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RESEARCH ARTICLE

THE EDUCATION MANAGEMENT INFORMATION SYSTEM (EMIS) AND THE EDUCATIONAL INFORMATION MANAGEMENT IN NIGERIA

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Abstract

This study examined the impact of the education management information system (EMIS) on Nigeria's educational information management, emphasizing tertiary institutions. The study aimed to examine the difficulties associated with accessing information in the tertiary institutions based on the absences of EMIS. A total of one hundred and eighteen undergraduates and graduates were randomly selected for the study. A self-developed instrument was used for data collection, and a simple linear regression was conducted on the data. The result implicated the absence of EMIS in the observed difficulties/challenges of information management in the school system. Finding, strengths, weaknesses, and conclusions are discussed.

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Introduction: -

Technology is currently having an increasingly transformational impact on education, affecting a broad range of areas from how students learn, how educators enhance their skills, enrich classroom environments, and impact how administrators manage grades, maintain security, and track payments (Ehimuan, 2019). The quest for development now in Nigeria makes it imperative for trainers to shift from the existing teaching method in schools to accommodate technologies (Laleye, 2015). Information and Communication Technology (ICT) in education has been continuously linked to higher efficiency, higher productivity, and higher educational outcomes, including the quality of cognitive, creative, and innovative thinking (Anikweze & Kanu, 2018). The relevance of technology in modern-day education cannot be overemphasized. Technology has made it possible for the even distribution of information and knowledge across all human endeavors.

A significant challenge for Nigeria's educational development is the lack of credible and timely data for evidence-based policymaking and planning, effective performance monitoring and feedback, and quality advocacy. Information management aims to improve organizations' effectiveness by managing information as resource-providing access to relevant information in a timely and cost-effective manner (Arua & Ukwuaba, 2016). Thus, the advance in educational development suggests the need for technological-based data records in Nigeria (Onah, 2016). There has been a concern for Nigeria's educational institutions to solve the problem arising from inadequate storage, flow, and information use. Insufficient access to relevant information hurts the effectiveness of administrators' decision-making (Arua & Ukwuaba, 2016). The traditional data record has been marred with personnel's sharp practices, including mutilation of vital academic records (Onah, 2016). The trend is pervasive among institutions that are practicing the manual means of record keeping. The new direction of information management creates institutions' opportunity to secure their files in a system that workers cannot easily mutilate. The application of management ethics to the acquisition, control, organization, dissemination, and use of information relevant to the

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operations of an organization of all types allows information assets to be governed, protected, and prioritized (Arua & Ukwuaba, 2016).

Education Management Information System (EMIS) denotes a system for the collection, integration, processing, maintenance, and dissemination of data and information to support decision-making, policy analysis, and formulation, planning, monitoring, and management at all levels of an education system (UNESCO Office Almaty; Tajikistan. Ministry of Education, 2003). Education management information system represents a framework of individuals, innovation models, strategies, forms, procedures, rules, and controls that work together to instruct decision-makers with comprehensive and unambiguous data to back them in completion of their duties. Education Management Information System is a platform for data collection, processing, analyzing, and reporting educational information, including schools, students, teachers, staff, and facilities (Onah, 2016).

Most instructional and administrative work in a secondary school in Nigeria is still carried out manually (Aduwa-Ogiegbaen & Iyamu, 2005). Because learning institutions represent an important place in human and knowledge development, it harbors essential records relating to people's academic records and other demographic information. School records are official documents, books, and files containing necessary and crucial information on actions and events in schools (Odeniyi & Adeyanju, 2020). Accordingly, Philip (2007) noted that record-keeping and management in academia ensure that accurate and proper records of student's achievement and growth, information on school activities, and matters that promote the school system's efficiency and effectiveness are kept and maintained. These essential documents are referenced at any given time by students in their later life. Records management ensures information can be accessed quickly, destroyed routinely when no longer needed, and enables schools to function on a day-to-day basis and fulfill their legal and financial requirements (Allahmagani, 2014). Most records are handled by school heads and are kept manually; hence the processing, retrieval, and utilization of records are not always easy (Amanchukwu & Ololube, 2015). Ololube (2013) reported that the lack of proper information management results in difficulties in administering, planning, and monitoring educational systems globally.

The Present Study

It is observed that EMIS is not fully utilized in Nigeria's educational sector. While most institutions have adopted the information system approach in handling records and sensitive information, most institutions across the academic level are yet to embrace the technology associated with record keeping. The poor state of the education management information system in Nigeria seems to account mainly for the system's poor educational information management (Onah, 2016). There is a growing concern about previous students' practical difficulties accessing their documents, such as academic certificates and transcripts. Also, challenges organizations and employers face in verifying their academic records in Nigeria's learning institutions. Also, undergraduates' challenges in relation to documentation are all related to the information management system's condition. The current study is aimed to explore the experience of difficulties in educational information management based on the absence of EMIS. Based on the above, the following hypothesis was formulated:

(H_a) The absence of EMIS will be responsible for the reported challenges in educational information management in the school system.

(H_o) The absence of EMIS will not be responsible for the reported challenges in educational information management in the school system.

Method: -

The study adopted a cross-sectional survey design. A total of one hundred and eighteen participants were selected for the study. The participants included undergraduates ($n= 74$), graduates ($n = 44$). The undergraduates comprised current students in all academic year levels from tertiary institutions in the Enugu States of Nigeria. At the same time, the graduates represent individuals who have graduated from the tertiary level and have accessed information/documents from their respective schools as ex-students.

Measures: -

An instrument designed to elicit the respondent's experience, challenge, and perception of the information management system was used for data collection. The Likert-type scale rated in a four-point scale ranging from "agree" to "strongly disagree" contains 15 items questionnaire is divided into A, B, and C. The instrument reliability was tested following a pilot study with samples outside the main population of the study. A Cronbach alpha of .86 coefficient was recorded on the scale.

Result: -

Table 1: - Table showing the result of the simple regression analysis conducted to examine the influence of the absence of EMIS on educational information management challenges.

	B	95% CI for B		SEB	β	R^2	t	Sig
		LL	UL					
Model								
Constant	2.585	2.396	2.775	.096			27.056	.000
Absence of EMIS	-.704	-.843	-.566	.070	-.683	.466	-10.066	.000

Note. B = Unstandardized regression coefficient; CI = Confident Interval; LL = Lower Limit; UL = Upper Limit; SEB = Standardized error of the coefficient; β = Standardized coefficient; R^2 = Coefficient of determination.

*P<.000.

The table above shows the result of a simple regression analysis conducted to determine the challenges of educational information management based on the absence of EMIS. The analysis established that the lack of EMIS statistically significantly influenced the challenges experienced in educational information management, $F(1,116)$, 101.333, $P<.000$. The absence of EMIS accounted for 46.6% of the explained variation in educational information management challenges, with an adjusted R^2 of 46.2%. Thus, our hypothesis (H_a) that the absence of EMIS will be responsible for the difficulties reported in educational information management in the school system was confirmed, which means that the challenges associated with accessing information in the tertiary institutions are a result of EMIS.

Discussion: -

The present study aimed to assess the impact of the absence of educational management information system on tertiary institutions' educational information management in Nigeria. The result indicates a significant regression equation, thereby accepting the (H_a) stating that the absence of EMIS will be responsible for the reported challenges in educational information management in the school system and rejecting the (H_0) that said otherwise. The finding supports literature highlighting the positive impact of EMIS on school administration and management, as reported in (Shah, 2014). For instance, Lee and Ryu (2013) reported that EMIS positively affects student satisfaction. Additionally, Bani-Hani, Al-Ahmad, and Alnajjar (2009) found a significant positive relationship between MIS and organizations' performance. This revelation indicates that the difficulties associated with accessing files, documents, and other related information in the tertiary institutions can be eliminated using EMIS.

Strength, Weakness, and Future Direction

Over the years, the academic environment has witnessed an increasing rate of difficulties relating to information accessibility. The current study reveals that the situation can be ameliorated by introducing an education management information system. However, certain limitations weaken the generalizability of the findings. For instance, the study failed to establish a cause-effect relation. The sampling method cannot be applied to generalizing the result. It is suggested that future researchers use a more robust approach to the study in terms of sampling and scope.

Conclusion: -

The study aimed to ascertain the role of EMIS on educational information management in Nigeria's tertiary institutions. The simple linear regression equation established a relationship between the absences of EMIS and the challenges associated with educational information management. The study concludes that the absences of educational management information system in the tertiary institutions in Nigeria are responsible for the increased difficulties and challenges of accessing information in the school system. However, it is recommended that educational institutions adopt a robust educational management information system to handle data effectively.

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