
ASSESSMENT OF UNDERGRADUATES VIEWS ON COMPUTER-BASED EXAMINATIONS IN UNIVERSITY OF ILORIN,
ILORIN, NIGERIA

By

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ABSTRACT

The use of technology has unveiled new learning opportunities within and outside the classroom. Indeed, in Nigeria, Computer Based Examination (CBE) especially through utilization of the internet is widely becoming a delivery alternative. In view of this; this study was carried out to examine undergraduates' views on computer based examinations in University of Ilorin. The study was a descriptive one of the survey type. A stratified random sampling technique was used to select 200 (40 students from each of the five faculties selected). students from five faculties in the university, namely; faculty of education, faculty of art, faculty of engineering, faculty of science and faculty of agriculture. (Data were collected using researchers-designed questionnaire titled "Assessment of Undergraduate Views on Computer Based Examinations in University of Ilorin". Descriptive statistic (percentage) was used to analyze the research data. The result revealed amongst others that basic infrastructural facilities should be made available to intensify the interest and usage of computer based examination as a tool in writing examinations in tertiary institutions. Also, computer training should be organized for undergraduates on appropriate use of computer and accessories. Thus, computer should be made available for both teachers and students to actualize this. Based on the findings, the following recommendations were made; more basic infrastructural facilities should be made available to intensify the interest and usage of computer based examination. In addition, fill -in- the -gap type of questions should be introduced to eliminate or reduce the rate of guessing among undergraduates during examinations, among others.

Keywords: *Assessment, views and Computer based examinations*

INTRODUCTION

The worthy of learning experiences in education is recognized if the subject matter is controlled and administered through the means of achieving meaningful and productive learning outcomes. The world is now a global village, as a result of development in Information and Communication Technology (ICT). The key

instrument to the globalization is computer. Computer mediated Communication is increasingly becoming the fact of everyday life, particularly in the developed and some developing countries. Olafare (2011) noted that information communication technology has changed how people live, work and play. Computer performs

multifunctional roles in teaching and learning processes at all levels.

Thus, Innovative technology helps students improve their literacy and numeracy skills and to recognize their existing abilities. It also encourages both independent and collaborative learning experiences and helps learners identify areas where they need assistance and support. Learners can complete their education from any location as long as they have access to the learning materials, possible through a wireless connection because learners can access the learning materials anytime, they can select the time they learn best to complete their coursework. This increases the success rate in learning, and facilitates informal learning (Zurita & Nussabaum, 2007).

There are two major methods of examining the ability of learners in school setting, starting from manual means of using paper and pencil to electronic. However, the present information technology means of examining students is the use of electronic systems in place of manual or paper method which is characterized by massive examination leakages, impersonations, demand for gratification by teachers, bribe-taking by supervisors and invigilators of examinations (Olawale & Shafi'l, nd).

One of the latest media which technology has brought to the environment, which is also causing a revolution in the society, is the computer. The knowledge of computer has been found to be very useful in all aspects of human life: art, engineering, communication, medicine and a host of others. In the field of education, computer has served as useful tool in administrative and instructional process and as a tool for effective teaching and learning. Ayo (2007) pointed out that the electronic examination system involves the conduct of

examinations through the web or the intranet and it reduces the large proportion of workload on examination, training, grading, and reviewing. The set of questions often used in the e-examination system are multiple choice objective tests and quizzes that can be easily evaluated online.

Yusuf (2011) opines that computer technology has had a deep impact on the education sector. Due to computers, imparting education has become easier and much more interesting than before. Owing to memory capacities of computers, large chunks of data can be stored in them. Networked computers aid quick communication and enable web access. Storing documents on computers in the form of soft copies instead of hard ones helps save paper.

There has been a remarkable increase in the potential of computers, which influenced an increase in various form of computer based instruction. Electronic examination has been highly interesting and suitable in both educational and pedagogical aspects. Examination is one of the best methods of evaluating the knowledge and ability of an individual (Olawale & Shafi'l, nd). The CBE is regarded as a paper-less process by which tests and assessments are taken and scored using personal computer workstations, thereby eradicating issues of leakage of examination questions and collusion between the candidates and those charged with the responsibilities of conducting and administering the examinations; as well as impersonation (Olafare, 2011).

Computer-Based Assessment (CBA), also known as Computer-Based Testing (CBT), e-assessment, computerized testing and computer-administered testing, is a method of administering tests in which the responses are electronically recorded, assessed, or both (Olafare, 2011). As the name implies, Computer-Based Assessment makes use of a computer or an equivalent electronic device such as a cell

phone or PDA. CBA systems enable educators and trainers to author, schedule, deliver, and report on surveys, quizzes, tests and exams.

Pearson Educational Measurement (2002) stated that the general advantages of Computer Based Assessment (CBA) systems over traditional paper-and-pencil testing (PPT) have been demonstrated in several comparative works. These include: increased delivery, administration and scoring efficiency; reduced costs for many elements of the testing lifecycle; improved test security resulting from electronic transmission and encryption; consistency and reliability; faster and more controlled test revision process with shorter response time; faster decision-making as the result of immediate scoring and reporting; unbiased test administration and scoring, among others.

No matter what the examinations' population size is, CBE helps test developers to set the same test conditions for all participants. It also improves all aspects of test security by storing questions and responses in encrypted databases and enables testers to create randomized questions and answers from vast question pools. Moreover, offering different test formats and the immediate presentation of different types of feedback, either to students or testers, are other great advantages of CBE. Collecting different performance data such as latency information is a unique feature of CBT (Olsen, 1989).

PURPOSE OF THE STUDY

The study sought to examine the views of undergraduates on computer based examinations in University of Ilorin, Ilorin, Nigeria. Specifically, the study:

1. Assessed undergraduates' views on awareness programme on the use of computer for examinations

2. Assessed undergraduates' views on the technical difficulties encountered by students during their Computer Based Examination.
3. Find out the undergraduates' views on the state of the CBE.

RESEARCH QUESTIONS

Answers were sought to the following questions:

What are undergraduates' views on awareness programme on the use of computer for examinations?

1. What are the technical difficulties encountered by the undergraduates during their Computer Based Examination?
2. What are the undergraduate's views on the status of the Computer Based Examination?

METHODOLOGY

The population for this research consisted of all the undergraduate students of University of Ilorin, Ilorin, Nigeria. Forty (40) students in 200 level were purposively selected from each of the five selected faculties in the university. The instrument for this study was a researchers- designed questionnaire with the title "Undergraduates views on computer based examinations in university of Ilorin". The questionnaire comprised two (2) sections; Section A and B. section A focused on demographic information of students. Section B comprised three parts; part I contained a list of 10 items, which allowed the researchers to respond to the views on awareness of students in the use of Computer as a tool in writing examinations. Part II consisted 12 items, which allowed students to show their views on the technical difficulties the students experience during the CBE and part III consisted of 11 items which allowed researchers to know the students'

views on the status of CBE for their semester performances. The items on the three parts were scored on "YES" or "NO" basis. Mean and percentage were used to analyze the data.

Data obtained with respect to research questions were analyzed using mean and percentage.

RESULTS

This section presents the analysis and interpretation of data collected for this study.

Research Question 1: What are undergraduates' views on awareness programme on the use of computer for examinations?

S/N	ITEMS	YES (%)					NO (%)				
		FACULTIES					FACULTIES				
		SCL.	AGRIC	ENGR.	EDU.	ART	SCL.	AGRIC	ENGR.	EDU.	ART
1.	I have not heard about Computer before.	10	12	22	20	18	3	4	6	3	2
2.	The use of Computer to write exams is new to me.	13	20	20.5	10	10	6	10	4	5	1.5
3.	Am comfortable using Computer to write examination.	15.5	15	10	8	17	12	8	6	5	3.5
4.	Undergraduates need to be aware of Computer in writing examination	29	15	25	16	4	2	3	3	2	1
5.	There is a little or no access to Computer in the school.	17	9	11	18	12	9	6	6	7	5
6.	Undergraduates have been given opportunities to learn to integrate Computers into their classroom practice.	5.5	10	20	5	10	15	10	9	11	4.5
7.	There is adequate training experience for the undergraduates in the use of Computer in the institution.	13.5	8	12	14	6.5	5	15	10	10	6

8.	The Government supplies computer and its accessories to the school for helping students enhance their skills.	12	10	7	13	10	12	8	11	9	8
9.	The institution has a teacher who specializes in Computer training.	9	19	13	14	3	11	9	12	8	2

Results on the awareness of the undergraduates' views on the use of computer to write examination across the selected faculties are as follows. The number of respondents was 200 in all. 82% had heard about computer before which made it easier for them to integrate the use of pen-paper examination to computer-based examination. 73.5% indicated that the use of computer to write examination is not new to them, which had helped promoting the use of computer based examination. 65.5% indicated that the undergraduates were comfortable using computer to write examinations. 89% indicated that the undergraduates need to be aware of computer as a tool in writing examination through seminars and workshops, thereby increasing their knowledge and capabilities.

Thus, 67% showed that there was little or no access to computer prior to examinations in the institution, which means the undergraduates were unable to handle the computer and its accessories prior to the examinations for efficiency and effectiveness. 50.5% indicated that undergraduates had not been given opportunities to learn to integrate computers into the classroom practice, which may have hampered them in effectively using the computer to write examination. 53.5% showed that there had not been adequate training experience given to the undergraduates in the use

of computer in the institution. 52% agreed that there was a limited supply of computer and its accessories to the institution compared to the population of students, to help enhance their skills on the use of CBT. 58% believed that the institution had teachers who specialized in Computer training.

Research Question 2: What are the technical difficulties encountered by the undergraduates during their Computer Based Examination?

S/N	ITEMS	YES (%)					NO (%)				
		FACULTIES					FACULTIES				
		SCI.	AGRIC	ENGR.	EDU.	ART	SCI.	AGRIC	ENGR.	EDU.	ART
1	I have experienced system shutdown during my CBT examination	11	13	10	6	16	12	8	8	7	9
2	I have encountered network problem during my CBT examinations.	11.5	8	12	17	14	9	8	8	7	5.5
3	I have encountered power failure which affected my answers in one of my examinations.	12.5	8	15	10	16	12	8	7	3	8.5
4	I have experienced Incomplete questions in one of my examinations.	10	9	12	16	12	11	8	9	6	7
5	I have difficulty in handling the mouse and keyboard.	10	14	19	20.5	14	5	3	6	4	4.5
6	I have experienced writing the same examination more than one time.	13.5	7	11	8	14	13	8	7	6.5	12
7	I have insufficient time to answer all questions.	14	16	12	14	15	6	7	5	3	8

The result of the study revealed that 56% of the undergraduates experienced system shutdown during one or more of their examinations. This means that there had been delayed, system malfunction and viruses that

might have affected some of the computer systems. It was also observed that 62.5% had encountered network problem during one of their examinations which could have caused; inability to submit their answers, delay and missing results

.61.5% observed that there had been constant supply of electricity which enabled the CBE staff to organize their programme or schedule effectively.

Furthermore, 59% of the undergraduates had experienced incomplete questions in one or more of their examinations and this had caused failure, poor results, frustration and loss of confidence among the students. 77.5% were capable of handling the mouse efficiently and effectively which means clicking a particular option was a not a problem. More so, 52.5% had experienced writing the same

examination more than one time. This could have been caused by network problem, sudden system shutdown. 53.5% agreed that the CBT staff took time to look into their complaint during one of their examinations. Besides, 71% complained of insufficient time to complete their questions during one of their examinations. This could be caused by inability to click an answer on time, system hanging, and network problem.

Research Question 3: What are the undergraduate's views on the status of the Computer Based Examination?

S/N	ITEMS	YES (%) FACULTIES					NO (%) FACULTIES				
		SCI.	AGRIC	ENGR.	EDU.	ART	AGRIC	ENGR.	EDU.	ART	
1.	CBT is too complex for evaluating undergraduates' performance.	11	9	8	11	12	8	12	15	8	6
2.	The CBT staff and personnel need orientation programmes and periodical training.	10	20	30	12	9	4	3	6	3	3
3.	I do not perceive any advantage in the use of CBT.	15.5	10	15	10	5	13	3	9	12.5	7
4.	I am not interested in the use of CBT for examination.	6.5	20	10	10	10	12	4	9	10	8.5
5.	The use of CBT has enhanced improvement in undergraduates' academic performance.	14.5	30	20	5	5	7	6	5	4	3.5
6.	The CBT have been fair with my result.	11	25	5	20	20	5	3	4	3	4
7.	The use of CBT in assessing undergraduates' performance is frustrating their classroom practice.	7	20	20	15	15	5	4	3	5	6

The result of the study revealed that 51% viewed CBE as a complex tool for evaluating their performance. 81% agreed that the CBE staff need periodical orientation training and workshops to enable them be vast and current on the use of computer for examinations. More so, 55.5% were not interested in the use of Computer for examinations. Yet, 56.5% admitted that CBE centre has been fair in the release of their result.74.5% believed that CBT was not a

correct method of assessing their academic performances. Likewise, 81% submitted that CBT was not a good way of judging students' performances since it allowed for guessing.

Conclusively, 77% believed wrong options were programmed for the right answers. This could have occurred when the CBE staff encountered boredom, tiredness and pressure during programming of the options. Likewise wrong personnel who did not have adequate

experience in the related field (computer programming, web development) might have caused wrong coding of the options.

SUMMARY OF MAJOR FINDINGS

Based on the analysis of responses of the students, it was revealed that:

1. Undergraduates need to be aware of computer as a tool in writing examination and that it has come to stay in the country. They should thereby be encouraged through mandatory attendance and participations in seminars and workshop and periodical training programmes.
2. The government had failed in the supply of computer and its accessories to the institutions that could help undergraduates to operate computer adequately and effectively.
3. Sudden system shutdown, network problems and power failure had affected undergraduates' answers, questions and submission of their answers.
4. There had been several complaints on missing results which could have emanated from system error, network issues and power failure.
5. Language construction is not in any way enhanced through CBE, so undergraduates find it difficult to express themselves in simple English.
6. Most questions were incomplete and wrong option was programmed for the right answer.

DISCUSSION

The study on CBE has revealed important information about ICT innovation which had implications for University of Ilorin and other universities. Pearson Educational Measurement

(2002) emphasized the technological issues involving computer interface legibility (such as screen size and resolution, font characteristic, line length) and user interface (such as scrolling to locate reading, permission for item review and how to present the items—one a time or several a time).

The result agreed with the findings of Bocij and Greasley (2003) who compared PPT and CBT formats and found that students felt CBTs were faster because they did not have to spend time clicking their responses. Most of the students were comfortable using computer to write examinations which revealed the interest of the students in the continuation of the examination. From this research, it is seen that undergraduates had not been given opportunities to learn to integrate computers in their classrooms.

Undergraduates need to be aware of the fact that computer as a tool in writing examination has come to stay. Thus, seminars, workshops and periodical training programmes are necessary for better achievement. Language construction is not in any way enhanced through CBE, so undergraduates find it difficult to express themselves in simple English.

The results also emphasized the need for proper reshaping of the state of the CBE system. Therefore, a call for improvement by staff and personnel is necessary. More quality and qualified persons that can give students the assistance and encouragement needed would have to be recruited. More so, the issues of insufficient time and missing results should be given immediate attention in order to get the best out of the university undergraduates. There had been several complaints on missing results which could have resulted from system error, network issues and/or power failure. From this research, the CBE has helped to reduce the rate of

malpractices compared to pen-paper examination.

RECOMMENDATIONS

Based on the findings of this study, the following recommendations were made:

1. Basic infrastructural facilities should be made available to intensify the interest and usage of computer based examination as a tool in writing examinations in tertiary institutions.
2. Computer training should be organized for undergraduates on appropriate use of computer and accessories. Thus computer should be made available for both teachers and students to actualize this.
3. A confirmatory message (like SMS) should be sent to each student immediately after each examination as evidence that their answers have been submitted successfully and they have results. This will reduce or eliminate missing results.
4. More CBT centers should be constructed and put in place so as to reduce the stress and difficulties encountered by each undergraduate during the course of writing the examination.
5. There should be periodical check and balances of all the computer systems to be used for the examination. This will help to reduce the problem of network issues, sudden system shutdown and mouse malfunction.

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