

INTEGRATING INFORMATION TECHNOLOGY INTO THE MANAGEMENT AND DEVELOPMENT OF NIGERIA COLLEGE OF EDUCATION GAMES ASSOCIATION (NICEGA) EVENTS

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Abstract

This study examined the integration of Information Technology (IT) in the management and development of the Nigeria Colleges of Education Games Association (NICEGA). The study focused on the historical development and organizational structure of NICEGA, the level of Information Technology adoption, and the benefits of Information Technology in sports administration. A descriptive survey research design was adopted. The population comprised Sports Directors, Administrative Officials, ICT Personnel, Coaches, and Athletes involved in NICEGA activities. Using a purposive sampling technique, 120 respondents were selected from six Colleges of Education across the six geopolitical zones of Nigeria. Data were collected through a structured questionnaire and analyzed using descriptive statistics and Pearson Correlation analysis. The findings revealed that NICEGA possesses a functional organizational structure, with a grand mean score of 3.60, indicating respondents' familiarity with its administrative framework and improvements in its operations. The study also found that the level of Information Technology adoption was relatively low, with a grand mean score of 2.98. Although computers and social media platforms were used for some administrative activities, advanced technologies such as online registration systems and performance analysis software were inadequately utilized. Furthermore, Information Technology was found to provide significant benefits, with a grand mean score of 4.23. Respondents agreed that IT enhances communication, record management, athlete monitoring, event coordination, transparency, and organizational effectiveness. The study concluded that increased investment in Information Technology infrastructure, digital tools, and staff training would significantly improve the efficiency and effectiveness of NICEGA sports administration.

Keywords: Information Technology, NICEGA, Sports Administration, Digital Transformation, Collegiate Sports.

Introduction

The ever-evolving and highly competitive nature of the global sports industry has created enormous pressure on sports organizations, institutions, and governing bodies to continuously improve their operational systems and management strategies. In the modern era, sports administration is no longer limited to physical training and event coordination alone; rather, it now involves the integration of sophisticated technological systems for athlete development, communication, competition management, media relations, and data analysis. According to Baker (2021), the advancement of

Information Technology (IT) has transformed the administration of sports across the world by introducing digital systems that improve efficiency, accuracy, transparency, and organizational productivity. Similarly, Anderson and Smith (2022) observed that sports organizations in developed countries increasingly rely on technology-driven approaches such as electronic databases, cloud-based communication systems, athlete performance analytics, virtual monitoring systems, and automated scheduling platforms to maintain competitiveness and global relevance.

In many developed nations such as the United States, the United Kingdom, Canada, and Australia, tertiary institutions have successfully integrated Information Technology into their collegiate sports systems. Universities and colleges in these countries now utilize advanced technological tools for athlete registration, online accreditation, performance tracking, biometric analysis, injury monitoring, and sports event broadcasting. Harris and Thompson (2020) explained that sports data analytics and digital communication platforms have significantly transformed the management of collegiate sports by enabling coaches and administrators to make informed decisions based on accurate and real-time information. In addition, the emergence of online sports management software and social media technologies has enhanced communication between athletes, coaches, sports administrators, sponsors, and fans. Consequently, sports organizations that embrace technological innovation are able to improve athlete performance, attract sponsorship opportunities, and strengthen institutional visibility at both national and international levels (Baker, 2021).

Given these challenges, there is an urgent need to explore practical strategies for integrating Information Technology into the administration and management of NICEGA activities. This study therefore seeks to examine specific IT tools, devices, and digital systems that can be effectively adopted within the operational framework of NICEGA. The study intends to identify technologies capable of improving athlete registration, performance tracking, communication systems, event scheduling, result processing, and media coverage. Through this investigation, the study aims to provide practical recommendations on how Information Technology can be integrated to modernize and streamline the operations of NICEGA.

Ultimately, the integration of Information Technology into NICEGA has the potential to transform collegiate sports administration in Nigeria by improving efficiency, transparency, accountability, and global competitiveness. Ojo and Olatunji (2024) emphasized that digital transformation in sports administration enhances organizational effectiveness and creates opportunities for athlete development, international exposure, and institutional growth. Therefore, by adopting modern technological systems, NICEGA can reposition itself as a progressive and innovative sports organization capable of meeting international standards. Such transformation would not only improve the management of sports competitions within Colleges of Education but also contribute significantly to the broader development of sports in Nigeria.

Statement of the Problem

In recent decades, the rapid advancement of Information Technology (IT) has transformed virtually every sector of human activity, including education, business, healthcare, communication, and sports management. According to International Olympic Committee, modern sports organizations increasingly depend on digital technologies for athlete monitoring, performance analysis, event coordination, and communication systems. Similarly, Fédération Internationale de Football Association emphasized that the integration of technological innovations such as electronic data management systems, video analysis, online registration platforms, and digital broadcasting has significantly improved the administration and global visibility of sports competitions. As a result,

institutions and organizations across the world are continually adopting innovative technological solutions to remain efficient, relevant, and competitive in the rapidly evolving sports industry (Adeyemi, 2021).

In developed countries, tertiary institutions have successfully integrated Information Technology into collegiate sports administration and management. Universities and colleges now utilize computerized athlete databases, online accreditation systems, electronic scheduling platforms, performance analytics software, and digital communication tools to enhance the organization of sporting events (Oyetunji & Ibrahim, 2020). According to Eze and Nwankwo (2019), the use of Information Technology in sports has improved transparency, efficiency, record keeping, athlete development, and decision-making processes within educational sports associations. However, despite global advancements in sports technology, the Nigeria Colleges of Education Games Association continues to rely heavily on traditional and manual administrative practices. This slow pace of technological integration has created a significant gap between Nigerian collegiate sports management and international best practices (Okafor, 2022).

Objectives of the Study

The study aims to:

- i. Examine the historical development and current organizational structure of the Nigeria Colleges of Education Games Association (NICEGA).
- ii. Assess the current level of Information Technology adoption in the management of NICEGA sports activities.
- iii. Evaluate the benefits of using Information Technology tools in the administration and management of NICEGA sports activities.

Research Questions

- i. What is the historical development and current organizational structure of the Nigeria Colleges of Education Games Association (NICEGA)?
- ii. What is the current level of Information Technology adoption in the management of NICEGA sports activities?
- iii. What benefits are derived from the use of Information Technology tools in the administration and management of NICEGA sports activities?

Methodology

This study adopted a descriptive survey research design to investigate the integration of Information Technology (IT) into the management and development of the Nigeria Colleges of Education Games Association (NICEGA). The survey design was considered appropriate because it enabled the researchers to obtain information from respondents concerning the level of Information Technology adoption and its benefits in sports administration within NICEGA, as well as information relating to the historical development and organizational structure of the association.

The study was conducted in selected Colleges of Education across the six geopolitical zones of Nigeria. These institutions included Federal College of Education Katsina (North-West), Federal College of Education Yola (North-East), College of Education Akwanga (North-Central), College of Education Ikere-Ekiti (South-West), Ebonyi State College of Education (South-East), and Federal College of Education Obudu (South-South). The institutions were purposively selected because of their active participation in NICEGA competitions and their relevance to the objectives of the study.

The population of the study consisted of 280 personnel directly involved in sports administration and Information Technology management in the selected Colleges of Education. These included sports administrators, ICT personnel, coaches, and other officials responsible for the planning, organization, and management of sports activities within the institutions. The population was drawn from six Colleges of Education representing the six geopolitical zones of Nigeria.

From the population of 280 personnel, a sample of 120 respondents was selected using purposive and stratified sampling techniques. The sample size represented approximately 43% of the total population, which was considered adequate for obtaining reliable data and ensuring effective representation of the various categories of respondents across the selected institutions.

Data for the study were collected using a structured questionnaire developed by the researchers. The questionnaire was designed based on the objectives of the study and consisted of two sections. Section A collected respondents' demographic information, while Section B contained items related to the historical development and organizational structure of NICEGA, the level of Information Technology adoption in sports administration, and the benefits derived from the use of Information Technology tools in managing NICEGA activities.

The questionnaire items were measured using a five-point Likert scale comprising: Strongly Agree (SA) = 5, Agree (A) = 4, Undecided (U) = 3, Disagree (D) = 2, and Strongly Disagree (SD) = 1. This scale enabled respondents to indicate the extent of their agreement or disagreement with the statements presented in the questionnaire.

To ensure the validity of the instrument, the questionnaire was subjected to face and content validation by experts in Sports Management, Information Technology, and Research Methodology. Their suggestions and corrections were incorporated into the final version of the instrument. The reliability of the instrument was established through a pilot study conducted among respondents who possessed similar characteristics to the study population but were not included in the main study. The responses obtained were analyzed using Cronbach's Alpha reliability coefficient in SPSS. A reliability coefficient of 0.70 or above was considered acceptable, indicating that the instrument was reliable for data collection.

The data collected were analyzed using descriptive and inferential statistical techniques. Descriptive statistics such as frequencies, percentages, means, and standard deviations were used to summarize and present the data. A decision mean of 3.00 was adopted as the benchmark for accepting or rejecting questionnaire items.

Results

Research Question One: What is the historical development and current organizational structure of the Nigeria Colleges of Education Games Association (NICEGA)?

Table 4.1: Historical Development and Structure of NICEGA

Variables	Mean	Std. Deviation
Organizational Structure Familiarity	3.82	0.91
Well-defined Structure	3.76	0.88
Structure Supports Sports Administration	3.45	0.96
Operational Improvement Over the Years	3.71	0.93
Administrative System Meets Current Needs	3.28	1.02
Grand Mean	3.60	0.94

The results revealed a grand mean score of 3.60 and a standard deviation of 0.94. Since the grand mean exceeded the benchmark mean of 3.00, respondents generally agreed that NICEGA possesses a

recognizable and functional organizational structure.

The highest mean score (3.82) was recorded for familiarity with the organizational structure of NICEGA. This indicates that most respondents were knowledgeable about the association's administrative framework and operational arrangements. Such familiarity enhances participation, communication, and effective implementation of sports policies.

The finding that NICEGA has a well-defined structure (Mean = 3.76) suggests that the association has established administrative procedures and leadership mechanisms that guide its activities. Respondents also agreed that NICEGA has experienced operational improvements over the years (Mean = 3.71), indicating progressive development in collegiate sports administration.

However, the relatively lower mean score of 3.28 for the statement that the administrative system meets current sports management needs suggests that although the association possesses a functional structure, some aspects of its administration require modernization. Overall, the findings indicate that NICEGA has established a solid administrative foundation for managing sports activities.

Research Question Two: What is the current level of Information Technology adoption in the management of NICEGA sports activities?

Table 4.2: Level of IT Adoption in NICEGA

Variables	Mean	Std. Deviation
IT Tools Widely Used	2.85	1.10
Computers Used in Administration	3.12	1.01
Online Registration Systems Utilized	2.68	1.08
Social Media Used for Publicity	4.05	0.82
Performance Analysis Software Used	2.42	1.13
IT Adoption is Satisfactory	2.74	1.06
Grand Mean	2.98	1.03

The grand mean score of 2.98 indicates that the overall level of Information Technology adoption within NICEGA remains relatively low. Since the grand mean fell below the criterion mean of 3.00, respondents generally believed that technological integration in the management of NICEGA activities is inadequate.

The highest mean score was recorded for the use of social media platforms for communication and publicity (Mean = 4.05). Conversely, the use of online registration systems (Mean = 2.68) and performance analysis software (Mean = 2.42) recorded low scores, indicating limited adoption of advanced digital technologies.

The finding that respondents did not consider the current level of IT adoption satisfactory (Mean = 2.74) further confirms that NICEGA has not fully embraced technological innovations. The implication is that NICEGA may not be fully benefiting from opportunities provided by digital technologies in sports administration.

Research Question Three: What benefits are derived from the use of Information Technology tools in the administration and management of NICEGA sports activities?

Table 4.3: Benefits of Information Technology

Variables	Mean	Std. Deviation
Improves Event Coordination	4.21	0.74
Enhances Athlete Monitoring	4.08	0.81
Improves Communication	4.35	0.69
Improves Record Management	4.26	0.72

Enhances Transparency	4.11	0.80
Contributes to NICEGA Development	4.39	0.67
Grand Mean	4.23	0.74

The findings revealed a grand mean score of 4.23, indicating strong agreement among respondents regarding the benefits of Information Technology in sports administration.

The highest mean score was recorded for the contribution of Information Technology to the overall development of NICEGA (Mean = 4.39). Respondents also agreed that Information Technology improves communication (Mean = 4.35), record management (Mean = 4.26), and event coordination (Mean = 4.21).

The findings further showed that Information Technology enhances athlete monitoring and transparency in sports administration. Overall, respondents strongly agreed that Information Technology contributes significantly to the effective management and development of NICEGA activities.

Discussion of Findings

The findings revealed that respondents generally agreed that the Nigeria Colleges of Education Games Association (NICEGA) possesses a recognizable and functional organizational structure, with a grand mean score of 3.60. Respondents indicated familiarity with the organizational structure of NICEGA and acknowledged that the association has a well-defined administrative framework that supports sports administration. The findings further revealed that NICEGA has experienced operational improvements over the years, suggesting that the association has made progress in organizing and managing collegiate sports competitions across Nigeria.

This finding implies that NICEGA has established a stable administrative system capable of coordinating sporting activities among Colleges of Education. A functional organizational structure is essential for effective decision-making, communication, and implementation of sports programmes. However, the relatively lower rating of the administrative system's ability to meet current sports management needs suggests that certain aspects of the organization require modernization to align with contemporary sports administration practices. The finding supports organizational management theories which emphasize that clearly defined structures contribute significantly to organizational effectiveness and achievement of objectives.

The findings showed that the overall level of Information Technology adoption in NICEGA is relatively low, with a grand mean score of 2.98, which falls slightly below the benchmark mean of 3.00. Although respondents acknowledged the use of computers for administrative purposes and the extensive use of social media for communication and publicity, the utilization of more advanced technological tools such as online registration systems and performance analysis software was found to be inadequate.

This finding suggests that technological integration within NICEGA remains limited and that many administrative processes are still performed manually. The high adoption of social media indicates awareness of the importance of digital communication; however, the low adoption of other information technologies demonstrates that NICEGA has not fully embraced digital transformation in sports management. The finding is consistent with studies on technology adoption in developing countries, which indicate that sports organizations often face challenges in integrating advanced technological systems due to inadequate infrastructure, limited financial resources, and insufficient technical expertise. Consequently, the low level of IT adoption may hinder operational efficiency, data management, and strategic planning within the association.

The findings revealed strong agreement among respondents regarding the benefits of Information

Technology in the management and administration of NICEGA activities, with a grand mean score of 4.23. Respondents agreed that Information Technology improves communication, enhances event coordination, facilitates athlete monitoring, improves record management, promotes transparency, and contributes significantly to the overall development of the association.

The highest-rated benefit was the contribution of Information Technology to the development of NICEGA, indicating that stakeholders recognize technology as an important tool for organizational growth and improved performance. Effective communication and efficient record management were also identified as major advantages of technology adoption. These findings support the growing body of literature which emphasizes that Information Technology enhances organizational efficiency, reduces administrative workload, improves decision-making processes, and promotes accountability.

Conclusion

This study examined the integration of Information Technology in the management of NICEGA, focusing on its organizational structure, level of IT adoption, and benefits. The findings revealed that NICEGA has a functional organizational structure and has recorded notable progress in the administration of collegiate sports over the years. However, some aspects of its administrative system require modernization to meet contemporary sports management standards.

The study also found that the level of IT adoption remains relatively low, despite the use of computers and social media in some administrative activities. Nevertheless, respondents strongly agreed that Information Technology improves communication, record management, athlete monitoring, event coordination, transparency, and overall organizational effectiveness. Therefore, the study concludes that increased investment in Information Technology and greater adoption of digital tools will significantly enhance the efficiency, effectiveness, and sustainable development of NICEGA sports administration.

Recommendations

Based on the findings of this study, the following recommendations were made:

1. NICEGA should invest more resources in Information Technology infrastructure, including computers, software applications, internet facilities, and digital management systems, to improve sports administration.
2. Regular ICT training and capacity-building programmes should be organized for sports administrators, coaches, athletes, and other stakeholders to enhance their technological skills and competence.
3. NICEGA should adopt modern digital tools such as online registration systems, athlete performance analysis software, and electronic record management systems to improve efficiency and accuracy.

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