

**USAGE OF INFORMATION AND COMMUNICATION TECHNOLOGY FOR
INFORMATION ADMINISTRATION IN HIGHER EDUCATION INSTITUTIONS – A
STUDY OF EBONYI STATE UNIVERSITY, ABAKALIKI**

Onele Adali, Ph.D and Nwite Onuma, Ph.D

Abstract

This study has been undertaken to identify the various functional areas to which ICT is deployed for effective school administration and also to find the current level of the usage of ICT in Nigerian higher education. Descriptive survey design was adopted for the study. Proportionate stratified random sampling techniques was used to obtain a sample of 310 comprising of lecturers and Final year students from a population of 6.862. The study utilized 18 item research developed questionnaire structured in a 4 point Likert-scale. The instrument was subjected to face-validation and also tested for reliability and it yielded reliability co-efficient of 0.72 using Cronbach Alpha procedure. Mean and standard deviation were used to answer the research questions while t-test was used in testing the hypothesis. The findings of the study revealed that ICT is occasionally used for student Administration (i.e. student admission). The study went further to reveal that ICT is not used for staff Administration and general Administration. Hence, the study recommends among others that the Government should provide ICT facilities to enable the administration use it for student, staff and general administration so as to compete globally.

Change has been happening at an uneven pace in any growth-oriented industry, and the education sector is no exception. Rapid growth in the field of education has made governance in academic sector a very complex task. The 21st century has witnessed tremendous advancements in technology which has led to far-reaching developments in the Administrative

system. Krishmaveni & Meenukumari (2010) noted that cost-effective technology combined with the flexibility in learning and administrative activities is essential to enhance efficiency. Sinha (2008) mentioned the various administrative challenges for education system of the 21st century as Global and local challenges, balancing between traditional and modern approaches, long term and short term considerations, competition and equity challenges, extraordinary expansion of knowledge.

These challenges appear general to most countries of the world. As a part of strategy, the author mentioned that these challenges could be overcome with the proper usage of technology. Moreover, many studies revealed the need for ICT integration into administrative activities of higher education institutions.

Ben-Zion (1995), pointed out that computer can be used extensively for educational administration. According to him, the following are some of the area where computers can be used for effective educational administration general administration. Pay roll and financial accounting, administration of student, data, inventory management, Personnel records maintenance, library system.

Information and Communication Technology (ICT) plays a vital role in supporting efficient management and administration in education sector. It is specified that technology can be used right from student admission to various resources administration in an education institution (Maki, 2008).

Therefore, Information Administration in this context refers to activities relating to the management of higher education institution. Hence the functional areas of information administration that are of great significance for day to day management of higher education are identified as student administration, staff administration and general administration.

Salerno (2009) outlined the various ways of introducing technology in education institution administration to include sending e-mail notices and agenda to staff, foster technology growth by asking parents to write their e-mail addresses, class web-page should be created, attend technology conference, admission, daily activities and administration should be through web-enabled services.

Rajeev (2008) specified that ICT has played a major role in reducing operational inefficiency and improving decision-making in many areas of governance. According to Maki (2008), administrative subsystems include Personnel, students, resources, financial and general administration.

ULF and Elzbieta (2009) mentioned that communication and general administration are the two main areas in which ICT is used in the managerial effectiveness and efficiency through the use of information and communication technologies.

Ashish and Arun (2005) highlighted on the importance of Information Technology as a modern day techno-management tool that would benefit institutions of higher education. It is also mentioned that usage of ICT in higher education administration involves harnessing technology for better planning, setting standards, effecting challenge and monitoring results of the core functions of universities. One of the key conclusions arrived at is that the integration of ICT in higher education is inevitable (ULF, 2009).

In support, Olive (2006) said that ICT fosters the dissemination of information and knowledge by separating content from its physical location.

Based on the above presentations, it is evident that the integration of ICT into general administration will increase efficiency and optimal resources utilization (Hasan, 2007).

Obeng (2004) observed that in most universities of the third world countries notices and agenda hardly reach all the staff and students as scheduled. He continued by saying that staff are facing challenges of e-communication hence, cannot compete globally when compared with the advanced Nations of the world.

In Ebonyi State University the issue of balancing the long term and short term goals is always hanging. Currently the management is talking of the strategic plan for all the departments, but the workability of this without the use of ICT is what to question. Moreso, in Ebonyi State University, the case of balancing the difference between the traditional and modern approaches of Information Administration appears unaddressed, thereby making the administration of staff and students cumbersome.

Hence, the need to address the extent of usage of ICT for Information Administration in higher education institutions. It is against this backdrop that the research seeks to investigate the level of the usage of ICT for Information Administration in Ebonyi State University, Abakaliki.

Research Questions

The following research questions were formulated to guide the study

1. What are the extent of usage of ICT for students' administration?
2. What are the extent of usage of ICT for staff administration?
3. What are the extent of usage of ICT for general administration?

Hypothesis

The following hypothesis was tested at 0.05 level of significance

Ho₁: There is no significant difference in the mean ratings of students and teachers on the extent of the usage of ICT for Information Administration in Ebonyi State University.

Methodology

Descriptive designs was adopted for the study. Descriptive survey design study seek to portray accurately the characteristics of a population with the attempt to making generalization about the attitude of that population by studying a small part (a sample drawn) from the population (Allen an Earl, 1997).

The population of the study comprised all the 1598 lecturers and 5304 final year (2011/2012 academic session student) of Ebonyi state university (Record Unit, EBSU, Abakaliki) making the total population to be 6862. Proportionate stratified random sampling technique was used to select 245 students and 65 lecturers making a sampling of 310.

The research instrument for the study was a researcher structured questionnaire titled Students and Lecturers Questionnaire on the Usage of ICT for Information Administration (STQUICTIA) developed to collect data for the study with the response mode of used, occasionally used, rarely used and not used. The instrument was face validated by the experts in the Department of Educational Foundations and Measurement and Evaluation. Ebonyi State University, Abakaliki and thereafter tested for reliability using Cronbach Alpha procedure. The reliability co-efficient yielded on Alpha reliability co-efficient of 0.72. The questionnaire was administered, directly on the sampled respondents by the researcher. The research questions were answered using mean score statistics and standard deviation based on 4 point

scale. Items with a mean (0) of 2.5 and above were regarded as used while items that received mean (0) scores less than 2.5 were regarded as not used. The hypothesis was tested using t-test at 0.05 level of significance.

Results

The findings of the study were based on research questions and hypothesis and were presented in tables below:

Table 1: Mean ((0) and Standard Deviation (SD) of Respondents’ Responses on the Usage of ICT for Students Administration

SN	Item	0	SD	Decision
1	Students use electronic media to apply for admissions	3.20	1.08	Used
2	Computers are used for students registration/enrolment	2.28	1.05	Not used
3	There is availability of timetable/class schedule in electronic form	2.01	0.93	Not used
4	Computers are used for the maintenance of students attendance	2.18	0.80	Not used
5	Communication of academic details of students to their parents/guardians is through e-media	2.02	0.79	Not used
6	e-mail is used for notifications regarding hostel accommodation	2.15	0.82	Not used
7	e-mail is used for notification regarding transportation	2.21	0.65	Not used
Grand mean		2.29		Not used

Table 1 shows that one out of seven items indicates a criterion mean above 2.50. while the mean ratings of items 2, 3, 4, 5, 6 and 7 were below the criterion mean of 2.50. It shows that ICT was not used for student administration in higher education institutions. Since the grand mean is 2.29 it implies that ICT was not used for student administration.

Table 2: Mean and Standard Deviation of the Respondents Response on the Usage of ICT for Staff Administration

S/N	Item	\bar{x}	SD	Decision
8	Computers are used for recruitment and work allotment of staff in Ebonyi State university	2.02	0.79	Not Used
9	Automation of attendance and leave management of staff members make use of computer	2.22	0.81	Not used
10	Electronic media is used for performance appraisal	2.06	00.75	Not used
11	Communication with staff is by using e0mail	21.66	0.72	Not used
12	Official matters regarding the institution are by e-circulars	1.66	0.84	Not used
13	e-kiosks are made available in Ebonyi state university	1.69	0.78	Not used
Grand mean		1.89		

From table 2, the mean ratings for all the items (ie. item 8, 9, 10, 11, 12 and 13) were below the criterion mean of 2.50 with grand mean of 1.89. This shows that the respondents exposed that ICT was not used for staff administration in Ebonyi state university.

Table 3: Mean and Standard Deviation of the Respondents on the Use of ICT General Administration

S/N	Item	\bar{x}	SD	Decision
14	e-media was used for schedule// allocation of halls for examination	2.06	0.63	Not Used
15	Dissemination of Information is done through e-kiosks	2.42	0.98	Not used
16	e-media was used by students to apply for university examinations.	2.24	0.68	Not used
17	e-media was used for the processing and displaying of students results	2.00	0.62	Not used
18	Facilities are made available for students to make fee payments electronically	2.04	0.68	Not used
Grand mean		2.15		Not used

Table 3 reveals that items 14, 15, 16, 17 and 18 have mean ratings below the criterion means of 2.50 with the grand mean of 2.15. This shows that the respondents disagree with the fact that ICT was used for general administration in Ebonyi state university.

Usage of Information and Communication Technology for Information Administration in Higher Education Institutions – A Study of Ebonyi State University, Abakaliki

Table 4: Mean, Standard Deviation and T-value Obtained from Students and Teachers on the Extent of the Usage of ICT for Information Administration in Ebonyi State University

S/N	Content Administrative Areas Using ICT	Students	SD	Teachers	SD ₂	t-cal value
1	Students use electronic media to apply for administration	3.48	0.72	3.22	0.74	6.55
2	Computers are used for student registration and enrolment	3.41	0.86	3.27	0.78	1.07
3	There is availability of timetable/class schedule in electronic form.	3.17	0.88	3.08	0.85	0.69
4	Computers are used for maintenance of students attendance	3.00	1.30	3.13	0.85	0.86
5	Communication of academic details of students to their parents/guardians is through e-media	3.11	0.83	3.36	1.94	0.88
6	e-mail used for notifications regarding hostel accommodation	2.87	0.78	3.34	2.52	1.27
7	e-mail is used for notification regarding transportation	3.26	0.99	3.01	0.90	1.40
8	Computers are used for recruitment and work allotment of staff	3.26	0.81	3.28	0.77	0.18
9	Automation of attendance and leave management of staff members make use of computer	3.10	0.86	3.07	0.84	0.36
10	Electronic media is used for performance appraisal	3.14	0.77	3.12	0.90	0.20
11	Communication with staff is by using e-media					3.18 0.69
12	Official matters regarding the institution is by e-circular					2.98 0.67 3.14 0.80 1.72
13	e-kiosks are made available in higher education institutions					3.05 3.04 3.04 0.06
14	e-mail was used for schedule/ allocation of halls for examination					3.00 0.73 3.08 0.74 0.85
15	Dissemination of information is done through e-kiosks.					3.01 0.81 2.95 0.77 0.65
16	E-media was used for the students to apply for university examination					1.06 0.92 2.93 0.76 0.11
17	e-media was used for processing and displaying of students results.					3.44 0.55 3.31 2.44 0.55
18	Facilities are there to make fee payment electronically					3.17 0.80 3.46 3.15 0.91
						t-test value 1.02

Data in table 4 reveals that t-test value of difference between the mean (0) scores of students and lecturers at 308 degree of freedom and at 0.05 level of significance is 1.02. this implies that the t-calculated value (1.02) is less than the t-critical value of 1.96 indicating that there is no significant difference between the responses of the students and lecturers on the extent of the usage of ICT for information Administration in higher education institutions.

Discussion

The findings in table 1 revealed that the respondents maintained that 6 out of the 7 ICT items was not used for students registration/enrolment, timetable/class schedule, maintain students attendance, communicate details of students through e-media, using e-mail for notifications regarding hostel accommodations and transportation. The

findings is in consonance with the finding of Visscher (2001) that school managers do spend time and energy using traditional approach to student administration instead of embracing modern approaches to reduce operational inefficiencies.

Date in table 2 reveals that in all the items (i.e. 8-13), it was reported that ICT was not used for recruitment and work allotment to staff, Automation of attendance and leave management of staff, use of electronic media for performance appraisal and communication as well as the use of e-circular and e-kiosks. The findings are in accordance with the research conducted by Olive (2006) on the usage of ICT in higher institutions of most African countries. According to him the flow of information in higher institutions in African countries cannot integrate into global networks thus making information, and knowledge inaccessible.

Data table 3 shows that 1 out of 5 items maintains that ICT was rarely used for general Administration. That student fee payment are rarely made electronically. This findings is in consonance with Hossein (2008), which proved that ICT provides several facilities and possibilities for educational administrators to do their tasks, especially on financial management. While 4 out of 5 items agreed that e-media was not used for scheduling/allocating halls for examinations, dissemination of information and for processing/displaying of students results. This goes with the opinions of Ashih and Arun (2005) that most higher institutions appear not to be recognizing Information technology as a modern day techno-management tool, hence they cannot grow fast to address the problems of the modern day economy.

The findings should be blamed on the educational administrations' inability to provide ICT facilities and enforce its use right from admission of the students to the recruitment/appointment of the lecturers as well as the day to day activities. The awareness of

these inadequacies are viewed as challenges to educational administrators of state and federal universities. The efficiency of educational administration and the growth of the entire system of education are not assured, if ICT is not used for information Administration.

The results of the hypothesis in table 4 shows that there is no significant difference in the mean responses of students and lecturers on the use of ICT or information administration. This implies that the null hypothesis was accepted, that Ebonyi state university does not embrace the use of ICT for information administration, in order to make a balance between the traditional and modern approaches of administration.

Educational Implications

This study has disclosed that most higher education institutions of the 3rd world countries are yet to fully embrace the use of ICT for students administration, staff administration and other day-to-day activities.

The envisaged paradigm shift from traditional approaches of administration to modern approaches of administration could contribute immensely to arrest the inefficiencies in administrative processes as well as the poor performance of staff and students globally. Therefore, if ICT is fully used for information administration in higher education institutions as (EBSU), the students and lecturers can compete globally and internally and dissemination of information can be more effective and efficient thereby enhancing administrative efficiency and quality.

Conclusion

Based on the findings of the study, it is concluded that ICT was occasionally used for student administration and was not used for staff and general administration. This will result in administrative inefficiency, poor dissemination

of information and inability of the students and lecturers to contest both globally and internally.

Recommendations

Based on the findings of the study, the following recommendations are made:

1. Ebonyi state government should provide facilities for the full usage of ICT for student and staff administration so as to compete both globally and internally.
2. Students and lecturers should embark on training and retaining on the use of computer to enhance dissemination of information by the administrators.
3. Educational administrators should fully embrace the use of ICT in their administrative processes in order to support the business strategies and process and as well as to reduce the problem associated with the creation of large and complex institutions, so as to function with increased efficiency and user-friendliness.

References

- Allen, R. & Earl, B. (1997). *Research methods for social work*. USA: Publishing Company.
- Ashish, R & Arun, k. (2005). It based KM for institutions of higher education: A need . *A Weekly Journal of Association of Indian Universities*. New Delhi India. 43(30), 4
- Ben-Zion, B. (1995). *Information technology in educational management*. London: Chapman and Hall.
- Hasan, J. (2007). ICT reflections annual magazines of the FIK-Centre for information technology, Jamia Millia Islamia. *New Delhi Issue*. Sunday 1st April
- Hossein, S. (2008). Administration of faculties by information communication technology and its obstacles. *International Journal of education and information technologies*. New Delhi 2(1)
- Krishnaveni, K. & Meetnakuma, I. (2010). Usage of ICT for information administration. *International Journal of environmental science and development* 1(3) 282-286
- Mak, C. (2008). Information and communication technology for administration and management for secondary schools in Cyprus. *Journal of online learning and teaching*. 4(3), 280-284
- Obey, K. (2004). *Practical application of ICT to enhance university education in Ghana*. Feature article. Ghana web 2004
- Olive, M. (2006). *ICT usage in higher education*. International Technology Conference. Spain March 9-.11.
- Rajeev, K. (2008). Educational technology research that makes a difference. *Series introduction, contemporary issues in technology and teacher education*. New Delhi 5(2) (Salerno, C(2009). Administrator's Role in technology integration. Education World 2009.
- Sinha, S. (2008). *National policy on ICT in school education*. India: Ministry of Human resource Management
- ULF, F. (2009). *Ways to use ICT in schools to optimize the impact on teaching and learning*. Paper presented at ECER. Vienna Austria 28-30 September.

Onele Adali, Ph.D and Nwite Onuma, Ph.D

Vischer, A. Wild, P & Fung, A (2001).
Information technology administration
UK: Prentice Hall.

Onele Adali, Ph.D
Department of Educational Foundations,
Ebonyi State University,
Abakaliki.

And

Nwite Onuma, Ph.D
Department of Educational Foundations,
Ebonyi State University,
Abakaliki.