IMPACT OF INFORMATION TECHNOLOGY IN UNIVERSITIES' ADMINISTRATIVE ACTIVTIES IN ENUGU STATE OF NIGERIA

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Abstract
This study was carried out to examine the impact of Information Technology (IT) in universities' administrative activities in Enugu state of Nigeria. Three research questions were drawn from the purpose of the study. The population of the study was 350 which comprised of Academics and Non-academics. The instrument used was a structured questionnaire. The instrument was subjected to face validation by three experts. The reliability coefficient of the instrument was 0.92 using Cronbach Alpha statistics. Mean and Standard deviation were used to analyze the three research questions. The study revealed among other things that the impact of teleconferencing in the delivery of discussion class encourages intrinsic interaction. The students' innovation and creativity was enhanced through IT by enabling students learn and remember what was taught and improving their competency in their class work. Lecturers use multimedia application to prepare instructional materials for effective teaching and learning. Teaching and learning of students are enhanced through its dynamic, interactive, flexible and engaging content. The study further showed that lecturers also use computer Assisted Instruction (CAI) in delivering instruction to students, and carryout evaluation of student's performance online (e-evaluation). Based on the findings, it was recommended among others that IT facilities should be adequately supplied to all schools by the government for effective running of the schools.

Keywords: Information Technology (IT), Administration and Universities

Background of the Study

Administration of University education has undergone tremendous changes over the years, assuming new dimensions influenced by technology driven applications. University Administration includes the performance or management of university activities which include academic and administrative activities and decision making as well as the efficient organization of students, staff and other resources to direct activities toward common goals and objective. Furthermore, administrative activities are the duties that need to be handled in order for the University to remain organized and run efficiently. These duties are often performed by a secretary, receptionist, administrative assistant, and executive assistant among others. With the use of InformationTechnology in the university administrative activities, the duties will be handled appropriately.

According to Ochai (2007), technology can be defined as the entities, both material and immaterial, created by the application of mental and physical effect in order to achieve some value. To this end, technology refers to the tools and machines that may be used to solve

real world problems. According to Moore (2002), technology is the application of knowledge to the achievement of particular goals or to the solution of a particular problem.

Information technology as an aspect of this study is a term which encompasses the application of technologies to information handling such as generation, storage, processing, retrieval and dissemination among others. According to Abimade (2007), information technology can be defined as broad-base technology (including its methods, management and communication of information). Okolocha (2004), defined information technology as the study of the application of digital technologies and techniques to be used in learning and education.

Therefore, the digital computer, which has the ability to process data and produce information, is the central facility. Information technology (IT) is another name for electronic data processing (EDP). As the range of computer- aided services has widened, especially since computer-on-a chip, or microprocessor, EDP has become inadequate to describe the entire wonders that can be manifested. Thus, it does embrace word processing and telecommunication, video messages and databases, micro computers and mainframes, in a more satisfactory manner than EDP (Aggarveal and Thakur, 2003). The pervasiveness of IT has brought about rapid technological, social, political and economic transformation, which has eventuated in a network society organised around IT (Yusuf, 2005).

The application of IT in university administrative activities particularly in Enugu State would improve efficiency and productivity, thereby engendering a variety of tools to enhance and facilitate lecturers' pedagogical activities. For instance, IT is becoming one of the most common means of service delivery in schools for both staff and students on and off campus using online teaching via web – based systems (Mutula, 2003). IT provides researchers with a steady avenue for the dissemination of research reports and findings (Yusuf, 2005). Looking at the role of education in the development of any society, the school will be indispensible in developing an IT learning culture of any country. All aspect of human life revolves around information and communication. Therefore, there is need for application of IT in the administration of university education especially in Enugu state because most of the work done by school administrators and Academic staff require the utilization of IT facilities.

Furthermore, Nwaigwe (2006) listed IT in education as motion picture or film, film strip, slide projection, overhead transparency, teletext and video text, the reprographic media, photography, photocopying, scanning and faxing microchips, microfilms and microfiche, voice mail, voice processing, the computer, the Internet, multimedia systems as examples of computer–based training (CBT) Compact Disc –Read Only Memory (CD–ROM), Compact Disc interactive (CD–I). Digital Video interactive (DVI), interactive processing information services. For the purposes of this study, IT refers to the following; projectors, cinema, telephone, e–mail facilities, CD–ROM, internet facilities, e–newspapers, e–posters, e–calendar of work, e–newspapers and e–magazines which can be applied in school administration. In view of the impact of IT in the performance of administrative activities, the Enugu state government deems it necessary to supply IT facilities in all universities in school administration, teaching and learning among others. It is therefore necessary to determine the extent the school administrators make use of IT facilities provided to them and investigate the possible solutions for controlling the problems hindering its use.

Statement of the Problem

The use of IT has resulted in a paradigm shift inculcating knowledge and skills necessary for the realization of educational objectives. Educational administration and IT literature have shown that no school administration in this era of IT driven economy can function effectively without appropriate IT facilities, especially in the areas of communications for enhancing relationships, students' innovation and creativity and most importantly, teaching and learning. Consequently, IT facilities are being supplied to schools to transform the administration as well as teaching and learning of schools, however, school administration is still under manual and analogue activities, resulting in what can be described as myopic and

local class administration, instead of IT-driven administration which would bring transformation and increase output. Experts in the field of education have agreed that students' innovation and creativity, teaching and learning in schools can be enhanced through the use of these IT facilities, which have not been given adequate attention. Based on this underlying problems and concerns above, this research aims to study the impact of information technology in universities administrative activities, so as to fill the existing gap between university administration and IT use.

The main purpose of this study is to investigate the impact of IT in universities administrative activities in Enugu state of Nigeria. Specifically, the study seeks to:

1. Identify ways in which IT is being used to promote effective communication among members of staff and students.
2. Find out the extent to which students' innovation and creativity are being enhanced through IT.
3. Ascertain the extent impact of IT could help teachers in teaching and learning.

The following research questions guided the study

1. In what ways does IT help in promoting effective communication among members of the staff and students?
2. To what extent are students' innovation and creativity enhanced through IT?
3. To what extent does IT help staff in teaching and learning?

Three null hypotheses were formulated and tested at 0.05 level of significant.

Methodology

This study adopted the descriptive survey research design, which is meant to elicit the opinions of university administrators and lecturers on the impact of IT in university administrative activities in Enugu state of Nigeria. According to Nworgu (2006) a descriptive survey design is one in which a group of persons or items are studied by collecting and analyzing data from only a few people or items considered to be true representative of the entire group or population of the study. The reason behind the selection of this design is because it is people oriented and vital issues on ways people use IT for effective university administrative activities are also discussed.

The study was carried out in public universities in Enugu state of Nigeria. The state has two (2) public universities all of which benefited from the supply of IT facilities from the federal and state government and are also making effort to become more effective. The Universities include; University of Nigeria, Nsukka and Enugu State University of Science and Technology, Enugu. The population of the study comprised of 474 University staff, which include 74 Administrators, 180 Academics & 220 Non Academic staff. The entire population was studied due to the manageable size of the population.

The instrument for data collection was a structured questionnaire titled: Information Technology, Impact Questionnaire (ITIQ), arranged in two sections; section A borders on demographic data of the respondents while section B focused on 26 items that are carefully organised in four clusters that address the research questions as follows: cluster A identifies ways in which IT is being used for promoting effective communication among members of staff and students. Cluster B elicit information on the extent to which students' innovation and creativity are being enhanced through IT. Cluster C ascertains the extent to which impact of IT could help Academic staff in the teaching and learning of students. The items were placed on a four point rating scale with options of very large extent; large extent; low extent and very low extent for cluster B to D while for cluster A only strongly agree, agree, disagree and strongly disagree were used. Options are weighted on 4, 3, 2, and 1 point(s) respectively.

The instrument was face validated by three experts from the Faculty of Education, Nnamdi Azikiwe University, Awka. Two of them were experts from the Department of Educational Administration and Planning; one in Measurement and Evaluation. The experts were requested to check the language, relevance and accuracy of the items in ITIQ in

addressing the research questions as well as the purpose of the study. The validates were also requested to study the observation schedule and scrutinize in line with research questions and or advice on the suitability of the instruments. Their corrections, suggestions and comments were used to modify the instrument.

The data collected for this study was analyzed using real limit of numbers and standard deviation to address the research questions. The real limits of numbers range are: 0.50-1.49(VLE), 1.50-2.49(LE), 2.50-3.49(LE), and 3.50-4.00(VLE). A criterion means score of 2.50 was employed. This implied that all mean scores below 2.50 was rejected as a way of IT impact in the schools under study. The null hypothesis was tested using t-test statistic at 0.05 level of significance.

Presentation and analysis of data

Research Question 1: In what ways does IT help in fostering effective communication among members of the staff and students?

The data for answering the above research questions is presented on Table 1 below

Table 1

Means and standard deviation of respondents (Administrators, Academic & Non Academic staff) responses on the ways IT help in promoting effective communication among members of the staff and students.

N=350

	Items	Mean	SD	Decision
1	The impact of teleconferencing in the delivery discussion class encourages intrinsic interaction	3.35	0.62	Agree
2	Power point packages are used for presentation during staff workshops	3.37	0.61	Agree
3	Schools management uses mobile telephone to communicate parents and Academic staff on school matters	3.17	0.66	Agree
4	Student's academic performances/results are sent to the parent through internet	2.87	0.76	Agree
5	The feed back to students in online delivery is quicker and more efficient.	2.88	0.76	Agree
6	Students use internet to register and pay for their school feels	2.82	0.81	Agree

The analysis in Table 1 shows that all the six items had their means ranging from 2.82 - 3.37 which are all above 2.50. This indicates that the entire respondent agreed on the indentified items. The standard deviation ranged from 0.61 – 0.81 showing that the respondents were not far from one another in their responses and their responses are not far from the mean.

Research Question 2: To what extent are student's innovation and creativity enhanced through IT?

The data for answering the above research question are presented on Table 2 below

Table 2:
Mean and standard deviation of respondents' (Administrator, Academic staff and Non academic staff) responses on the extent student's innovation and creativity are enhanced through IT

	Items	N	Mean	SD	Decision
1	With IT students learn & remember what was taught	350	2.73	0.96	LE
2	IT helps in expressing abstract ideas or concepts to students	350	2.80	0.84	LE
3	It ensures students' competency in their class work	350	3.12	0.68	LE
4	It encourages students' ability to formulate precise descriptions of how problems should be tackled	350	3.46	0.41	LE
5	IT enables students to transfer knowledge/ideas and skills to real life situations	350	3.00	0.72	LE
6	It inhibits the mathematic & science performance of some students	350	2.94	0.81	LE

The analysis in Table 2 shows that all the six items had their means ranged from 2.73 – 3.46 which are all above 2.50. This indicates that the entire respondent rated the items Large extent on the indentified items. The standard deviation ranged from 0.41 – 0.94 showing that the respondents were not far from one another in their responses and their responses are not far from the mean.

Research Question 3: To what extent does IT help in teaching and learning?

The data for answering the above research question are presented on table 3 below.

Table 3:

Mean and standard deviation of Academic responses on extent IT helps in the teaching and learning.

	Items	N	Mean	SD	Decision
1	Academic staff use computer assisted instruction (CAI) in delivering instruction to students	350	2.88	0.99	LE
2	Corel Draw is used by Academic staff to prepare their teaching aids	350	3.04	0.65	LE
3	Academic staff use multi-media application to prepare instructional materials for effective teaching and learning	350	3.53	0.68	LE
4	Academic staff use only text to access students academic ability notes	350	3.16	0.66	LE
5	Spreadsheet is used to prepare students grade sheet	350	3.06	0.41	LE
6	Teaching and learning of students are enhanced through its dynamic, interactive flexible and engaging content	350	3.07	0.69	LE
7	IT provides visual relief from large amount of text	350	2.89	0.77	LE
8	It motivates learning	350	2.80	0.84	LE
9	Motion film is used in delivering instruction for easy	350	2.78	0.84	LE

	absorption and relation				
10	IT helps in teaching and learning outside the classroom through e-learning	350	2.88	0.84	LE
11	Academic staff use of computer increases their competence in instruction	350	2.90	0.71	LE
12	Academic staff use on screen stimulation to give science students access to greater variety of experiment	350	2.88	0.70	LE
13	Students use tutorial instruction packages as stimulating facilities	350	2.86	0.80	LE
14	Lecturers use Microsoft word to store instructional materials	350	2.94	0.80	LE

The analysis in Table 3 shows that all the fourteen items had their means ranging from 2.86 – 3.53 which are all above 2.50. This indicates that the entire respondents rated the items Large extent on the indentified items. The standard deviation ranged from 0.41 – 0.99 showing that the respondents were not far from one another in their responses and their responses are not far from the mean.

Hypothesis 1: There is no significant difference between the mean responses of school administrators and academic staff with regard to the way IT is used in fostering effective communication among member of staff and students.

Table 4:

Summary of T- Test for Hypothesis One

Group	N	Mean	SD	Df	Total	Sig (2- tailed	
Administrator	15	3.16	0.36	348	0.760	0.44	NS
Academic staff	335	3.07	0.44				

The data in table 4 shows that the probability associated with all calculated value of + -cal (0.760) is 0.448. Since the probability value of 0.448 is greater than the 0.05 level of significances, the null hypothesis is accepted. Hence, there is no significant difference between the mean response of school administrators and academic staff with regard to the ways IT is used in fostering effective communication amount members of staff and students.

Hypothesis 2: There is no significant difference between the mean responses of school administrators and academic staff with regard to the extent student's innovation and creativity is being enhanced through IT.

Table 5:

Summary of T-test for hypothesis two

Group	N	Mean	SD	Df	Total	Sig (2- tailed)	
Administrators	15	3.33	0.43		1.41	0.15	NS
Academic staff	335	2.95	0.47	348			

Table 5 shows that the probability association with the calculated value of t (1. 418) is 0.157. Thus the null hypothesis is accepted. Since the probability value of 0.157 is greater than the 0.05 level of significance. Hence, there is no significant difference between the mean responses of school administrators and academic staff with regard to the extent students' innovation and creativity is being enhanced through IT.

Hypothesis 3: There is no significant difference between the mean responses of school administrators and academic staff with regard to the use of IT in implementing curriculum instruction.

Table 6
Summary of t-test Hypothesis four

Group	N	Mean	Std. deviation	Df	Total	Sig (2-	
Administrator	15	3.31	0.41		2.80	0.005	S
Academic staff	335	2.95	0.49	348			

Table 6 shows that the probability associated with the calculated value of t (2.800) are 0.005. Thus the null hypothesis is not accepted since the probability value of 0.005 is less than the 0.05 level of significance. Hence, there is a significant difference between the mean responses of school administrators and academic staff with regards to the use of IT in implementing curriculum instruction.

Discussion of the Findings

A survey of the available IT facilities for universities administrative activities in Enugu state with the aid of an observational checklist shows that the following are the IT facilities available: computer is present in some schools but not all; internet services are available in few parts of the schools within the state and printers; laptops are available in some offices in the schools.

The analysis of data in table 1 shows that IT helps in fostering effective communication among staff and students in the following ways. Teleconferencing in the delivery of discussion class encourages intrinsic interaction, power point packages are used for presentation during staff workshops; school management uses mobile telephones to communicate parents and Academic staff on school matters, student's academic performance / result were sent to the parent through internet; the feedback to students in online delivery is quicker and more efficient; students use internet to register and pay their schools fees. This finding is in line with Diyoke (2012), findings that the use of IT helps in keeping student's records and other necessary information effectively.

Analysis of the result also reveals that students' innovation and creativity can to a high extent be enhanced through the use of IT. This agreed with Diyoke (2012) who found that students can use spreadsheet to draw graphs in mathematics and as well use internet to do assessment online. By the use of these IT components, the students can learn how to be proficient in plotting of graph and gathering of information on the internet for other academics purposes. Thus, such IT programmes help in increasing the innovation and create ability of the student.

The result shows that IT to a high extent helps in fostering effective communication among the stakeholders. It was found that the use of IT help stakeholders in the following ways; school management use intercom in the communication; school management uses spreadsheet to prepare personnel's duty roster; power point package is used for seminar presentation to staff during worked workshop; school administrations use online payment for lecturer's salaries and allowances, multi-media are used for preparation during newly employee's orientation; Telephone is used to contact the security agencies in time of trouble. Finally, the analysis of the responses on the use of IT by Academic staff in teaching and learning reveals that IT helps in teaching and learning to a high extent.

Conclusion

From the results and discussion of the findings, the researcher concluded that there are few available IT facilities for university administrative activities in Enugu state and that IT is

utilized there to a high extent in effective school administration in several ways including fostering effective communication among the stakeholders and helping lecturers in the teaching and learning of students.

Recommendation

Based on the implication of the study, the following recommendations were made.

1. IT facilities should be adequately supplied to all schools by the government for effective running of the schools.
2. IT facilities should be used for efficient administration of Universities.
3. Adequate time should be given to the study of computer in schools to enable the students acquire the necessary IT knowledge.
4. Regular workshops on the use of IT for teaching and learning should be organized for the lecturers.
5. Curriculum planners can consider the inclusion of IT as general study course in university's curriculum.

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