Impact of Emerging Technologies on the Administration of Colleges of Education in the Management of Records in Enugu State

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ABSTRACT

The study examined the impact of Emerging Technologies on the administration of Colleges of Education in the management of records in Enugu State. This study was guided by two research questions and two hypotheses. The study adopted descriptive survey research design. The population for the study was 874 respondents which comprised 231 College administrators and 643 non-academic staff. There was no sampling because the population was manageable. The instrument used for data collection was a 13-item self structured questionnaire titled "Impact of Emerging Technologies on the Administration of Colleges of Education in the Management of records Questionnaire (IETsACMSRQ)". The instrument was validated by three research experts, two in Department of Educational Management and one in Measurement and Evaluation unit of Department of Mathematics and Computer Education, all from Faculty of Education, Enugu State University of Science and Technology (ESUT), Enugu. To ascertain the internal consistency of the instrument, Cronbach Alpha method was used to compute the internal consistency of the instrument. The computation yielded .79 and .80 for clusters 1 and 2 respectively. The instrument had an overall reliability index of .80 which indicated that the instrument is reliable. The research questions were answered using mean and standard deviation while the hypotheses were tested with t-test statistic at .05 level of significance. The findings of the study showed that emerging technologies have impact on the administration of Colleges of Education in the management of staff and students' records. Based on the findings of the study, the researcher recommended that the Administrators and other non-academic staff of Colleges of Education should be given orientation on how best to keep records. There should also be refresher courses for the old staff on the emerging technologies needed for keeping either students or staff records.

Keywords: Information and Communication Technologies, Administration, Students' records, Colleges of Education

INTRODUCTION

In Nigeria, education is seen as a vital force in advancing the nation's development. It is widely acknowledged as a tool for empowering individuals, imparting them with knowledge and abilities that enable them to make meaningful contributions to their own advancement and the improvement of their communities. It is a globally accepted dictum that no nation can develop beyond her level and quality of education. Ogbuanya & Okoye (2015), posited that education is a potential instrument for social change which often brings about societal wellbeing and political awareness which ultimately promotes economic development. Oyekan (2018) defined education as vibrant instrument and strength of change for sustainable development, stable polity and viable economy of any progressive nation. That is why the Federal Republic of Nigeria (FRN, 2013) in Nigeria's Philosophy of Education stated that education is an instrument for national development. The FRN (2013), in her National Policy on Education, the education sector is made up of different forms which include among others, Basic Education, Post-Basic Education, Mass and Nomadic Education and Tertiary Education. For the purpose of this study, the researcher

laid emphasis on tertiary education level. The tertiary education is also known as a specialized education in a specific field, taken on after finishing secondary schools. It is a non-compulsory and provided in a specialist institution usually a College of Education, Polytechnic or University. However, for the purpose of the present study, the researchers focused on Colleges of Education.

Colleges of education are institutions established to give professional training for the production of highly motivated, conscientious and efficient classroom teachers for our primary and post secondary institutions (Onye, 2018). A College of Education basically is Nigeria Certificate of Education (N.C.E.) awarding tertiary institutions but may be a degree-awarding tertiary educational institution too. According to Uzoechina (2013), Colleges of Education are among institutions of learning formally designated to provide teacher education. In Nigeria, teacher education is given a major emphasis in all educational planning because of its importance. Colleges of Education will only carry out effective teacher education upon successful implementation of relevant programmes. An important aspect for Colleges of Education to actualize the relevant programmes is through effective management.

Management is the process of getting things done with the accomplishment of the stated objectives. Elujekwute (2015), defined management as the process of utilizing material and human resources to accomplish designated objectives which involves the organization, direction, coordination and evaluation of people to achieve organizational goals. Ogbonnaya (2014), defined management as the co-ordination of the resources of an organization through the process of planning, organizing, directing and controlling all energies aimed at achieving the organizational goals. An important aspect in management is effective record keeping. In support of this, Agbe in Elujekwute, Agbo & Uwalaka (2021), posited that the management of materials and data prepared for future reference is known as record.

Records are the life-blood of every organisation. Record keeping is a germane factor in determining the effectiveness and efficiency of the school system. According to Ereh & Okon (2015), records are official documents, books and files containing essential and crucial information on actions and events which are kept and preserved in the school offices for utilization and retrieval of information when needed. Records are important because they serve as major information tool that sustains the school and aids in achieving educational goals and objectives. Records refer to official documents, books, and files containing information that is highly crucial about actions and events that take place in schools.

The office keeps and preserves these records for use and retrieval of information as needed. In fact, it is central in the administration of institution of learning because it documents the planning and implementation of appropriate course of service allowing proper monitoring. In conventional paper-based organizations, paper continues to be viewed as the material for records in administrative documentations (Odeniyi & Adeyanju, 2020). According Elujekwute (2015), the facilities available and properly kept and maintained do influence to a large extent the quality of education being provided. According to Olalere, Ladoba, Oladapo, Alamu, Bamidele, Innocent & Adeojo (2021), records are grouped into statutory and non-statutory. Statutory records include admission/withdrawal register, attendance register, scheme of work, time-table, logbook, visitors' book (educational policy

book), time/movement books, school diary, lesson plan/note for teachers, examination record book, punishment book, staff minutes book, inspection/supervision report file, etc. Non-statutory records are cash book, stock book, school calendar, inventory book, school magazine, confidential report forms and requisition book, hence, this study focused on students and staff records.

A student is a person who is registered at the level of higher education. A student record contains information directly related to a student and is maintained by the educational institution. Student records kept by higher education institutions are part of documents that record student activities during their study process. Findings revealed that the level of ICT adoption and digitalized students' records management in the universities was generally moderately high. It was further revealed that an increase in the level of ICT adoption was associated with higher effectiveness of digitalized students' records management and vice versa. Adesua & Adu (2015), found that the use of technology gadgets facilitate the preparation of students' raw scores, cumulative GPA and issuance of students' transcripts among others. A study conducted by Egoeze, Misra, Maskeliūnas & Damaševičius (2018), showed that technologies have impact on students' and staff records.

Staff records refer to the collection of related data about employees of an organization. The importance of staff records is that, it makes available necessary facts and figures for the efficient management decision making on staff matters in order to preserve impartiality and consistency. Staff records provide information on the employment and duty posts of both academic and non academic staff. These records contain detailed demographic information of staff (such as age, gender, qualification, previous experience, appraisal forms, certificates, detailed description of tasks to be performed by staff in accordance with the employment conditions of service as well as staff disciplinary committee files. A study conducted by Egoeze, Misra, Maskeliūnas & Damaševičius (2018), showed that technologies have impact on staff records. Meanwhile, records management in Colleges of Education is approaching the point at which science and technology particularly emerging technologies may play a vital role. In Africa, the field of records management has undergone great advancements in the utilization of Information and Communication Technologies (ICTs) and this is mainly due to the emergence of emerging technologies utilization (Kasozi, 2012).

Emerging technologies have become the foundation for process improvement and increased accuracy, effectiveness and efficiency in most organizations today. Emerging technologies according to Bozalek (2015), are those technologies which are likely to have a large impact on teaching, learning, or creative inquiry on learners or those technologies which are on the rise. Emerging technologies are technologies that are currently developing, or that are expected to be available within the next five to ten years, and is usually reserved for technologies that are creating, or are expected to create, significant social or economic effects. Emerging technologies are technologies whose development, practical applications, or both are still largely unrealized. The utilization of technology in the education sector has transformed the way in which records are stored and managed today. Okechukwu & Ukeh (2022), contended that the main focus in achieving educational objectives has changed to incorporate technology integration, thus establishing a digital presence on the internet. The implementation of relevant emerging

technologies for students and staff records can only be achieved through effective administration (Alabi, 2017). The fact remains that an effective education process will be hard to actualize without proper administration.

Administration is the management of public affairs efficiently. Unachukwu & Okorji (2014), defined administration as a social process concerned with identifying, motivating, controlling and unifying formally and informally organized human and material resources within an integrated system designed specially to accomplish predetermined goals. Aideloha (2018), defined administration as whenever collective action is required, whenever there is a need for order on a series of activities and whenever a group seeks to obtain a goal.

Conclusively, the need for effective staff and students' records management in colleges of education must take into considerations the most effective emerging technologies in the creation, usage, storage, retrieval and even archiving of essential records to sustain the memory of the college. Mulauzi, Wamundila & Hamooya (2013), posited that it is difficult to attain development without records and archives. It is essential for colleges of education to integrate records management more effectively so that records management becomes a strategic management function towards reaching a competitive advantage. Emerging technologies have become the foundation for process improvement and increased accuracy and efficiency in most organizations today. The management of any form of activity, in this modern era cannot be possible without the use of emerging technologies. Record management is one area in which the use of emerging technologies is indispensable. There are rapidly growing opportunities afforded by emerging technologies to support staff and students' records in the education sector. Therefore, the impact of emerging technologies on the administration of Colleges of Education in the management of records in Enugu State becomes imperative.

Statement of the Problem
There has been public outcry in the Colleges of Education today in Enugu state due to inefficiency of records keeping. With respect to the significance of record keeping in the education sector for the actualization of educational goals, it was observed that records were not adequately managed by the administrators. Despite the main purpose of record keeping in the Colleges of Education, the management of records in Colleges of Education in Enugu State still leaves much to be desired for effective administration. There is equally the shortage of trained personnel for records keeping. Having observed this ugly and unpleasant situation in the administration of Colleges of Education, it is obvious that College records are inadequately kept and maintained.

This calls for the integration of emerging technologies at Colleges of Education by administrators to illuminate the hope for better record keeping. This is based on the fact that students and staff records may be better managed through emerging technologies. The problem of this study is that despite government efforts in making technology available for both academic and administrative activities in Colleges of Education, it seems that the impact has not been felt. It is saddening to note that many record keeping processes are still being carried out with traditional methods in Colleges of Education today. This study, therefore, examined the impact of emerging technologies on the administration of Colleges of Education in the management of records in Enugu State.

Purpose of the Study

The purpose of the study was to ascertain the impact of emerging technologies on the administration of Colleges of Education in the management of records in Enugu State.

Specifically, the study sought to ascertain the:

1. impact of emerging technologies on the administration of Colleges of Education in the management of students' records in Enugu State;
2. impact of emerging technologies on the administration of Colleges of Education in the management of staff records in Enugu State.

Research Questions

The following research questions guided the study:

1. What impact does emerging technologies have on the administration of Colleges of Education in the management of students' records in Enugu State?
2. What impact does emerging technologies have on the administration of Colleges of Education in the management of staff records in Enugu State?

Hypotheses

The hypotheses were formulated and tested at .05 level of significance:

H_{O1}: There is no significant difference between the mean ratings of administrators and non-academic staff on the impact of emerging technologies on the administration of Colleges of Education in the management of students' records in Enugu State.

H_{O2}: There is no significant difference between the mean ratings of administrators and non-academic staff on the impact of emerging technologies on the administration of Colleges of Education in the management of staff' records in Enugu State.

Research Method

The study adopted the descriptive survey research design. Nworgu (2015), defined descriptive survey research design as a design that aims at collecting data and describing them in a systematic way. Leedy and Ormrod (2013), also explained that descriptive survey design is a design used to study population which allows for selecting, studying and analyzing sample chosen from the target population, from which inferences/generalization are made about the entire population. The population for the study was 874 respondents which comprised 231 College administrators and 643 students among the seven Colleges of Education in Enugu state. There was no sampling because the population was manageable. The instrument used for data collection was a 13-item structured questionnaire titled "Impact of Emerging Technologies on the Administration of Colleges of Education in the Management of Records Questionnaire (IETsACMSRQ)". The items were structured on a four point rating scale of Strongly Agree (SA) – 4 points, Agree (A) – 3 points, Disagree (D) – 2 points and Strongly Disagree (SD) – 1 point.

The instrument was validated by three research experts, two in Department of Educational Management and one in Measurement and Evaluation unit of Department of Mathematics and Computer Education, all from Faculty of Education, Enugu State University of Science and Technology (ESUT), Enugu. To ascertain the internal consistency of the instrument, Cronbach Alpha method was used to collect data from a trial test. The computation yielded .79 and .80 for clusters 1 and 2 respectively. The instrument had an overall reliability index of .80 which indicates that the instrument is reliable. However, out of

the 874 copies of questionnaire administered, the researcher with the help of his research assistants retrieved 791 (190 from administrators and 601 from non-academic staff) copies which resulted to 90.50% returned rate. The research questions were answered using mean and standard deviation while the hypotheses were tested with t-test statistic at 0.05 level of significance. In rating the mean scores, each response option had a numerical value based on real limit of numbers: SA = 3.50-4.00; A = 2.50-3.49; D = 1.50-2.49; SD = 0.00-1.49. The null hypothesis was not significant when the probability values were greater than .05, but significant when the probability values were less than .05.

Data Analysis and Results Presentation
Research Question 1: What impact does emerging technologies have on the administration of Colleges of Education in the management of students' records in Enugu State?

Table 1: Mean Ratings of Administrators and Students on the Impact of Emerging Technologies on the Administration of Colleges of Education in the Management of Students' Records

S/N	ITEMS Emerging technologies impact on the following students' records:	Administrators 190			Non-academic staff 601		
		$\overline{x}$	SD	Dec	$\overline{x}$	SD	Dec
1.	registration of students.	3.05	.82	A	2.94	.82	A
2.	verification of students' records.	3.03	.86	A	2.96	.81	A
3.	students' academic performance.	2.91	.78	A	2.96	.84	A
4.	attendance register.	2.94	.82	A	3.03	.80	A
5.	students' payment.	2.97	.82	A	3.06	.82	A
6.	class lists.	3.05	.82	A	3.02	.82	A
	Cluster Mean/SD	**2.99**	**.82**	**A**	**3.00**	**.82**	**A**

The data presented on Table 1 showed that the respondents agreed to the items stated. The administrators' means ranged from 2.91 to 3.05 while the non-academic staff means ranged from 2.94 to 3.06. In addition, they have cluster means of 2.99 and 3.00. Their computed standard deviations are low for both administrators and non-academic staff respectively. This signifies that their responses are closely clustered around the mean and so are homogenous. The respondents were generally of the view that emerging technologies have impact on the administration of Colleges of Education in the management of students' records in Enugu State.

Research Question 2: What impact does of emerging technologies have on the administration of Colleges of Education in the management of staff records in Enugu State?

Table 2: Mean Ratings of Administrators and Students on the Impact of Emerging Technologies on the Administration of Colleges of Education in the Management of Staff Records

S/N	ITEMS Emerging technologies impact on the following staff records:	Administrators 190 $\overline{x}$	SD	Dec	Non-academic staff 601 $\overline{x}$	SD	Dec
7.	benefits records.	3.03	.85	A	2.99	.82	A
8.	lecture time table.	2.99	.80	A	2.96	.82	A
9.	staff disciplinary committee files.	2.96	.84	A	2.99	.82	A
10.	staff appraisal.	2.93	.81	A	2.99	.81	A
11.	diary of work.	2.92	.83	A	2.96	.81	A
12.	staff attendance.	2.95	.84	A	2.96	.81	A
13.	staff movement book.	2.97	.81	A	2.99	.82	A
	Cluster Mean/SD	**2.96**	**.83**	**A**	**2.98**	**.82**	**A**

The data presented on Table 2 showed that the respondents agreed to the items stated. The administrators' means ranged from 2.92 to 3.03 while the non-academic staff means ranged from 2.96 to 2.99. In addition, they have cluster means of 2.96 and 2.98. Their recorded standard deviations for both administrators and non-academic staff are low signifying homogeneity in their responses. Thus, the answer to RQ_2 is that emerging technologies have positive impact on the administration of Colleges of Education in the management of staff records in Enugu State.

Hypotheses

H_{O1}: There is no significant difference between the mean ratings of administrators and non-academic staff on the impact emerging technologies have on the administration of Colleges of Education in the management of students' records in Enugu State.

Table 3: Summary of t-test Analysis of the Mean Ratings of Administrators and Non-Academic Staff on the Impact Emerging Technologies have on the Administration of Colleges of Education in the Management of Students' Records

Group	n	$\overline{x}$	SD	df	p-value	Decision
Administrators	190	2.99	.82			
				789	.104	H_{01} not rejected
Non-academic staff	261	3.00	.82			

Data on Table 3 for administrators and non-academic staff on the impact emerging technologies have on the administration of Colleges of Education in the management of students' records in Enugu state show that at 789 degree of freedom, the p-value was .104. The outcome of the p-value is greater than 0.05 level of significance set for this study. This signifies that the null hypothesis was not rejected and, therefore, there was no significant difference between the mean ratings of administrators and non-academic staff on the impact of emerging technologies

on the administration of Colleges of Education in the management of students' records in Enugu State.

H$_{O2:}$ There is no significant difference between the mean ratings of administrators and non-academic staff on the impact emerging technologies have on the administration of Colleges of Education in the management of staff records in Enugu State.

Table 4: Summary of t-test Analysis of the Mean Ratings of Administrators and Non-Academic Staff on the Impact Emerging Technologies have on the Administration of Colleges of Education in the Management of Staff Records

Group	n	$\overline{x}$	SD	df	p-value	Decision
Administrators	190	2.96	.83			
				789	.085	H$_{02}$ not rejected
Non-academic staff	261	2.98	.82			

Data on Table 4 for administrators and non-academic staff on the impact emerging technologies have on the administration of Colleges of Education in the management of staff records in Enugu state show that at 789 degree of freedom, the p-value was .085. The outcome of the p-value is greater than .05 level of significance set for this study. This signifies that the null hypothesis was not rejected, therefore, there was no significant difference between the mean ratings of administrators and non-academic staff on the impact of emerging technologies on the administration of Colleges of Education in the management of staff records in Enugu State.

Discussion of Findings
The findings of the study showed that emerging technologies have impact on the administration of Colleges of Education in the management of students' records in Enugu State. The findings is in agreement

with Adesua & Adu (2015), who found that the use of technology gadgets facilitate the preparation of students' raw scores, cumulative GPA and issuance of students' transcripts among others. The finding of this study also agrees with that of Egoeze, Misra, Maskeliūnas & Damaševičius (2018), who found that technologies have impact on students' records. Further finding showed that there was no significant difference between the mean ratings of administrators and non-academic staff on the impact of emerging technologies on the administration of Colleges of Education in the management of students' records in Enugu State.

The findings of the study showed that emerging technologies have impact on the administration of Colleges of Education in the management of staff records in Enugu State. The finding of the study agrees with those of Egoeze, Misra, Maskeliūnas &

Damaševičius (2018), who found that technologies have impact on staff records. Further finding showed that there was no significant difference between the mean ratings of administrators and non-academic staff on the impact of emerging technologies on the administration of Colleges of Education in the management of staff records in Enugu State.

Conclusion

The study focused on the impact of emerging technologies on the administration of Colleges of Education in the management of records in Enugu State. The findings of this study have provided empirical basis to conclude that emerging technologies have significant impact on the administration of Colleges of Education in the management of records.

Recommendations

Based on the findings, the following recommendations were proffered:

1. Administrators and other non-academic staff of Colleges of Education should be given orientation on how best to keep records. There should also be refresher courses for the old staff on the emerging technologies needed for keeping either students or staff records.
2. College of Education administrators should endeavour to make internet facilities available in all offices and classrooms.

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