

DEMOGRAPHIC CHARACTERISTICS AND PERCEIVED QUALITY OF ELECTRONIC MANAGEMENT INFORMATION SYSTEM SERVICES (E-MIS) IN TERTIARY INSTITUTIONS: IMPLICATIONS FOR QUALITY STUDENT EVALUATION AND ASSESSMENT

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Corresponding Author Eyong Emmanuel Ikpi Department of Education Foundations Article History Received: 09 / 12 / 2024 Accepted: 27 / 12 / 2024 Published: 29 / 12 / 2024	Abstract: The study was on demographic characteristics and perceived quality of electronic management information system (e-MIS) services in tertiary institutions. Implications for quality student evaluation and assessment. The design was an Ex-post facto design and the Population was 42,245 final-year students. The sample comprised 684 students (1.62% of the population) selected using stratified random sampling and the instrument: Researcher-developed questionnaire (DCPQEMISQ) was used for data collection, which was validated by experts and tested for reliability (Cronbach's alpha index: 0.73-0.83). Data Analysis was carried out using an independent t-test and a One-way ANOVA using SPSS version 24. Key Findings indicate that age has a significant influence on perceived quality of e-MIS services. Institution type was also found to have a significant influence on perceived quality of e-MIS services. Gender did not have any significant influence on the perceived quality of e-MIS services. Recommendations: management of tertiary institutions should develop a positive quality mindset, also encourage and improve computer literacy skills to enhance easy use of e-MIS. The study highlights the importance of demographic characteristics in shaping students' perceptions of e-MIS services in tertiary institutions. Keywords: Electronic, Management, Information System, Quality, Evaluation & Assessment.
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Introduction

In today's digital age, information is a vital resource for success. Management Information Systems (MIS) play a crucial role in supporting educational institutions by providing a framework for collecting, processing, analysing, and disseminating information. This enables better planning, decision-making, and management control. Key Features of MIS: Integrated System: Combines people, processes, and technology to support organisational functions. User-Machine System: Utilises computer-based systems to provide information for decision-making. Information Support: Provides timely, accurate, and consistent reports to support operations, management control, and decision-making. Benefits of MIS in Education: Improved Planning: Enables educational managers to make informed decisions, enhanced Decision-Making: Provides relevant information for strategic, tactical, and operational decisions, efficient Operations: Streamlines processes, reduces errors, and improves productivity, effective Communication: Facilitates communication among stakeholders. By leveraging MIS, educational institutions can improve their overall performance, achieve their goals, and provide better services to students and stakeholders.

Strategically, school management information systems help the manager in determining the aims of the school, making long-term plans, distributing resources, and forming educational methods of the future, determining the performances of lecturers, teachers and the success of the school (Telem & Buvitski, 2015). In this way, school management information systems can also be used as a tool to initiate and use educational leadership of the manager (Telem, 2020).

The adoption of Management Information Systems (MIS) in Nigerian tertiary institutions is expected to enhance operational efficiency through effective record management, improved response time, and organizational agility, but challenges such as students' academic records misplacement, delay in decision-making, poorly designed call roster, and unstable program scheduling persist (Nwankwo, Ugwu & Ugwu, 2020; Omohwovo, 2021), highlighting the need for improving the quality of MIS, enhancing user training, and ensuring accurate and reliable data (Sutton et al., 2020).

The key features of information systems in universities, as noted by Sutton, Pincok, Baumgart, Sadowski, Fedorak and Kroeker

(2020), include information quality, service quality, and system quality, which encompass the usefulness, accuracy, and reliability of information, technical support and user understanding, and the system's ability to meet user needs on time and accurately. Despite the adoption of Management Information Systems (MIS) in Nigerian tertiary institutions to enhance operational efficiency through effective record management, improved response time, and organisational agility, challenges persist, such as students' academic records misplacement, delays in decision-making, poorly designed call rosters, and unstable program scheduling (Sutton et al., 2020).

Unegbu, Ogugua, Nnadimele and Nse (2020) study was to determine the gender influence on the use of Information and Communication Technology (e-management of information system) in terms of e-management of information by lecturers in library schools in South-East and South-South Zones of Nigeria. The study covers the entire population of 162 lecturers in library schools in South-East and South-South zones of Nigeria. 145 copies of the questionnaire were completed and returned for analysis, representing 89.5%. The result of the finding shows that both males and females do not differ in the use of e-management of information systems and e-management of information.

A study by Unegbu, Ogugua, Nnadimele, and Nse (2020) investigated the influence of gender on the use of Information and Communication Technology (e-management of information system) among lecturers in library schools in South-East and South-South zones of Nigeria. The study found that both male and female lecturers do not differ significantly in their use of e-management of information systems, with a mean value of 3.0 indicating a neutral attitude towards its use. The study recommends organizing seminars and workshops to expose lecturers to the potential of e-management of information systems and encourage positive attitudes towards its use, particularly among those with high attitudes due to gender barriers. Key Findings: No significant difference in the use of e-management of information systems between male and female lecturers. Lecturers' attitude towards e-management of information systems is neutral (mean value of 3.0). It was recommended that organising seminars and workshops to expose lecturers to the potential of e-management of information systems. Provide training programs to encourage positive attitudes towards e-management of information systems, particularly among lecturers with high attitudes due to gender barriers.

A study by Egunjobi and Fabunmi (2020) found that gender did not have a significant relationship with e-management of information system competence and e-management of data among undergraduates in state-owned universities in South-West Nigeria. The study revealed that undergraduates' e-management of information systems was mostly constrained by irregular power supply, exorbitant users' fees, and inadequate internet services. The study recommended that university management should invest in modern technologies and improve infrastructural facilities like electricity and internet services to enhance students' e-management of information system competence. Additionally, the study suggested that curriculum designers should consider incorporating e-management of information systems into the syllabus and develop clear policies to guide its integration in the university system (Egunjobi & Fabunmi, 2020).

Research by Shen et al. (2016) and Sloan (2005) explored the impact of subjective norms and perceived usefulness on students' attitudes towards online learning systems. Shen et al. (2016) found that instructor and mentor influences significantly contributed to students' perceived usefulness of course delivery

systems, with teaching methods, technology use, and learning materials playing a crucial role. Sloan (2005) reported a growing trend in online education adoption among post-secondary institutions and found a significant positive impact of perceived usefulness on learning outcomes. Both studies highlight the importance of instructor support and perceived usefulness in shaping students' attitudes towards online learning systems.

A study by Elkaseh, Wong, and Fung (2016) investigated the impact of an e-results system on students in Libya, considering age differences. Using a quantitative approach and structural equation modelling, the study found that the e-results system had a significant effect on students based on their age differences. This suggests that age is an important factor in determining students' perceptions and experiences with e-results systems.

The literature highlights the significant impact of Management Information Systems (MIS) in institutions on students and institutional effectiveness. According to Mereku et al. (2009), Brush et al. (2008), and Maharana et al. (2009), MIS has equipped students with skills to search for information, gain knowledge, and understand abstract concepts. It has also been found to make knowledge acquisition more accessible, engage students in the learning process, and facilitate active learning through simulation games (Gateway, 2010). Effective utilization of MIS resources can advance teaching and learning, facilitate good communication, and enable students, teachers, and administrators to retrieve required information within a short period (Iqbal & Ahmed, 2010; Shaikh & Khoja, 2011).

Theoretical framework

Management by objectives by Peter F. Drucker (1954)

Management by Objectives (MBO), developed by Peter Drucker (1954), emphasizes the importance of aligning organizational activities with its overall objectives. The theory advocates for participatory strategic planning, where all managers contribute to the planning process, and implementing performance systems to ensure effective organizational functioning. MBO also highlights the need for judicious use of resources (financial, human, and material) to achieve organizational objectives. In the context of tertiary education in Nigeria, MBO can help institutions achieve their goals despite scarce resources. By focusing on clear objectives and linking them to resources, stakeholders can enhance effectiveness in teaching, results collation, and processing.

Human capital theory by Adam Smith (1776)

The Human Capital Theory, propounded by Adam Smith in 1776, posits that education and training are investments in skills and competencies that enhance productivity. The theory argues that people invest in education to increase their human capabilities and intellectual abilities, leading to higher productivity. In the context of Nigeria, the theory emphasises the importance of properly training and equipping manpower in all aspects of education to withstand technological and scientific challenges in a global competitive economy. The relevance of this theory to the study is that tertiary educational institutions play a crucial role in nation-building and require human and capital development to be self-creative, innovative, and catalytic for sustainable growth and national development. The theory can guide managers in utilising limited resources effectively for information management, procurement of educational resources, and preservation of students' records to accomplish institutional goals

Statement of the problem

The introduction of Management Information Systems (MIS) in tertiary institutions in Nigeria is crucial to addressing challenges such as inaccurate record-keeping, ineffective communication, poor planning, and decision-making, which have been exacerbated by poor information management, thereby hindering national development (Odusanya, 2019). The poor quality of e-MIS in most universities, despite efforts by the Tertiary Education Trust Fund (TetFund) to finance ICT centres, highlights the need for further research and improvement in this area.

Purpose of the study

The main purpose of this study is to examine demographic characteristics and perceived quality of electronic management information system services (e-MIS) in tertiary institutions. Implications for quality student evaluation and assessment. Specifically, the study seeks to:

- Examine how gender influence the quality of the electronic Management Information System (e-MIS).
- Determine the influence of age on undergraduate students' quality of electronic Management Information System (e-MIS)
- Find out how institutional type influence the quality of the electronic Management Information System (e-MIS).

Research questions

The following research questions were raised to guide the study:

- What is the gender influence on undergraduate students' quality of electronic Management Information System (e-MIS)?
- To what extent does age influence undergraduate students' quality of electronic Management Information System (e-MIS)?
- What is the influence of institutional type on undergraduate students' quality of electronic Management Information System (e-MIS)?

Table 1

Population Distribution of respondents in tertiary Institutions in Cross River State, Nigeria

S/N	Institutions	No of final year students		
		Male	Female	Total
1	University of Calabar, Calabar	10,234	9876	20,110
2	Cross River University of Technology, Calabar	4734	3568	8302
3	College of Education, Akamkpa.	3564	2987	6551
4	Federal College of Education, Obudu.	5432	1786	7218
5	Institute of Technology and Management, Ugep.	43	21	64
	Total	24,007	18,238	42,245

Source: Office of the Registrar, Tertiary Institutions, Cross River State (2024)

Sampling Technique

The stratified random sampling technique was adopted in the study. The first stage was to stratify tertiary institutions into the different schools in Cross River. The second stage was to stratify the respondents based

Statement of null hypotheses

To guide the study, the following null hypotheses were formulated:

- Male students do not differ from female students based on the quality of the electronic Management Information System (e-MIS).
- There is no significant influence of age influence undergraduate students' quality of electronic Management Information System (e-MIS).
- Institutional type does not significantly influence the quality of the electronic Management Information System (e-MIS).

RESEARCH METHOD

Research design

The study utilised the ex-post facto design. This design is relevant for the study because the researcher is considering variables that have already occurred and the researcher is studying such variables in retrospect. According to Ishghedigi (2010), the ex-post facto design is used when the variables under study have already occurred and the researcher is studying the said variables in retrospect.

Population of the study

The population of the study comprised all the 42,245 final-year students in tertiary institutions in CRS. The University of Calabar has male 10234 and female 9876 which amounts to 20110, Cross River University of Technology Calabar has male 4734 and female 3568 which amount to 8302, college of Education Akamkpa has 3564 male and 2987 female totaling 6551, Federal College of Education Obudu has 5432 male and 1786 female which gave a total of 7218, and Institute of Technology and Management Ugep has 43 male and 21 female which amounts to 64. See the population distribution in Table 1.

on their gender. In using this method, proportionate stratified random sampling was adopted, in which a sample of the respondents was based on the number of respondents contained in each of the strata.

Sample

The sample comprises 684 undergraduates of tertiary institutions in CRS, which was drawn using Taro Yamane's formula for sample

size determination (representing 1.62%). The statistical formula devised by Taro Yamane is as follows:

$$n = N / 1 + N(e)^2$$

In the formula above;

N is the required sample size from the population under study

N is the whole population that is under study

e is the precision or sampling error, which is usually 0.05

Instrumentation

The study used a researcher-developed questionnaire called "Demographic Characteristics and Quality of Electronic Management Information System Services (e-MIS) Questionnaire (PVQMISQ)" to collect data. The questionnaire had two sections: Section A: Collected demographic data, such as gender, age, institution, marital status, family structure, and religious affiliation. Section B: Consisted of 43 items on a four-point modified Likert scale, ranging from Very Large Extent (VLE) to Very Low Extent (VLE), to measure the quality of e-MIS services.

Table 2

Coefficient of internal consistency for the research instruments (n=40)

S/No.	Variables	No. of items	$\bar{X}$	SD	ΣSD^2	SD^2	R
4	Quality of e-MIS	43	96.01	7.86	3.89	3.46	.83

Procedure for data collection

The data collection procedure involved several steps:

- The researcher obtained permission from the heads of departments to administer the instrument to lecturers.
- The researcher and a research assistant administered the instrument to respondents in their offices.
- Verbal instructions were provided to respondents on how to fill out the questionnaire, emphasizing confidentiality, protection of responses, voluntary participation, and freedom to withdraw from the study.
- The researcher and research assistant ensured that all instructions were clearly explained to respondents to facilitate accurate completion of the questionnaire.

Validity of the instrument

The instrument, Demographic Characteristics and Perceived Quality of Electronic Management Information System Services (e-MIS) Questionnaire (DCPQEMISQ), underwent face validation by the researcher's supervisor and two experts in Measurement and Evaluation and Sciences Education. They reviewed the items to ensure the instrument measured what it was designed to measure, and their suggestions and modifications were incorporated into the final version before pilot testing.

Reliability of the instrument

The reliability of the instrument, Demographic Characteristics and Quality of Electronic Management Information System Services (e-MIS) Questionnaire (DCPQEMISQ), was established using the Cronbach Alpha reliability coefficient method. A trial test with 40 respondents from tertiary institutions in Cross River State, Nigeria, yielded a reliability index of 0.83, indicating a high level of internal consistency and reliability for the instrument.

Procedure for data analysis

The collected data from the field were analysed using the Statistical Package for Social Sciences (SPSS) programme version 24. Results are presented with descriptive statistics (mean and standard deviation) as well as inferential statistics (independent t-test and one-way ANOVA), as all hypotheses were tested at 0.05 level of significance.

RESULTS AND DISCUSSION

Descriptive statistics of measured variables

The descriptive statistics (mean, standard deviation, maximum and minimum) were computed for the nine dimensions of the independent variables of the study, namely. The results are presented in Table 3.

Table 3

Descriptive statistics of measured variables (n=679)

Variable	$\bar{X}$	Sd
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Gender		
Male	11.8675	2.66885
Female	12.1326	3.11534
Age		
20 years and below	11.0000	3.54662
21-25 years	10.5300	2.64558
26-30 years	11.7248	2.82145
31 years and above	12.2845	2.84105
Institutions		
University of Calabar, Calabar	10.8653	3.15405
Cross River University of Technology, Calabar	12.9141	1.43097
College of Education, Akamkpa.	9.1392	2.20567
Federal College of Education, Obudu.	13.4933	2.77028
Institute of Technology and Management, Ugep.	12.8800	1.16619
Marital status		
Single	24.2652	14.27530
Married	20.4225	10.59399
Divorced	39.1935	209.03342
Separated	32.9194	11.98264
Widowed	18.2188	10.51799
Family structure		
Intact	25.7123	98.62524
Moderate	28.0323	13.48546
Broken	14.0435	3.75957
Religious background		
Christian	25.8351	99.05832
Muslim	24.2647	13.78472
Others	25.2830	12.95759

The results in Table 3 revealed that among the independent variables measured with the same number of items and response options, for gender, the mean for females dominated ($\bar{X} = 12.1326$), and in respect to age, 31 years and above dominated ($\bar{X} = 12.2845$) while for an institution, the mean for the Federal College of Education, Obudu. Concerning marital status, those who have divorced dominated the study ($\bar{X} = 29.1935$). For family structure, a moderate home dominated ($\bar{X} = 28.0325$) and finally, for religious background, Christians dominated the study ($\bar{X} = 25.8351$). Thus, all the observed means were higher than the expected mean ($\mu = 5.00$).

Test of hypotheses

For each hypothesis, the procedures used are explained briefly, followed by the presentation and interpretation of results. All the

stated hypotheses were tested at .05 alpha. The decision rule is that a null hypothesis is rejected if the p-value associated with the computed test statistic is less than .05, but retained if otherwise.

Hypotheses one

Male students do not differ significantly from female students in terms of their quality towards the electronic Management Information System (e-MIS). The major independent variable in this hypothesis is gender, categorised in terms of male and female. While the dependent variable is the quality of electronic Management Information System (e-MIS) services. To test this hypothesis, an independent t-test analysis was employed. The result of the analysis is presented in Table 4.

Table 4

Independent t-test analysis of gender and quality of electronic Management Information System

Gender	n	Mean	Std. Deviation	Std error	Df	LS	t-value	p-value
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Male	400	11.8675	2.66885	.13344	677	.05	-1.188	.235
Female	279	12.1326	3.11534	.18651				

* $p < .05$

The result in Table 4 revealed that a total of 679 respondents constitute the study sample, while male are 400 with a mean and standard deviation of 11.8675 and 2.66885, while female are 279 with a mean and standard deviation of 12.1326 and 3.11534, respectively. At 677 degrees of freedom with .05 quality of significance, the p-value is .235, accompanied by a t-value of -1.188. Thus, the null hypothesis is accepted.

Hypotheses two

There is no significant age influence on undergraduate students towards the electronic Management Information System

(e-MIS). The major independent variable in this hypothesis is the age, categorised in terms of below 20 years, 21-25 years, 26-30 years and 31 years and above. While the dependent variable is quality towards the electronic Management Information System. To test this hypothesis, one-way analysis of variance was adopted with age as a factor and students' quality towards the electronic Management Information System as a dependent variable. The F-ratio test was employed to test the significance of main influence, while Fisher's Least Significant Difference Test (LSD) was employed as a Post-hoc Test. The result of the analysis is presented in Table 5

Table 5

One-way ANOVA of age and students' quality towards electronic Management Information System

Age	N	$\bar{X}$	Std. D	Std. Error
20 years and below	122	11.0000	3.54662	.32110
21-25 years	100	10.5300	2.64558	.26456
26-30 years	109	11.7248	2.82145	.27025
31 years and above	348	12.2845	2.84105	.15230
Total	679	11.7054	3.02182	.11597

Sources of variation	Sum of Squares	df	Mean Square	F-value	p-value
Between Groups	315.601	3	105.200	12.086	.000
Within Groups	5875.489	675	8.704		
Total	6191.090	678			

* $p < .05$

It is evident from the results in Table 5 of the descriptive statistics that 679 respondents. The study analyzed data from 679 respondents across four age groups: 20 years and below, 21-25 years, 26-30 years, and 31 years and above. The results showed significant differences in perceptions of electronic Management Information System (e-MIS) quality among undergraduate students based on age. The 31 years and above age group had the highest

mean score (12.2845), while the 21-25 years age group had the lowest (10.5300). The ANOVA results revealed a significant F-value of 12.085 ($p < 0.05$), leading to the rejection of the null hypothesis. Post-hoc analysis using Fisher's Least Significant Difference (LSD) showed significant mean differences between specific age groups.

Table 6

Post Hoc-Multiple (Pairwise comparison) of age and students' quality of e-MIS

Age	E-MIS	Mean Difference (I-	Std. Error	p-value
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20 years and below	21-25 years	.47000	.39799	.238
	25-30 years	-.72477	.38885	.063
	31 years and above	-1.28448*	.31042	.000
21-25 years	20 years and below	-.47000	.39799	.238
	25-30 years	-1.19477*	.40854	.004
	31 years and above	-1.75448*	.33475	.000
25-30 years	20 years and below	.72477	.38885	.063
	21-25 years	1.19477*	.40854	.004
	31 years and above	-.55971	.32384	.084
31 years and above	20 years and below	1.28448*	.31042	.000
	21-25 years	1.75448*	.33475	.000
	25-30 years	.55971	.32384	.084

*. The mean difference is significant at the 0.05

Hypotheses three

The hypothesis states that there's no significant difference in the quality of electronic Management Information System (e-MIS) based on institutions. The independent variable is the institution (with categories including University of Calabar, Cross River University of Technology, College of Education Akamkpa, Federal College of Education Obudu, and Institute of Technology

and Management Ugep), and the dependent variable is the quality of e-MIS. One-way analysis of variance (ANOVA) was used to test this hypothesis, with the F-ratio test assessing the significance of the main influence and Fisher's Least Significant Difference (LSD) test used as a post-hoc test. The results are presented in Table 7.

Table 7

One-way ANOVA of institutions and quality towards electronic Management Information System					
Institutions	N	$\bar{X}$	Std. D	Std. Error	
University of Calabar, Calabar	297	10.8653	3.15405	.18302	
Cross River University of Technology, Calabar	128	12.9141	1.43097	.12648	
College of Education, Akamkpa.	79	9.1392	2.20567	.24816	
Federal College of Education, Obudu.	150	13.4933	2.77028	.22619	
Institute of Technology and Management, Ugep.	25	12.8800	1.16619	.23324	
	679	11.7054	3.02182	.11597	
Sources of variation	Sum of Squares	df	Mean Square	F-value	p-value
Between Groups	1430.821	4	357.705	50.647	.000
Within Groups	4760.269	674	7.063		
Total	6191.090	678			

*p<.05

The study analyzed data from 678 respondents across five institutions: University of Calabar (UNICAL), Cross River University of Technology (CRUTECH), College of Education Akamkpa (COE Akamkpa), Federal College of Education Obudu (COE Obudu), and Institute of Technology and Management Ugep (ITM Ugep). The results showed significant differences in undergraduate students' perceptions of electronic Management Information Systems (e-MIS) based on their institutions. The Federal College of Education Obudu had the highest mean score (13.4933), while the College of Education Akamkpa had the lowest (9.1392). The ANOVA results revealed a significant F-value of 50.647 ($p < 0.05$), leading to the rejection of the null hypothesis. Post-hoc analysis using Fisher's Least Significant Difference (LSD) showed significant mean differences between UNICAL and other institutions: CRUTECH (-2.04874, $p < 0.05$), COE Akamkpa (1.72608, $p < 0.05$), COE Obudu (-2.62801, $p < 0.05$), and ITM Ugep (-2.01468, $p < 0.05$). These findings indicate that

institutional differences significantly influence students' perceptions of e-MIS.

Summary of results

From the data analysis, the following findings were drawn:

- Male students do not differ from female students based on the quality of the electronic Management Information System (e-MIS).
- There is a significant influence of age on undergraduate students' quality of electronic Management Information System (e-MIS).
- Institutional type does significantly influence the quality of the electronic Management Information System (e-MIS)

Discussions of findings

The findings of the study are discussed as outlined below

The study revealed interesting insights about the relationship between gender, age, institutional type, and the quality of Electronic Management Information Systems (e-MIS). Key Findings:

Gender and e-MIS Quality: Male and female students don't differ significantly in their perception of e-MIS quality. This finding contradicts some studies, such as Pathak (2011), which suggests that gender institutions can impact the ease of use of educational and technical operations. However, it aligns with Unegbu et al. (2020) and Egunjobi & Fabunmi (2020), which found no significant relationship between gender and e-management of information systems.

Age and e-MIS Quality: There's a significant age difference in undergraduate students' perception of e-MIS quality. This might be because e-MIS applications have improved school standards, teaching programs, and student-teacher interaction. Shen et al. (2016) and Elkaseh et al. (2016) also found that age influences students' perceived usefulness of course delivery systems and e-results systems.

Institutional Type and e-MIS Quality: The type of institution significantly influences e-MIS quality. Universities tend to have a higher rate of e-management of information than colleges. Akinfolarin and Rufai (2017) found that facilities like computer systems, e-libraries, and social media platforms can impact e-management of information systems and students' learning. Thus, the findings can be discussed as effective implementation of e-MIS requires consideration of age differences and institutional types. Providing adequate training and resources can help bridge the gap in e-MIS utilisation across different age groups and institutions.

Summary

The study was carried out to examine Demographic Characteristics and Quality of Electronic Management Information System Services (e-MIS) in tertiary institutions in Cross River State, Nigeria. The study utilises eight (8) objectives, research questions and hypotheses and the ex-post facto design was employed in the study. The population of the study comprised all the 42,245 final year students in tertiary and the stratified random sampling technique was adopted in the study. A sample of 684 was used, using Taro Yamane's formula for sample size determination (representing 1.62%). The instrument for data collection was a researcher-developed questionnaire titled "Demographic Characteristics and Quality of Electronic Management Information System (e-MIS) Quest...

The study investigated the relationship between demographic characteristics and the quality of Electronic Management Information System (e-MIS) services in tertiary institutions in Cross River State, Nigeria. The research design was ex-post facto, and a sample of 684 final-year students was selected using stratified random sampling. A researcher-developed questionnaire, "Demographic Characteristics and Quality of Electronic Management Information System (e-MIS) Questionnaire," was used to collect data. The findings revealed that:

- Gender: Male and female students differ in their perception of e-MIS quality.
- Age: Age does not significantly influence undergraduate students' perception of e-MIS quality.
- Institutional Type: Institutional type does not significantly influence the quality of e-MIS.

The study used descriptive and inferential statistics to analyze the data, and the results have implications for the implementation and utilization of e-MIS in tertiary institutions

Conclusion

The study explored the relationship between demographic characteristics and the quality of Electronic Management Information System (e-MIS) services in tertiary institutions. The findings revealed insights into how gender, age, and institutional type influence students' perceptions of e-MIS quality. The results showed significant differences in perceptions based on certain demographic factors. However, some findings contradicted existing literature, highlighting the complexity of e-MIS adoption in tertiary institutions. The study's results have implications for improving e-MIS implementation and utilization in these settings.

Implications for quality student evaluation and assessment

Electronic Management Information System (E-MIS) services provide organisations/institutions with valuable insights into handling students' strengths, weaknesses, and performance metrics. This information is crucial for quality assessment, as it enables continuous monitoring, evaluation, and improvement of students. By offering quick access to reliable data, E-MIS facilitates data-driven decision-making and fosters better communication among stakeholders in the academic environment. This, in turn, supports the identification of issues and ensures alignment with students' needs, ultimately driving business improvement. With E-MIS, schools can achieve strategic quality goals and gain a competitive advantage in their respective institutions. By leveraging data-driven insights and enhancing quality assessment measures, organisations can improve overall quality, efficiency, and effectiveness, leading to sustained growth and success in students' quest for academic excellence.

By implication, an Electronic Management Information System (E-MIS) improves student learning evaluation and assessment by centralising data collection, storage, and analysis, enabling informed decision-making for administrators and teachers, facilitating timely and accurate data retrieval, supporting better feedback and personalised learning plans and identifying student needs and trends to inform instruction. This leads to more effective and targeted support for students, ultimately enhancing their learning experience.

Recommendations

The study recommends that:

- Tertiary institution managers should develop positive mindsets and improve their computer literacy skills to enhance e-MIS use.
- Universities should improve and make e-MIS functional to facilitate blended learning and prompt release of students' results.
- Nigerian tertiary institutions should continuously incorporate e-MIS use in their teaching and learning strategy to enhance effectiveness and efficiency.

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