sport administration, creating new forms of value through efficiency, transparency, and stakeholder engagement (Hanelt *et al.*, 2021) <sup>[11]</sup>. Globally, sport governing bodies and clubs employ digital innovations not only to streamline administration but also to foster fan engagement, improve athlete performance tracking, and optimize revenue models through sponsorships and digital content delivery (Ratten, 2020) <sup>[21]</sup>.

The drivers of this transformation are multifaceted. First, there is increasing demand from athletes and fans for seamless and data-driven experiences. Second, competitive pressures push organizations to adopt analytics and monitoring tools to maintain performance parity. Third, policy environments in many regions now promote e-governance and digital public service delivery, indirectly encouraging sport bodies to adopt digital processes (Filo, Lock, & Karg, 2015) <sup>[8]</sup>. These global shifts create a normative expectation that even subnational sport systems must adapt if they are to remain relevant and sustainable.

### Key technologies used in sport administration

The literature identifies four major categories of technologies currently shaping sport administration.

**1. Scheduling and facility management systems:** Cloud-based platforms are widely used to allocate training slots, avoid scheduling conflicts, and optimize facility utilization. Such systems reduce administrative redundancies and enable data-based facility planning.

**2. Athlete data management systems:** Centralized databases consolidate athlete medical, training, and competition records, improving record-keeping and ensuring continuity across coaches and medical staff. This is crucial for long-term athlete development models.

**3. Wearables and performance monitoring devices:** These tools, including GPS trackers, accelerometers, and heart rate monitors, provide real-time data on athlete workload, fatigue, and physiological responses. Evidence indicates they are valuable for injury prevention and for tailoring training to individual needs (Pizzo *et al.*, 2019) <sup>[20]</sup>.

**4. Analytics and visualization tools:** Beyond raw data collection, analytics platforms convert data into insights for administrators and coaches. They support decision-making in areas such as team selection, load management, and organizational planning (Collins, 2020) <sup>[6]</sup>.

However, as studies in developing contexts note, the adoption of these technologies is uneven. Many organizations still rely on manual systems, while advanced tools are concentrated in elite clubs or well-resourced universities (Onifade & Ayodele, 2021) <sup>[19]</sup>.

Several empirical studies have demonstrated the tangible benefits of digitalization in sport administration. At the organizational level, digital platforms reduce administrative time, minimize duplication of records, and improve financial transparency through electronic payments for facility use (Ratten, 2020) <sup>[21]</sup>. At the athlete level, data-driven monitoring enhances training precision, reduces overtraining risks, and facilitates early detection of injury. Research on wearable devices underscores their validity in capturing

performance-relevant indicators when used appropriately (Akenhead & Nassis, 2016) <sup>[3]</sup>.

Furthermore, evidence suggests that facility-booking applications improve utilization rates, ensuring that costly public infrastructure does not remain underused (Ekong & Udo, 2020) <sup>[7]</sup>. Similarly, athlete management systems allow administrators to track career trajectories, enabling more strategic talent development at state and national levels. Nevertheless, the literature cautions that benefits accrue only when systems are integrated into organizational routines; without organizational buy-in, data often remains unused (Filo *et al.*, 2015) <sup>[8]</sup>.

### Barriers in low-resource contexts: Africa and Nigeria

Despite the potential, African sport systems face distinct constraints. Studies identify persistent barriers including poor broadband connectivity, inconsistent electricity supply, limited technical expertise, and the high cost of devices and software licenses (World Bank, 2020) <sup>[24]</sup>. These systemic issues mean that even when facilities exist, their digital components are underutilized.

In Nigeria, research highlights a paradox: while there is enthusiasm for technology, much of sport administration remains manual. Ojo (2018) <sup>[17]</sup> notes that most institutions still rely on paper-based scheduling and record-keeping, leading to inefficiencies and duplication. Adegbite and Adesina (2022) <sup>[1]</sup> observe that without deliberate policy interventions, state-level sport systems risk being left behind in the global digital race. Moreover, inadequate training for administrators results in underutilization of existing digital platforms, further widening the gap between potential and actual impact.

Notwithstanding these barriers, some innovations are emerging within African contexts. Local technology start-ups have begun providing affordable athlete management platforms and mobile-based ticketing systems, tailored to local infrastructure realities (Mchezaji, 2023) <sup>[15]</sup>. Public-private partnerships (PPPs) in some Nigerian states have also piloted digital facility management and cashless payment systems, with encouraging results (Ekong & Udo, 2020) <sup>[7]</sup>. Global development literature points to the importance of Digital Public Infrastructure (DPI) interoperable systems for identity, payments, and connectivity as foundational for sectoral digitalization. When such infrastructure is in place, sectors like sport can integrate digital services more cheaply and effectively (World Bank, 2020) <sup>[24]</sup>. For Akwa Ibom, aligning sport administration with these broader ICT initiatives could accelerate adoption while lowering costs.

Most existing scholarship on sport digitalization either focuses on elite organizations in advanced economies or discusses digital governance in broad policy terms. There is a lack of empirical work examining subnational contexts in low- and middle-income countries, where much of grassroots sport development and facility management actually takes place. This represents a critical gap because state-level systems face distinct challenges, including budgetary constraints, local policy environments, and administrative capacity issues (Onifade & Ayodele, 2021) <sup>[19]</sup>.

### Materials and Methods

This study adopted a descriptive survey research design which was considered appropriate for investigating the adoption of digital technologies, the barriers constraining their use, and the perceived impacts on sports administration

in Akwa Ibom State. The choice of design allowed for the systematic collection of quantifiable data from a defined population at a single point in time, thereby offering reliable insights into practices and challenges surrounding digitalization in sports management within the state.

The study population consisted of 480 individuals drawn from sports administrators, coaches, facility managers, and officials across Akwa Ibom State Sports Council, tertiary institutions, secondary schools with functional sports programmes, and selected private sport organizations. These groups were deliberately targeted as they are directly involved in scheduling, athlete management, facility oversight, and other administrative duties that are most likely to be influenced by digitalization. From this population, the sample size was determined using Taro Yamane's formula for finite populations at a 95% confidence level and a 5% margin of error, which yielded a total of 218 participants. A stratified random sampling technique was employed to ensure fair representation across government, school-based, and private organizations, thereby enhancing the generalizability of the findings.

Data for the study were collected using a structured questionnaire designed by the researcher and subjected to expert validation by three academics in sport management and educational measurement. The instrument was divided into four sections covering demographic characteristics of respondents, adoption of digital platforms such as scheduling systems, athlete data management tools, facility booking applications, and performance monitoring technologies; barriers to digitalization including skills, cost, infrastructure, and policy; and perceived impacts on organizational efficiency, facility utilization, and athlete development. Items in these sections were rated on a four-point Likert scale ranging from Strongly Disagree (1) to Strongly Agree (4), a format adopted to minimize neutrality and to encourage respondents to make definitive judgments.

The validity of the instrument was ensured through a combination of expert review and a pilot test conducted with thirty sports administrators in neighboring Cross River State, outside the main study area. Reliability was established through Cronbach's Alpha analysis which produced coefficients of 0.79 for adoption, 0.82 for barriers, and 0.84 for impact, all of which exceeded the minimum threshold for acceptable internal consistency. The administration of questionnaires was carried out both physically and electronically, using institutional channels and official WhatsApp groups, to maximize response rates and accommodate respondents' varying access to digital tools. Out of the 218 questionnaires distributed, 201 were completed and 197 returned valid and used for the analysis, representing a high response rate of 90 percent.

Data analysis was done using descriptive statistics of frequencies, means, and standard deviations to summarize the demographic data and answer research questions. The analyses were performed using SPSS version 25.

### Result

**Table 1:** Gender Distribution of Respondents

| Gender | Frequency | Percentage (%) |
|--------|-----------|----------------|
| Male   | 118       | 59.9           |
| Female | 79        | 40.1           |
| Total  | 197       | 100.0          |

Table 1 shows the gender distribution of respondents. Out of the 197 valid questionnaires analyzed, the majority were male (59.9%), while females accounted for 40.1%. This indicates that sports administration in Akwa Ibom State is still

relatively male-dominated, although female participation is also significant, suggesting a gradually improving gender balance in the sector.

**Table 2: Age Distribution of Respondents**

| Age Group    | Frequency | Percentage (%) |
|--------------|-----------|----------------|
| 20–29 years  | 52        | 26.4           |
| 30–39 years  | 61        | 31.0           |
| 40–49 years  | 50        | 25.4           |
| 50 and above | 34        | 17.2           |
| Total        | 197       | 100.0          |

Table 2 presents the age distribution of respondents. The largest proportion of participants were between 30–39 years (31.0%), followed by those aged 20–29 years (26.4%) and 40–49 years (25.4%), while only 17.2% were 50 years and

above. This distribution reveals that sports administration in Akwa Ibom is largely driven by individuals in their early and mid-career stages, with fewer older officials actively engaged.

**Table 3: Role of Respondents in Sports Administration**

| Role             | Frequency | Percentage (%) |
|------------------|-----------|----------------|
| Administrator    | 55        | 27.9           |
| Coach            | 68        | 34.5           |
| Facility Manager | 32        | 16.2           |
| Official         | 42        | 21.4           |
| Total            | 197       | 100.0          |

Table 3 shows the roles of respondents in sports administration. Coaches represented the highest proportion of participants (34.5%), followed by administrators (27.9%), officials (21.4%), and facility managers (16.2%). This

suggests that coaches and administrators form the backbone of sports operations in the state, while facility managers are fewer, potentially reflecting gaps in infrastructure oversight and maintenance.

**Table 4: Years of Experience of Respondents**

| Years of Experience | Frequency | Percentage (%) |
|---------------------|-----------|----------------|
| 1–5 years           | 63        | 32.0           |
| 6–10 years          | 58        | 29.4           |
| 11–15 years         | 44        | 22.3           |
| Above 15 years      | 32        | 16.2           |
| Total               | 197       | 100.0          |

Table 4 illustrates the years of experience of respondents. A significant number of respondents had between 1–5 years (32.0%) and 6–10 years (29.4%) of professional experience, while 22.3% had 11–15 years and only 16.2% had more than 15 years of experience. These findings show that a majority

of sports administrators in Akwa Ibom are relatively young in service, which could present opportunities for adaptability to digital tools, but also highlights a need for sustained capacity building.

**Table 5: Type of Organization of Respondents**

| Organization Type           | Frequency | Percentage (%) |
|-----------------------------|-----------|----------------|
| Government Sports Council   | 89        | 45.2           |
| Educational Institution     | 64        | 32.5           |
| Private Sports Organization | 44        | 22.3           |
| Total                       | 197       | 100.0          |

Table 5 presents the type of organization of respondents. The highest proportion of respondents were drawn from government sports councils (45.2%), followed by educational institutions (32.5%) and private sports organizations (22.3%). This distribution indicates that state-owned

institutions remain the dominant employers and organizers of sports in Akwa Ibom, though private organizations and educational institutions also play an important role in sports administration and digitalization efforts.



**Table 6:** Mean and standard deviation summary of adoption of digital platforms in sports administration

| S/N | Item   | Mean | SD   | Remarks           |
|-----|--|------|------|-------------------|
| 1   | Our organization uses digital platforms for scheduling sporting events.        | 3.21 | 0.84 | Agree             |
| 2   | Athlete data is managed through digital systems rather than paper records.     | 2.47 | 0.91 | Disagree          |
| 3   | Facility booking in our organization is carried out through digital tools.     | 2.58 | 0.88 | Disagree          |
| 4   | Digital platforms are used for monitoring athletes' training and performance.  | 3.09 | 0.79 | Agree             |
| 5   | Digital communication tools (WhatsApp, email, online portals) are widely used. | 3.46 | 0.67 | Agree             |
| 6   | Adoption of digital technologies has replaced most manual processes.           | 2.36 | 0.95 | Disagree          |
|     | Grand Mean   | 2.86 |      | Moderate Adoption |

The results in Table 6 show the extent to which digital platforms have been adopted in sports administration across Akwa Ibom State. The overall grand mean of 2.86 indicates a moderate adoption level, suggesting that while certain digital tools are widely used, full digital integration has not yet been achieved. The highest-rated item was the use of digital communication tools such as WhatsApp, email, and online portals ( $M = 3.46$ ,  $SD = 0.67$ ), reflecting the popularity of low-cost, accessible technologies for coordination and administrative communication. Similarly, digital platforms for scheduling sporting events ( $M = 3.21$ ,  $SD = 0.84$ ) and monitoring athletes' training and performance ( $M = 3.09$ ,  $SD = 0.79$ ) were positively rated, indicating that these tools are becoming integral to sport management practices.

However, adoption appears weaker in more technical areas. Athlete data management ( $M = 2.47$ ,  $SD = 0.91$ ) and facility booking through digital tools ( $M = 2.58$ ,  $SD = 0.88$ ) received lower ratings, suggesting reliance on manual and paper-based systems remains significant. The lowest mean score was recorded for the item on digital technologies replacing most manual processes ( $M = 2.36$ ,  $SD = 0.95$ ), implying that sports organizations still operate largely in a hybrid model with substantial manual input. Taken together, these findings highlight that while basic digital communication and scheduling platforms are embraced, structural and systemic digitalization particularly in athlete data and facility management is still evolving in Akwa Ibom sports administration.

**Table 7:** Mean and standard deviation summary of barriers to digitalization in sports administration

| S/N | Item  | Mean | SD   | Remarks      |
|-----|---|------|------|--------------|
| 1   | Lack of digital skills among sports administrators hinders effective use of digital platforms.              | 3.32 | 0.71 | Agree        |
| 2   | High cost of acquiring and maintaining digital tools is a major barrier.                                    | 3.41 | 0.68 | Agree        |
| 3   | Poor internet connectivity limits the adoption of digital platforms in our organization.                    | 3.28 | 0.74 | Agree        |
| 4   | Lack of adequate technical support prevents sustained use of digital systems.                               | 3.16 | 0.77 | Agree        |
| 5   | Absence of clear policies and institutional guidelines discourages digitalization in sports administration. | 3.08 | 0.80 | Agree        |
| 6   | Resistance to change from traditional manual processes slows digital adoption.                              | 2.97 | 0.83 | Agree        |
|     | Grand Mean  | 3.20 |      | High Barrier |

The findings presented in Table 7 highlight significant barriers to the adoption of digital platforms in sports administration across Akwa Ibom State. The overall grand mean of 3.20 indicates that respondents generally agreed that several barriers persist, thereby limiting the effectiveness of digitalization initiatives. The most critical challenge was the high cost of acquiring and maintaining digital tools ( $M = 3.41$ ,  $SD = 0.68$ ), suggesting that financial constraints are a primary factor slowing down digital transformation. Similarly, lack of digital skills among sports administrators ( $M = 3.32$ ,  $SD = 0.71$ ) and poor internet connectivity ( $M = 3.28$ ,  $SD = 0.74$ ) were also rated highly, pointing to infrastructural and human capacity issues that impede adoption.

Other notable barriers include lack of adequate technical support ( $M = 3.16$ ,  $SD = 0.77$ ) and the absence of clear institutional policies and guidelines ( $M = 3.08$ ,  $SD = 0.80$ ), both of which reflect systemic weaknesses in sustaining digital innovations. Interestingly, the lowest-rated barrier was resistance to change from traditional manual processes ( $M = 2.97$ ,  $SD = 0.83$ ), which, although still agreed upon by respondents, suggests that the cultural acceptance of digitalization is gradually improving. Overall, the evidence points to a context in which cost, skills, and infrastructure form the most pressing constraints, while attitudinal resistance is less of an issue compared to structural challenges.

**Table 8:** Mean and standard deviation summary of perceived impact of digitalization in sports administration

| S/N | Item  | Mean | SD   | Remarks     |
|-----|---|------|------|-------------|
| 1   | Digital platforms improve organizational efficiency in sports administration.                     | 3.34 | 0.66 | Agree       |
| 2   | Adoption of digital tools enhances proper utilization of sports facilities.                       | 3.12 | 0.71 | Agree       |
| 3   | Athlete performance is better monitored and tracked through digital technologies.                 | 3.27 | 0.69 | Agree       |
| 4   | Digitalization reduces duplication of effort and administrative errors.                           | 3.18 | 0.72 | Agree       |
| 5   | Adoption of digital platforms improves transparency and accountability in sports administration.  | 3.21 | 0.74 | Agree       |
| 6   | Digital tools enhance communication and coordination among administrators, coaches, and athletes. | 3.41 | 0.62 | Agree       |
|     | Grand Mean  | 3.25 |      | High Impact |

The results in Table 8 indicate that respondents perceive digitalization to have a generally positive impact on sports administration in Akwa Ibom State. The grand mean of 3.25 reflects a high level of agreement that digital platforms

contribute to improvements in efficiency, accountability, and communication within sports organizations. Among the items, the highest-rated perception was that digital tools enhance communication and coordination among

administrators, coaches, and athletes ( $M = 3.41$ ,  $SD = 0.62$ ), underscoring the critical role of digital communication platforms in bridging gaps and fostering collaboration. Similarly, organizational efficiency ( $M = 3.34$ ,  $SD = 0.66$ ) and monitoring athlete performance ( $M = 3.27$ ,  $SD = 0.69$ ) were rated highly, suggesting that digitalization contributes significantly to administrative streamlining and athlete development.

Other important impacts included improved transparency and accountability ( $M = 3.21$ ,  $SD = 0.74$ ) and reduction of administrative errors through digitalization ( $M = 3.18$ ,  $SD = 0.72$ ), both of which emphasize how technology helps in strengthening governance and operational credibility. The relatively lower-rated item, though still positively perceived, was the enhancement of proper utilization of sports facilities ( $M = 3.12$ ,  $SD = 0.71$ ), implying that while facility booking and usage are improving, they may still face challenges from infrastructural and policy barriers noted earlier. Taken together, these findings affirm that digitalization has had a tangible and positive impact on sports administration in Akwa Ibom, particularly in the domains of communication, efficiency, and performance monitoring.

### Discussion of Findings

The findings from this study reveal a moderate level of adoption of digital platforms in sports administration in Akwa Ibom State, with a grand mean of 2.86. Digital communication tools such as WhatsApp, email, and online portals were the most widely utilized, while athlete data management and facility booking systems recorded the lowest adoption levels. This pattern suggests that organizations tend to adopt low-cost, easily accessible tools rather than complex systems requiring high investments and technical know-how. Similar studies in sub-Saharan Africa have reported comparable trends, where communication technologies are embraced due to their affordability and ease of use, while advanced performance and facility management systems lag behind (Omodia & Ogu, 2022; Bamidele & Okafor, 2021) <sup>[18, 4]</sup>. This supports the argument that the nature of digital adoption is heavily shaped by contextual resource availability.

On the other hand, the low mean values for athlete data management and digital facility booking indicate persisting reliance on manual processes. This finding aligns with Chukwu *et al.* (2020) <sup>[5]</sup>, who reported that Nigerian sports councils still rely significantly on paper-based record-keeping due to infrastructural and policy gaps. In contrast, research from developed contexts such as the United Kingdom and Australia shows extensive adoption of athlete monitoring platforms and digital facility management systems (Jones & Millar, 2021) <sup>[13]</sup>. This contrast underscores the digital divide in sports administration, pointing to the role of socioeconomic and institutional differences in shaping outcomes.

The second research question explored barriers hindering digitalization in sports administration. The results showed that high cost, lack of digital skills, and poor internet connectivity were the strongest barriers, while resistance to change was the least significant. This indicates that, contrary to earlier assumptions that attitudes toward change were the primary barrier, sports administrators in Akwa Ibom are increasingly open to digitalization but constrained by structural limitations. These findings align with Udo and Essien (2023) <sup>[22]</sup>, who found that cost and infrastructural

deficits were the most significant challenges in public sector digitalization projects in southern Nigeria. The relative decline in resistance to change may also reflect growing digital literacy and acceptance of technology among younger professionals.

Interestingly, the barrier of inadequate institutional policy was also rated high, suggesting that without clear regulatory and operational frameworks, digitalization efforts remain fragmented. This observation resonates with global evidence where policy direction and institutional support are critical in shaping successful digital adoption (Filo *et al.*, 2022) <sup>[9]</sup>. Countries with clear e-governance frameworks have recorded higher uptake in sports digitalization, while contexts with weak policies face difficulties in sustaining innovations (Miah & Lee, 2021) <sup>[16]</sup>. Thus, the Akwa Ibom case demonstrates that cost and infrastructure alone are insufficient explanations; institutional alignment is equally necessary.

The third research question addressed the perceived impact of digitalization. Respondents generally agreed that digital platforms improve efficiency, accountability, and athlete performance monitoring, with a grand mean of 3.25. The strongest impact was observed in communication and coordination, reflecting the centrality of digital communication platforms in everyday operations. This finding is supported by Wicker and Breuer (2020) <sup>[23]</sup>, who argued that digitalization enhances organizational efficiency primarily through improved communication and information exchange. In the Nigerian context, easy access to smartphones and messaging apps likely explains why this impact is more strongly perceived compared to other domains.

Further, digitalization was found to improve organizational efficiency and reduce administrative errors, supporting the growing consensus that technology reduces redundancy and streamlines workflows (Grix & Carmichael, 2021) <sup>[10]</sup>. However, the relatively lower perception of facility utilization improvement suggests that infrastructural bottlenecks still limit the full benefits of digitalization. This resonates with the findings of Adeola and Oladipo (2019) <sup>[2]</sup>, who highlighted that without parallel investments in physical infrastructure, the benefits of digital platforms remain underutilized. Thus, while digitalization promises efficiency, its full potential is moderated by resource limitations.

Another notable outcome is that athlete monitoring through digital platforms was positively perceived, consistent with global findings where wearable devices and performance software are increasingly used to track training load and injury risks (McLaren *et al.*, 2022) <sup>[14]</sup>. However, given the earlier finding of low adoption of formal athlete data management systems, it is plausible that monitoring in Akwa Ibom relies more on informal or hybrid methods rather than fully integrated performance technologies. This partial adoption model explains why respondents see benefits, but not at the same intensity as in advanced sports systems.

Overall, the findings suggest that sports administration in Akwa Ibom is at a transitional stage of digitalization. While basic digital tools have been embraced for communication and coordination, structural challenges such as cost, infrastructure, and policy hinder the full integration of advanced digital systems. This aligns with global discourses emphasizing that digital transformation is context-dependent and mediated by socio-economic, institutional, and cultural variables (Heinonen & Robson, 2021) <sup>[12]</sup>. The agreement and

disagreement patterns between this study and prior literature highlight the importance of considering both global best practices and local contextual realities when discussing digitalization in sports administration.

### Conclusion

Based on the findings, this study concludes that sports administration in Akwa Ibom State is experiencing a transitional phase of digitalization, characterized by moderate adoption of digital tools. Communication platforms such as WhatsApp and email are widely embraced, improving coordination and organizational efficiency, while more advanced systems for athlete data management and facility booking remain underutilized. Barriers such as high cost, poor internet connectivity, lack of digital skills, and weak institutional policies continue to limit progress, although resistance to change is declining. Overall, digitalization is perceived to have a positive impact on efficiency, accountability, and performance monitoring, but its full potential can only be realized through strategic investment, infrastructural development, and policy support.

### Recommendations

Based on the findings of this study the following recommendation were made:

1. Sports organizations in Akwa Ibom State should prioritize the adoption of comprehensive digital platforms for scheduling, athlete data management, facility booking, and performance monitoring to strengthen administrative efficiency.
2. Government and stakeholders should address key barriers by investing in digital infrastructure, subsidizing costs, providing regular digital skills training, and developing clear institutional policies to support sustainable digitalization.
3. Sports administrators should leverage digital tools to enhance organizational efficiency, transparency, and athlete development, ensuring that digitalization translates into measurable improvements in performance and accountability.

### Conflict of Interest

The author declares no conflict of interest.

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