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STUDENTS' E-MANAGEMENT VARIABLES AND UNIVERSITY ADMINISTRATION EFFECTIVENESS IN NIGERIA: POLICY ORIENTATIONS

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ABSTRACT

Some tremendous technological advancements in the present 21st century have culminated in far-reaching developments in the administrative system of universities, especially in the developed nations. This work investigated the relationship between students' e-management variables such as automated admission, online course registration, computerised hostel allocation and university administration effectiveness in Nigeria. It adopted a descriptive research design. Three null hypotheses were postulated and tested at the .05 level of significance. The population for the study comprised all 27,826 full time undergraduate students out of which 1600 participants were selected through stratified random technique. A self-designed validated and reliable ($r = .87$) questionnaire was used for data collection. Findings from the study revealed a weak, positive and significant relationship between university administration effectiveness and automated admission ($r = .171$; $p < .05$). There is also strong, positive and significant relationship between university administration effectiveness and online course registration ($r = .891$; $p < .05$). Finally, strong, positive and significant relationship is also discovered between university administration effectiveness and computerised hostel allocation ($r = 0.721$; $p < .05$). Premised on the study findings, the article recommends among other things that the university authority should ensure that websites are being updated regularly, and are more user-friendly. Also, the university should re-consider the installation of free Wi-Fi on campus to enable better internet connectivity for students and staff.

Keywords: E-management, Automated Admission, Online Registration, University Administration, Higher Education, Nigeria



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BACKGROUND TO THE STUDY

The recent explosion in the field of information technology which translates into new knowledge economy and new information technologies are altering the ground rules for effective information flow in every society. According to Thomas (2004), the relevance of using new technologies to provide information access is of great significance in the global economy. In other words, IT is the focal point of electronics, data processing and telecommunication.

Tremendous technological advancement has occurred in the present twenty-first century which has culminated in far-reaching developments in university administrative systems, especially in the developed nations. Cost-effective technology and flexibility in learning and administrative activities are essential to enhance efficiency. One of the tasks in university administration experiencing a global information technology revolution is students' management. Nwankwo (2002, as cited in Oladejo, 2007, p. 9) observed that the functions of students personnel management include admission, registration, enrolment, students' organization, classification, provision of essential services such as medical, sports, guidance and counseling services as well as the comprehension and development of activities, interests and needs of individual students. In essence, all the activities and services rendered to the students in the university are included in the students' personnel management and appear to be the core of institutional administration.

The rising administrative costs of tertiary institutions, especially students' personnel makes it imperative to devise an alternative management framework which will reduce these administrative costs in the long run, and at the same time, optimize the University's objective function; hence, the need to embrace a technology-based approach to student management. The emergence of modern Information and Communications Technology (ICT), and the need for Nigerian universities to be viewed and ranked through the degree of their website functionality, network structure, and associated academic portal necessitated the adoption of e-management of students' personnel functions.

E-management is a contemporary approach that seeks to convert the institutions' operations from manual to electronic using IT in delivering administrative functions. It is the administrative process that depends on the possibilities of the Internet and business networks in the planning, direction and control of enterprise resources in order to achieve organizational goals (Najem, 2004). E-management entails deploying ICTs to carry out various managerial functions such as planning, organizing, staffing, leading or directing, and controlling an organization for accomplishing organizational goals.

Some scholars have however expressed negative opinions about e-management adoption in institutional administration. For instance, Akinde (2004) argued that manual course registration is part of the orientation program for all students as it enables them to have a better understanding of the school environment and orientation of their university when they actively involve themselves in manual course registration. He submitted further that with manual course registration, students will be able to identify offices easily, and even know the names of most lecturers and officers in the University. Corroborating Akinde (2004), Oni (2011) also maintained that the impact of e-management is not significant in university students' administration, establishing the equivalence of Computer Based Tests (CBTs) with Pen and Paper Tests (PPTs), especially when computers gave



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exactly the same tests as those given in paper-and-pencil format. They also highlighted instances where systems crash as a result of erratic power supply, and where information is lost to virus attack on the files without backup.

Despite these contrary views however, it is believed that the numerous lags in Nigerian universities students' administration could be prevented if e-management facilities were effectively installed and utilized in the universities. The use of e-management in the examination process has been cited as the cause of students having to carry over some courses as a result of errors noticed in the online course registration. It has been noticed that the computer can only process the information that is input into it. If wrong data are given, the outcome will also be wrong; hence the axiom, "garbage in garbage out". This therefore informs the study to investigate the relationship between students' e-management variables such as automated admission process, online course registration, computerised hostel allocation and university administration effectiveness in Nigerian higher education institutions.

STATEMENT OF THE PROBLEM

In the modern era of information technology, many human endeavors are now being carried out and managed electronically. E-management is a type of contemporary approach that seeks to convert the institutions' operations from manual to electronic using information technology in delivering its administrative functions. The rising administrative costs of tertiary institutions, especially in students' personnel administration, makes it imperative to develop an alternative management framework which will reduce these costs in the long run, and at the same time, optimize the University's objective function. Hence the need to embrace a technology-based approach to student management. The extent to which e-management of students has facilitated university administration has to be continuously investigated. This study therefore examined the relationship between students' e-management variables namely automated admission process, online course registration, computerised hostel allocation and perceived efficiency of university administration in Nigeria.

PURPOSE OF THE STUDY

This work investigated the relationship between students' e-management variables namely automated admission process, online course registration, computerised hostel allocation and university administration effectiveness in Nigeria. The specific objectives of the study are:

1. To evaluate the relationship between automated admission and university administration effectiveness in Nigeria.
2. To investigate the extent to which online course registration is related to university administration effectiveness in Nigeria.
3. To determine the relationship between computerized hostel allocation and university administration effectiveness in Nigeria.



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RESEARCH HYPOTHESES

The following research hypotheses were formulated and tested at the .05 level of significance in the study:

- Ho₁: There is no significant correlation between automated admission and university administration effectiveness in Nigeria.
- Ho₂: Online course registration process and university administration effectiveness are not significantly related in Nigeria.
- Ho₃: The relationship between computerized hostel allocation process and university administration effectiveness is not significant in Nigeria.

LITRATURE REVIEW

The Concept of E-Management

According to Lagoke, Oladejo, and Oladejo (2012), the application of electronics, especially to teaching and learning activities is not a new phenomenon across the globe. They further opined that even in developing countries such as Nigeria, many institutions have been using one form of electronic system or another for various administrative works. This could therefore be termed as E-Management. E-management generally can be defined as a strategic approach for managing the future and dynamic organizations by implementing high-performance system based technology. It focuses on integration, automation and artificial intelligence through rapid development of systems for achieving the organizational vision (Yao, Othman, Aballa, & Omar, 2011). E-management is the umbrella for many of the e-business models including electronic management tools for information exchange and cooperation between the various parties in the supply chain. It includes processes that ensure compatibility of the managerial functions and IT departments with each other and the ability to provide services, the availability of security, and good performance for e-business success (Seresht, 2008). Lagoke et al. (2012) were of the view that the goal of utilizing technologies in educational institutions is to provide learners with an empowering environment where these technologies may be used anytime, anywhere in an extremely user-friendly manner.

As for students' personnel management, Emetarom (2002) described it as the planning, organizing, directing, supervising, coordinating and controlling of those activities and welfare of the entire student population. Also, Flippo (2003) outlined planning, organizing, directing and controlling as the administrative task areas of the personnel management which under this circumstance should be applied in university students' administration. In the submission of Nosiri (2005), students' personnel management consists of those administrative and supervising functions and services other than classroom instruction. Premised on the above definitions, students' e-personnel management can be described as all technology-based functions and activities carried out by the university administrator on students in such areas as admission, registration, enrolment, students organization, classification of students, provision of essential services like medical, sporting, guidance and counseling services to ensure that students derive the best from the schools' curricular and co-curricular activities.



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Selected E-Management Variables and University Administration

According to Christiana (2008), e-management plays a vital role in supporting powerful, efficient management and administration in the education sector because technology can be used right from student administration to various administrative areas in an education institution. Hossein (2008) lends credence to Christiana's view that e-management provides several possibilities for educational administrators to do their tasks and one of these tasks is the student admission process. The integration of ICT enhances the overall admission activities of higher education institutions by making it more accessible to many (Thomas, 2004).

The transition from manual to online applications, registration, scoring of scripts, and collating and disseminating of results improves the efficiency, accuracy and reliability of admission procedures (Nosiri, 2005). Mbakwem and Okeke (2007) stated that such a transition guarantees safety, security and efficiency in handling large volumes of scores over a very short period.

Online registration is a recent technology in school administration via e-management. Before the advent of on-line registration, students were faced with a monotonous task of manual registration of courses where they were faced with all manner of intimidation and wrong attitude from staff who are supposed to sign such forms. Ajayi (2004) noted that this method was cumbersome and time wasting. The idea of online registration is however in line with the world's latest trend of information technology prior to the advent of e-management in Nigerian universities. The online registration system allows students, to register through the internet, and drop or add courses online within the registration period. The students are expected to go into a cybercafé or any available internet facility and log into the school web site and register courses for the semester/session. Ashish and Arun (2005) and Ajayi (2004) stated that on-line registration has put an end to all manners of complaints by students about the nonchalant attitude of some staff in signing course forms as experienced in manual registration, and also allows quicker response. In the same vein, Chaoes (2006) also noted that a well-conceived and implemented automated student record system can reduce the cost of handling the paper work associated with record keeping.

Another very important service delivered by the Student Affairs Unit has to do with the arrangement for hostel accommodation. Onyeagbako (2002) maintained that manual method of managing and administering hostels in institutions is obviously not effective as it is attributed to drawbacks like human error, low security, difficulty in data update, and difficulty in record keeping. Kola (2014) then submitted that the easiest way to address the drawbacks of the manual scheduling methods and ensures data integrity especially in a thick populated institution is to make access to accommodation electronic and online.

METHODS AND MATERIALS

This sub-section explains the procedure used in carrying this study. It focuses on research design, study population, sample and sampling technique, instrumentation, validity and reliability of the instrument, and method of data analysis.



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Research Design

The study used a descriptive survey research design. It focused on obtaining data from a large study population through the use of questionnaire. According to Creswell (2012) survey research designs are procedures in quantitative research in which investigators administer a survey to a sample or to the entire population of people to describe the attitudes, opinions, behaviors, or characteristics of the population.

Population of the Study

The population for the study comprised all 27,826 full time undergraduate students in the University of Lagos 2014/15 academic session as at the time of conducting this study. However, this does not include foundation students, distance learning students, extra year students, and postgraduate students.

Sample and Sampling Technique

A total number of 1,600 undergraduate students were selected through stratified random sampling technique across the selected faculties to constitute the sample size. The University was stratified into Faculties. Eight faculties were then randomly selected from the entire 13 faculties. Participants were then randomly selected from each of the selected Faculties.

Research Instrument

The researchers used a self-designed validated and reliable instrument entitled "Students' E-Management Variables and University Administration Effectiveness Questionnaire (SEMVUAEQ)". It was divided into Sections A and B. Section A sought demographic information of the respondents, while Section B sought information on each of the students' e- management variables included in the study. The questionnaire was scored on a 4-point modified Likert scale of Strongly Agree (SA), Agree (A), Strongly Disagree (SD), and Disagree (D) with weights 4, 3, 2 and 1 respectively.

Validity and Reliability of the Instrument

Copies of the draft instrument were given to some senior colleagues in Measurement and Evaluation for content, construct and face validity. Each of the sub-independent variables was initially made up of 12 items. The final draft however consisted of 7 items each. A pilot study was carried out on 350 participants from another tertiary institution who were not part of the original research. Internal consistency method of estimating reliability value, particularly the Cronbach alpha, was used. The obtained alpha value was .87, which shows that the instrument is reliable.



Method of Data Analysis

Data obtained were subjected to inferential statistical hypotheses testing. Specifically, the three null hypotheses were tested using Pearson Product-Moment Correlation Coefficient (PPMC) at the .05 level of significance. The need to use this statistical tool is not unconnected with the fact that the study sought relationship between each of the sub-independent variables and the dependent variable (university administration effectiveness). Both the independent variables and the dependent variable are continuous variables.

FINDINGS

In this section, the collected data are analyzed and the findings discussed.

Ho₁: There is no significant correlation between automated admission and university administration effectiveness in Nigeria.

Table 1
Relationship between Automated Admission and University Administration Effectiveness

Variables	\bar{x}	<i>SD</i>	N	<i>r</i>	<i>p</i>	Remark	Decision
Automated	17.58	3.39					
Admission			1600	.171	.000	Sig.	Reject H ₀₁
Univ. Admin Effectiveness	12.61	6.53					

Table 1 shows a weak, positive and significant correlation between automated admission and university administration effectiveness ($r = .171$; $p < .05$). Therefore, the null hypothesis which states that there is no significant correlation between automated admission and university administration effectiveness in Nigeria, is rejected.

Ho₂: Online course registration and university administration effectiveness are not significantly related in Nigeria.

Table 2 below gives the relationship between online course registration and university administration effectiveness variables.



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Table 2
Relationship between Online Course Registration and University Administration Effectiveness

Variables	\bar{x}	SD	N	r	p	Remark	Decision
Online Course	15.71	5.27					
Registration			1600	.891	.000	Sig.	Reject H _{o2}
Univ. Admin. Effectiveness	12.61	6.53					

Table 2 above shows that there is a strong, positive and significant correlation between online course registration and effective university administration ($r = .891$; $p < .05$). Thus, the null hypothesis which states that online course registration and university administration effectiveness in Nigeria are not significantly related, is rejected.

Ho₃: The relationship between computerized hostel allocation and university administration effectiveness is not significant in Nigeria.

Table 3
Relationship between Computerized Hostel Allocation and University Administration Effectiveness

Variables	\bar{x}	SD	N	r	p	Remark	Decision
Computerized Hostel	16.67	4.56					
Allocation			1600	.721	.000	Sig.	Reject H _{o3}
Univ. Admin. Effectiveness	12.61	6.35					

Table 3 shows a strong, positive and significant correlation between computerized hostel allocation and university administration effectiveness ($r = 0.721$; $p < 0.05$). Therefore, the null hypothesis which states that the relationship between computerized hostel allocation and university administration effectiveness is not significant is also rejected.

DISCUSSIONS OF FINDINGS

Hypothesis one formulated no significant relationship between automated admission and university administration effectiveness at the University of Lagos. The result revealed that there is a weak, positive and significant relationship between automated admission and university administration effectiveness ($r = 0.171$; $p <$



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.05). This is buttressed by the assertion that the transition to online applications improves the efficiency, accuracy and reliability of admission procedures (Nanighe, 2000, as cited in Seresht, 2008). This finding also corroborates the study of Thomas (2004), who stated that ICT integration into the students' administration process enhances the overall admission activities of higher education institutions by making it more accessible to many. This suggests that automated admission process is an indicator of effective university administration.

Furthermore, hypothesis two test results showed a significant relationship between online course registration and university administration effectiveness at the University of Lagos. The result revealed existence of a strong, positive and significant relationship between online course registration and university administration effectiveness ($r = 0.891$; $p < .05$). In contrast, Akinde (2004) stated that students have a better orientation of their college when they actively involve themselves in manual course registration; Oni (2011) also suggested that manual course registration is part of the orientation program for every student because it enables students to have a better understanding of their environment. However, the present finding is in line with Connolly and Begg (2004) who maintained that online registration provides student information securely stored in computer systems for easy retrieval. This underscores the point that e-management ensures a more effective and efficient course registration process.

Finally, hypothesis three postulated no significant relationship between computerized hostel allocation and university administration effectiveness at the University of Lagos. The result revealed a strong, positive and significant relationship exists between computerized hostel allocation and university administration effectiveness ($r = .721$; $p < .05$). This finding corroborated the opinion of Kola (2014), who found that the manual method of hostel allocation is characterized by numerous drawbacks, hence the need for a more technology-based approach. Abdul (2013) suggested that a more reliable system hostel management system is needed and that hostel allocation should be fully computerized for the coming intake; this is in line with the present findings.

CONCLUSION AND POLICY ORIENTATIONS

Research on e-management is on the rise in Nigeria due to the mandate by the Nigerian Universities Commission (NUC) that universities should be viewed and ranked through the level of the functionality of their websites, network structure and associated academic portals. Several studies have therefore been conducted which addressed many challenging aspects of the e-management model such as information intelligibility, data sourcing and accessibility, database security, data interoperability, learning and adaptation through virtual platforms, adoption of expert systems, and awareness creation for an e-institution. The challenges are indeed numerous and cover most (if not all) domains of university administration, such as the admission, course registration, examination, hostel allocation process among others. However, the fact still remains that for effective university administration, e-management has come to stay.

Hence, the following recommendations are hereby suggested towards policy orientation:

1. The university authority should ensure that its website is being updated regularly, and reduce difficulties in accessing the uploaded information by making the website user- friendly.



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2. University should also operate accounts on popular social media to widen the channels for accessing information on admission.
3. The university should re-consider the installation of free Wi-Fi on campus to improve connectivity and facilitate students' online activities.
4. University should create a means of getting stable power supply.

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