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Prof. Nike Yetunde Sidiqat IJAIYA

**Information and Communication Technology for Quality Assurance of Student
Services in University of Ilorin and AI-Hikmah University**

Dr. Olaolu Paul Akinnubi

Department of Educational Management and Counseling
Al-Hikmah University, Ilorin, Kwara State
+2348167659879, akinnubipaul@alhikmah.edu.ng

&

Prof. Afusat Titilayo Alabi

Department of Educational Management
University of Ilorin, Ilorin, Kwara State
+2348033733745, alabiafusat@unilorin.edu.ng

Abstract

The explosion in students enrolment posed to university managers in Kwara State is a great challenge and has made the application of ICTs indispensable for quality assurance of student services. Hence, this study was carried out to examine Information and Communication Technologies for quality assurance of student services in University of Ilorin and Al-Hikmah University Descriptive research design was employed in the study. Three hundred and sixty four participants were selected as sample for the study using Research Advisors (2006). "Information and Communication Technologies for Duality Assurance of Student Services Questionnaire" (ICTQASS) was used to collect data for the study. The instrument was validated and a reliability coefficient of 0.76 was obtained through a pilot study. Two research questions and one research hypothesis guided the conduct of the study Descriptive statistics of percentage and mean ratings were used to answer the research questions raised, while inferential statistic of t-test was used to test the research hypothesis formulated, at 0.05 level of significance. The findings of the study showed that there were ICT facilities for quality assurance services in the institutions. There was high level of implementation of ICT for quality assurance of student services at University of Ilorin

and Al-Hikmah University with means of 1.75 and 1.71, respectively. There was no significant difference in ICT for quality assurance of student services between University of Ilorin and Al-Hikmah University ($p\text{-value} = 0.299 > \text{set } p\text{-value} = 0.05$). Based on the findings of the study, it was recommended, among others, that lecturers should embrace the use of ICT in teaching and, tutorials and group discussion among the students, and be encouraged by the institutions' management to give lectures online.

Keyword: Information and Communication Technologies, Quality Assurance, Student Services, University.

Introduction

Information and Communication Technology (ICT) has become a very crucial source of innovation and improvement in the administration of higher educational institutions. Its application has become increasingly important in adding values to the processes of learning and supporting other activities focused on students and staff. Information and communication technology entails the use of different forms of technologies such as computers, the Internet, multimedia simulations, virtual laboratories, broadcasting technologies (radio and television) and telephony to capture, process and transmit data and information towards improved teaching and learning, and other administrative activities towards students learning such as students admission, registration, accommodation and examination processes.

Quality assurance in the educational system focuses on the improvement of processes and methodologies used to develop educational outcome/products. Quality assurance in higher education includes all policies, measures, planned processes and actions through which the quality that satisfies the stakeholders' needs and demands is maintained and developed.

The increasing complexity and expansion in student enrolments in the Nigerian university system has rendered the old method of student services ineffective. The new method of integrating Information and Communication Technology (ICT) in student services within the university system places the institutions in a better position to meet up with the ever increasing enrolment challenges at a given point in time (Alabi & Akinnubi, 2013), and assure quality in the education process. According to Basri, Alandejani & Almadani (2018), most universities that have fully

adopted ICT have recorded immense advancement in the application of ICT for the improvement of learning methods, teaching, research and development. This study, specifically focused on the use of ICT for students' services of admission/registration, accommodation, instructional delivery, examinations results computation and release.

Literature Review

Concept of ICT

Information and Communication Technology depicts a network which offers a steadily expanding range of new services that have major economic consequences for the standardization of information in the university system. It involves computer-based tools used by the universities in the areas of teaching and learning, research and administrative activities such as admission processing/registration, assessment/examination (CBT), examination results' computation/release and accommodation. It encompasses the computer hardware and software, the network and several other devices, such as audio, video, photography, camera, and the likes that convert information into common digital form (Witson, 2004, Odekunle, 2013 and Toyo, 2017).

Higher education is internationalizing as there have always been students who travelled across national boundaries to attend higher educational institutions in another country today, which is far more profound. There is the new world of virtual education, the wide- spread use of the internet as a source of reference materials, and an increasingly mobile workforce who carry their credentials across boundaries (Watson, 2007). This is the right time for a policy shift from kindergarten to the university. The use of Information and Communication Technology (ICT) in instructional delivery must be made compulsory in higher education (Kpolovie & Awusaku, 2016). Aremu (2002) noted that good curriculum is one which has breath, is balanced, relevant and ensures continuity.

The computer does not only help to ensure these characteristics but to support the variety of aims proposed through the curriculum. Toyo (2017) found out that ICT is an essential concept in the university system that helps to improve student services in the area of admission processing and course registration.

Information and communication technologies offer several opportunities in education. They can be used as a means of preparing the current generation of students for future workforce that is,

providing foods for tomorrow's practices through teachers' use of Communication Technology (ICT). Students can be given the Information and opportunities of becoming a part of the knowledge and skills imparted to the young people in an increasingly complex world. It is not enough to get information and communication technology into the university system without its proper integration in the delivery of quality instruction and administrative activities. Even in advanced countries, knowledge of the potentials of ICT and competence in its use do not guarantee their use with students (Jimoh, 2007 and Akinnubi, 2010).

Several studies have been carried out on the use of ICT for different aspects of university education. A study was carried out by Alabi, Issa and Oyekunle (2012) on the use of CBT for the conduct of examinations at the University of Ilorin. The study found that the planning, implementation and monitoring stages in the use of CBT for post-JAMB screening examinations have been successful but needed to be extended to other general university examinations. Oduma (2014) conducted a study on the role of ICT and quality control in quality assurance of higher education. Among the findings was that ICT increased learners' motivation and engagement. Provision of student services is central to this motivation.

Concept of Quality Assurance

Quality assurance is a process of getting things done right from the beginning. It involves elimination of waste and increase in productivity at a given point in time. Quality assurance in the education system therefore, is an umbrella concept for a lot of activities that are designed to improve the quality of input, process and output of the educational system (Okebukola 2012). Quality assurance in student services will lead to quality in higher education. Admission processing/registration, instructional delivery, assessment/examination (CBT), examination results computation/release and accommodation, among others, are central to student services in the university system at any given point in time.

The structure of the university system in terms of provision of enabling environment, especially in the area of student services could be better achieved through ICT thereby leading to quality graduates that will be self-independent and help in realisation of the nation's goals. Higher education improvement strategies are required to achieve stakeholders' expectation of higher education. It is important to add that decision makers in higher institutions

are beginning to promote educational practices that will lead to the realisation of their institutional objectives and the attainment of the highest level of accountability to stakeholders (Skender, 2018). Availability of computers, modem, internet, Uninterrupted Power Supply (UPS), students' instruction- programmed tablets and other sources of power supply among others will help in ICT-driven university system. Premised on this background, this study explored Information and Communication Technologies for quality assurance of student services, using the University of Ilorin and Al-Hikmah University as case studies.

Purpose of the Study

The main purpose of this study was to assess the use of ICT for quality assurance student services in the University of Ilorin and Al-Hikmah University. Specific purposes were to:

- i. Assess the availability of ICT facilities in University of Ilorin and Al-Hikmah University.
- ii. Determine the level of use of ICT for quality assurance of student services in University of Ilorin and Al-Hikmah University.
- iii. Examine the difference in ICT use for quality assurance of students services between University of Ilorin and Al-Hikmah University.

Research Questions

1. What are the available ICT facilities for quality assurance of student services in University of Ilorin and Al-Hikmah University?
2. What is the level of use of ICT for quality assurance of student services at the University of Ilorin and Al-Hikmah University?

Research Hypothesis

Ho: There is no significant difference in ICT for quality assurance of student services between University of Ilorin and Al-Hikmah University.

Methodology

Descriptive research design was used in the study in order to describe the situations of ICT use for student services as they exist. The population for the study comprised all the 1,283 (Unilorin-1,200 and Al-Hikmah-83) final year students in the Faculties of Education of the two Universities. Two Deans of Education, two Directors of COMSIT/ICT, Librarians, Deans of Student Affairs and Admission Officers also formed part of the population of this study. Furthermore, 364 (Unilorin-291 students, Dean of Faculty of Education, COMSIT Director, Librarian, Dean of Students' Affairs and Admission Officer; Al-Hikmah University-63 students, Dean of Faculty of Education, ICT Director, Librarian, Dean of Students' Affairs and Admission Officer) participants were purposively selected as sample for the study using Research Advisors (2006). Researchers-self designed instrument entitled "Information and Communication Technologies for Quality Assurance of Student Services Questionnaire" (ICTQASSQ) was used to collect necessary data for the study. The instrument was validated by three experts in the areas of Educational Measurement and Evaluation and Educational Management. Reliability of ICTQASSQ was ascertained through a pilot test with a coefficient value of 0.76. Thus, the instrument was adjudged reliable. Copies of the instrument were administered on the participants by the researchers at the two universities. Descriptive statistics of percentage and mean ratings were used to answer the research questions raised, while inferential statistic of t-test was used to test the research hypothesis formulated in the study at 0.05 level of significance.

Results

Answering Research Questions

Research Question One: What are the available ICT facilities in the University of Ilorin and Al-Hikmah University?

Table 1 available ICT facilities in University of Ilorin and Al-Hikmah University**N=364**

S/N	Items	Available		Not Available	
		F	%	F	%
1.	Computers	364	100	-	-
2.	Modem	262	72	102	28
3.	Internet	322	88	42	12
4.	UPS	312	86	52	14
5.	Students' Instruction programmed Tablets	258	71	106	29
6.	Other sources of power supply	349	96	15	4
Average Availability		85.5			

Results in Table 1 indicated that computer (100%), modem (72%), internet (88%), UPS (86%) students' Instruction-programmed tablets (71%), other sources of power supply (96%) and other facilities (84%) are available in University of Ilorin and Al-Hikmah

University. These ICT facilities aid student services thereby driving quality assurance in the university system. Other facilities indicated by the participants included projector CCTV cameras and lecture attendance capturing machine as collated from "Other facilities (please specify)" item of ICTQASSQ.

Table 2
Available ICT facilities in University of Ilorin
N-296

S/N	Items	Available		Not Available	
		F	%	F	%
1.	Computers	296	100	-	-
2.	Modem	210	71	86	29
3.	Internet	260	88	36	12
4.	UPS	262	89	34	11
5.	Students' Instruction programmed Tablets	250	84	46	16
6.	Other sources of power supply	289	97.6	6	2.4
Average Availability		88.3			

As shown in Table 2, computers (100%), modem (71%), internet (88%), UPS (89%), students' Instruction-programmed tablets (84%), other sources of power supply (73% and other facilities (88%) were available in University of Ilorin for the purpose of student services.

Table 3
Available ICT facilities in Al-Hikmah University

N=68

S/N	Items	Available		Not Available	
		F	%	F	%
1.	Computers	68	100	-	-
2.	Modem	52	76	16	24
3.	Internet	62	91	6	9
4.	UPS	50	74	18	26
5.	Students' Instruction programmed Tablets	8	12	60	88
6.	Other sources of power supply	60	88	8	12
Average Availability		73.5			

Based on the results in Table 3, the participants indicated that computers (100%) modem (76%), internet (91%), UPS (74%), students' Instruction-programmed tablets (12%), other sources of power supply (88%) and other facilities (69%) are available in Al-Hikmah University to enhance student services.

Research Question Two: What is the level of ICT use for quality assurance of student services in University of Ilorin and Al-Hikmah University?

Table 4
Level of use of ICT for quality assurance of student services in University of Ilorin and Al-Hikmah University

N=364

S/N	Items	Yes	No	Mean
Admission Processing/Registration				
1	Applicants obtain admission forms online.	364	0	2.00
2	Applicants' credentials are submitted online.	364	0	2.00
3	Admission letter is assessed online.	364	0	2.00
4	Registration for courses is automated for ease of the students.	358	6	1.98
5	All payments are made online during registration.	357	7	1.98
Academic: Instruction, e-Library				
6	Lecturers sometimes give lectures online	54	310	1.15
7	Students have access to the e-library	338	26	1.93
8	Students always use the e-library for reading and completing assignments.	330	34	1.91
9	Tutorials sometimes take place online.	32	332	1.09
10	Group discussions are coordinated by the lecturers online.	86	278	1.24
Assessment/Examination (CBT)				
11	Students' examinations are conducted using Computer Based Testing (CBT)	339	25	1.93
12	Computer appreciation program is organized for students.	143	221	1.39
13	Assignments are submitted online.	260	104	1.71
14	Continuous Assessment Tests are conducted using CBT	274	90	1.75
15	Projects are given to students online.	90	274	1.25
Examination Results Computation/ Release.				
16	Students' results are computed online.	363	1	2.00
17	Students have access to their results online.	364	0	2.00
18	Uploading of students' results online is made easy.	356	8	1.98
19	The internet facility is effective in downloading students' results.	336	28	1.92
20	Students are not allowed to access their results until all payments are made.	347	17	1.05
Accommodation				
21	Students are allocated to rooms online.	330	34	1.91
22	Payment for students' hostel is done online.	364	0	2.00
23	Students are allowed to pick hostel room of their choice online.	291	73	1.80
24	Once the hostel rooms are exhausted, payment for such facility is disabled online.	343	21	1.94
25	Hostel accommodation is not transferable among students.	275	89	1.24
Overall Mean				1.73

Key: Mean: 0.00-0.69 = Low, 0.70-1.39= Moderate, 1.40 and above= High

Table 4 shows that the level of implementation of ICT for quality assurance of student services in University of Ilorin and Al-Hikmah University was high with mean of 1.73. This implies that Admission processing/registration, instruction, e-Library, assessment/examination (CBT), examination results computation/release and accommodation are effectively facilitated by ICT. This further indicates that the environment is conducive for effective teaching and learning process

Table 5

Level of use of ICT for quality assurance of student services in University of Ilorin

N=296

S/N	Items	Yes	No	Mean
Admission Processing/Registration				
1	Applicants obtain admission forms online.	296	0	2.00
2	Applicants' credentials are submitted online.	296	0	2.00
3	Admission letter is assessed online.	296	0	2.00
4	Registration for courses is automated for ease of the students.	292	4	1.99
5	All payments are made online during registration.	296	0	2.00
Academic: Instruction, e-Library				
6	Lecturers sometimes give lectures online	100	196	1.34
7	Students have access to the e-library	280	16	1.95
8	Students always use the e-library for reading and completing assignments.	270	26	1.91
9	Tutorials sometimes take place online.	96	200	1.32
10	Group discussions are coordinated by the lecturers online.	79	217	1.27
Assessment/Examination (CBT)				
11	Students' examinations are conducted using Computer Based Testing (CBT)	279	17	1.94
12	Computer appreciation program is organized for students.	80	216	1.27
13	Assignments are submitted online.	200	96	1.68
14	Continuous Assessment Tests are conducted using CBT	216	80	1.73
15	Projects are given to students online.	80	216	1.27
Examination Results Computation/ Release.				
16	Students' results are computed online.	295	1	2.00
17	Students have access to their results online.	296	0	2.00
18	Uploading of students' results online is made easy.	296	0	2.00
19	The internet facility is effective in downloading students' results.	286	10	1.97
20				

	Students are not allowed to access their results until all payments are made.	286	10	1.03
21	Accommodation	280	16	1.95
22	Students are allocated to rooms online.	296	0	2.00
23	Payment for students' hostel is done online.	286	10	1.97
24	Students are allowed to pick hostel room of their choice online.			
	Once the hostel rooms are exhausted, payment for such facility is disabled online.	294	2	1.99
25	Hostel accommodation is not transferable among students.	269	27	1.09
Overall Mean				1.75

Key: Mean: 0.00-0.69 =Low, 0.70-1.39- moderate, 1.40 and above= high

From Table 5, level of implementation of ICT for quality assurance of student services in University of Ilorin was high with the mean of 1.75.

Table 6

Level of implementation of ICT for quality assurance of student services in Al-Hikmah University

N=68

S/N	Items	Yes	No	Mean
Admission Processing/Registration				
1	Applicants obtain admission forms online.	68	0	2.00
2	Applicants' credentials are submitted online.	68	0	2.00
3	Admission letter is assessed online.	68	0	2.00
4	Registration for courses is automated for ease of the students.	66	2	1.97
5	All payments are made online during registration.	61	7	1.90
Academic: Instruction, e-Library				
6	Lecturers sometimes give lectures online	20	48	1.29
7	Students have access to the e-library	58	10	1.85
8	Students always use the e-library for reading and completing assignments.	60	8	1.88
9	Tutorials sometimes take place online.	55	13	1.81

10	Group discussions are coordinated by the lecturers online.	7	61	1.10
Assessment/Examination (CBT)				
11	Students' examinations are conducted using Computer Based Testing (CBT)	60	8	1.88
12	Computer appreciation program is organized for students.	63	5	1.93
13	Assignments are submitted online.	60	8	1.88
14	Continuous Assessment Tests are conducted using CBT	58	10	1.85
15	Projects are given to students online.	10	58	1.15
Examination Results Computation/ Release.				
16	Students' results are computed online.	68	0	2.00
17	Students have access to their results online.	68	0	2.00
18	Uploading of students' results online is made easy.	60	8	1.88
19	The internet facility is effective in downloading students' results.	50	18	1.74
20	Students are not allowed to access their results until all payments are made.	61	7	1.10
Accommodation				
21	Students are allocated to rooms online.	50	18	1.74
22	Payment for students' hostel is done online.	68	0	2.00
23	Students are allowed to pick hostel room of their choice online.	5	63	1.07
24	Once the hostel rooms are exhausted, payment for such facility is disabled online.	49	19	1.72
25	Hostel accommodation is not transferable among students.	62	6	1.09
Overall Mean				1.71

Key: Mean: 0.00-0.69=Low, 0.70-1.39=moderate, 1.40 and above

As shown in Table 6, the level of implementation of ICT for quality assurance of student services in Al-Hikmah University was high with mean of 1.71.

Hypothesis Testing

Ho: There is no significance difference in ICT use for quality assurance of student services between the University of Ilorin and Al-Hikmah University.

Table 7

ICT for quality assurance of student services in the University of Ilorin and Al-Hikmah University

Variables	N	Mean	SD	DF	Calculated t-value	Sig.	Decision
Unilorin	296	37.37	9.31	362	1.56	.299	Ho Accepted
Al-Hikmah	68	39.34	9.75				

Set p-value – 0.05

Table 7 shows that the t-test p- value (.299) is greater than the set p-value (.05) level of significance and for 362 degrees of freedom. Therefore, the null hypothesis which states that there is no significance difference in ICT for quality assurance of student services between University of Ilorin and Al-Hikmah University was accepted. This implies that there was no significance difference in ICT for quality assurance of student services between University of Ilorin and Al-Hikmah University. The two institutions were aware or the importance of ICT achieving their vision and mission statements and are already using computers, modem, internet, UPS, other sources of power supply and other facilities in the area of student services, for the purpose of quality assurance.

Discussion

The findings from the study show that Information and Communication Technology (ICT) is given necessary attention in the area of student services for quality assurance in University of Ilorin and Al-Hikmah University. This has been made possible with availability of necessary ICT facilities 88.3% and 73.5% for University of Ilorin and Al-Hikmah University respectively. This is an improvement over previous studies (Alabi, 2000; Alabi, Issa Oyekunle 2012; Alabi & Akinnubi, 2013; Oduma, 2014). The university system is statutorily charged with the responsibility of producing graduates that can be ICT compliance, useful to themselves and the society at large. Learning at this level of education could be described as being effective if it results in bringing

about the expected transformation in the attitudes, skills and knowledge of the students over a period of time. To achieve the aforementioned statement, the use of Information and Communication Technology (ICT) for quality assurance in student services remains imperative (Akinnubi, 2010, Oduma (2014) and Adavebiele, 2016). The current final year students of the University of Ilorin were given Instruction- programmed Android and or Windows Tablets which served as instructional aids, which were given last in 2017.

Available literature indicates that integrating ICT in student services is generally positive, leading to radical shift from the traditional/manual approach to a more student- friendly approach (Victor and Figo, 2015, and Toyo, 2017). Kpolovie and Awusaku (2016) submitted that ICTs in teaching is less expensive, enables lessons to be introduced speedily, provide consistent message, and make possible working from any location anytime updating contents easily and quickly, increase learners' retention and management of large group of students.

Lecturers who succeed in making use of ICT in the discharge of their duties do not only contribute to improve learning outcomes in their students, but also benefit personally from enhanced work productivity (Adavebiele, 2016). ICTs are electronic technologies used for accessing, processing, gathering, manipulating and presenting or communicating information within the university system. The students are expected to find the administration of the University easy to get along with it when ICT is integrated into administrative processes. The admission and registration processes are done online, hostel allocation, examination of relatively large groups is conducted through CBT, and results are computed online and can be effectively downloaded by students from their portals. This finding is a manifestation of computerization of schools at all levels suggested as one of the measures towards effective application of computers in educational management (Alabi, 2006).

Conclusion

Computers, modem, internet, UPS, students' Instruction-programmed tablets, sources of power supply, and projector, CCTV camera and lecture attendance capturing machine (given by participants as other available facilities not specified in ICTQASSQ) are available ICT facilities for student services that could enhance quality assurance. The level of use of ICT for quality assurance of student services was high and there was no significant difference in ICT for quality assurance of student services between University of Ilorin and Al-Hikmah University. ICTs of

universities enhance the relevance and quality of learning thereby increasing student motivation, promote change in alt subject areas, improve school management and support data-driven policymaking.

Recommendations

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

- i. Students' Instruction-Programmed Tablets stopped since 2017/2018 academic session should be re-introduced and made available to University of Ilorin students, while A-Hikmah University should complement the computer appreciation program for students with Instructional Tablets, with improved access to the internet.
- ii. Al-Hikmah University should improve on other sources of power supply for quality assurance of student services. The University of Ilorin could also improve, or sustain, the power supply to speed up the ICT-driven programs for students. This could be achieved by extending the power generation at the Administrative Buildings to the faculties and or installing power-generating plants in the faculties.
- iii. Lecturers should embrace the use of ICT for online lectures, group discussions, tutorials and assignments among the students in the University of Ilorin and Al-Hikmah University. Towards this end, lecturers should be encouraged by the institutions' management to give lectures online through improved provision of stable internet facilities and adequate competencies through appropriate training for both lecturers and students.

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