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Keywords: electronic examination, examination malpractices, information and communication technology, perception.

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Perception of Electronic Examination among Undergraduate Students of University of Maiduguri

Mohammed Auwal Umar [α] & Fredrick Wilson [σ]

Abstract- The study was conducted to measure the perception of electronic examination among undergraduate students of University of Maiduguri. It was orchestrated on three specific objectives; to find out the perception of the students regarding the introduction of e-exam; to examine the perception of the students regarding e-exam as means of assessment; to examine the negative and positive perception of the students regarding the appropriateness of facilities, timing and format of question. The study employed the propositions of Technology Acceptance Model (TAM) to explain students' knowledge, acceptance and perception. The research used quantitative research method and survey methodology, using Questionnaire as instruments for data collection. The study purposely selected 200 students and found that majority of the students believe e-examination is better than the pen-paper examination. Majority of the students perceive electronic examination as an easy process. The study also found that the electronic examination is not suitable for every course to majority of the students. Majority of the respondents are against the format of the questions being asked via electronic examination. The study concluded that the introduction of e-examination in University of Maiduguri was a success despite having few challenges. The students perceived the new system as better means of assessment than pen-paper, even though they expressed dissatisfaction with the format of questions, examination timing and its suitability for some courses. It was recommended that the University of Maiduguri need to review the implementation of the new examination system in order to examine its suitability to all courses. Technical failures and limitation should be checked to improve effectiveness of the conduct of the examinations.

Keywords: electronic examination, examination malpractices, information and communication technology, perception.

I. Introduction

Examination is a method used in schools and other non-school setting for measurement and evaluation of performance after a lesson, lecture, and session or for the purpose of recruitment. Academically, it occurs at the end of semester, term or session in order to evaluate the performance of pupils or students. Regardless of primary, secondary or tertiary institution, every student is subjected to examination after a successful completion of semester or term studies. During the examination period, halls are prepared, examination questions are set and invigilators oversee the smooth conduct of the examinations at designated venues.

Overtime, examination pattern changes due to improvement in research and importation of technologies. In the olden days, examination questions are handwritten then typed (using typewriter) before administering on the candidates. This is now an old fashion with the advent of computer system that takes less time to produce examination questions with higher quality. Progressively, after several testing using computer network, applications and other facilities, electronic examination was introduced. This is referred to as e-exam. The e-exam is a form of e-assessment which is timed, scheduled, supervised and assessed using computer systems and programmed application and operating system. However, the electronic examination provides ground for ease of marking, saves time and reduced logistical engagement and waste of resources such as pen, papers, booklets etc. Central to the emergence and development of e-exam was driven by Information and Communication Technologies (ICTs)

According to Mathew, Joro and Manasseh (2015) the field of education has been affected by ICTs which have undoubtedly affected teaching, learning and research. As maintained by Yusuf & Umar (2018) ICTs have potential to accelerate, enrich and deepen skills to motivate and engage students to help relate school experience to work practice as well as strengthening teaching and learning and helping school change. Without misconstruing the concept, ICT is a modern pillar of development in education sector. ICT is a compound of various technologies for enhancing communication and access to information. For instance, computer education is essential for an individual to be able to access and apply information.

In a more recent development, ICTs in the education sector have been incorporated into measurement and evaluation. For instance, in Nigeria institutions education and agencies related to the Ministry of Education have hugely explored the use of ICT in their operations. From the transfer of JAMB (Joint Admission and Matriculation Board) examinations to E-Examinations and ratings, up to the universities' adoption of ICT for E-Examination; ICTs have been the

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reliable tools. The introduction of Electronic Examinations (E-Exams) across various institutions of higher learning has generated huge and diverse response from expert as well as people affected in the system such as teachers and students. Thus, this paper picked a firm interest in conducting an empirical study to examine the knowledge, acceptance and perceptions of affected students toward new introduced examination pattern.

II. Statement of the Problem

Most often than not, the acceptance of newly introduced initiatives is highly attached to direction of perception and lack of awareness while the issue of sustainability is linked to lack of preparedness and inability to ensure invented initiatives are maintained. In 2018, Daily Trust published an article which contained that "University of Maiduguri is one of the schools in Nigeria that has introduced Electronic Exam (e-exam); a computer-based test where students are electronically examined via a computer and a standardized operating system instead of the traditional pen-to-paper exams". The development was greeted with mixed reactions. Considering the arguments above, every technological importation into Nigerian system requires examination of its acceptance and perceptions around it. Available literature shows a gap in knowledge regarding the examination of perception of students about E-examination as a new pattern of examination in University of Maiduguri; a gap which this paper tries to fill.

III. Objectives of the Study

The general objective of the study is to examine the perceptions of the University of Maiduguri students regarding the newly introduced Electronic Examination system in the institution. In order to achieve the general objective, three specific objectives were formulated. Thus;

i. To find out the perception of the students regarding the introduction of e-exam.
ii. To examine the perception of the students regarding e-exam as means of assessment.
iii. To examine the negative and positive perception of the students regarding the appropriateness of facilities, timing and format of question.

Research Questions

i. What are the perceptions of the students regarding the introduction of e-exam?
ii. What are the perceptions of the students regarding e-exam as means of assessment?
iii. What are negative and positive perception of the students regarding the appropriateness of facilities, timing and format of question?

IV. Significance of the Study

The outcome of the study will serve important benefit to the University in trying to adjust the E-exam system permanently into the varsity. Results from the assessment of the students' knowledge of the E-exam will provide the varsity with insight into the level of preparedness of the students with respect to awareness and knowledge of the use of ICTs used for taking the E-exams.

On the other hand, the result from the level of acceptance will provide policy makers of the varsity with an evaluation of their policy which in return will enable them adjust the policy to the most suitable spot. Results from the examination of perceptions will direct the attention of the university's Senate to stage awareness campaign through its committees to clear the grey areas and negative perception of the students towards the new development. This is to forestall the possibilities of negative impact on results of the students conducted through E-exam system.

V. Scope and Limitations of the Study

The study grounded its root in measuring the nature of perception towards the introduction of Electronic Examination (E-Exam) in University of Maiduguri. There are other dependent variables (knowledge and acceptance) which are interrelated in the aspect of diffusion and technological acceptance model. The level of knowledge and acquaintance to technology influence the speed of acceptance. The array of acceptance is also determined by the nature of perception of technology in a particular country, state, community or locale. To this end, the study chose to cover the perception aspect because it is the independent variable that triangulates relationship in this respect. The study is limited to University of Maiduguri because of scarce resources.

VI. Literature Review

It is very important to note that assessment is an integral part of learning whose measurement is challenging (Naveed, Imran and Kashif, 2009). However, assessing student to measure the quality of learning is fascinating and important affair that crave meticulous approach. The pen-to-paper system of assessing students has overtime been the reliable parameter used for measurement and evaluation in education systems in Nigeria at primary, secondary and tertiary levels. There has been a public outcry over the conduct, authenticity and reliability of public examinations in Nigeria. In response to these complaints, the Joint Admission and Matriculation Board (JAMB) introduced a full scale computer-based test (CBT) in the 2015 Unified Tertiary Matriculation Examination (UTME) to eliminate examination malpractice and to facilitate examination

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registration and prompt release of result. The advancement in information and communication technology informed a viable decision to shift to online assessment system in order to dribble the challenges staged by the manual system. The introduction of online assessment popularly known as e-exam has drawn the attention of many.

According to Zubairu, Oyefolahan, Etuk and Babakano (2018) online assessment is gaining popularity and acceptance by many examination bodies and higher institutions of learning. Researchers took to their deck and conducted various researches to ascertain the feasibility, importance, acceptability and the possible challenges the system might encounter. This part of the paper reviews such researches and compiled a compendium from chunk of their findings.

According to Ndunagu (2014) "Electronic Examination is a product of Information and Communication Technology that was developed to solve problems and limitation confronting the process and procedure of conducting paper examinations". He outlined the problems to include; High cost of conducting the examinations, examination leakages, missing result, lack of flexibility of examinations, long period of retrieval of results and so much more problems that give the examiners and students night mare. These problems have militated against advancement in print examination and often tamper with its credibility. On these bases, he conducted a study towards improving the standard and quality of education in Nigeria in order to restore students' confidence and eliminate the loop holes that allow malpractices to thrive in the University system. The findings of his study showed that the level of examinations conducted electronically have impact on the quality of students produced in Nigeria Universities. It was also found that the advent and access to internet has brought about a significant increase in the quality of students produced in Nigeria Universities. He argued that the main successes achieved against examination malpractices are mainly due to the introduction of electronic examination. In conclusion, the researcher puts that the Electronic Examination is the way forward for educational Institution in Nigeria.

Osang (2012) conducted a study to examine how the adoption of electronic examination have assisted National Open University of Nigeria (NOUN) in the evaluation phase of students study circle as well as the architecture for electronic examination as implemented by NOUN, which can be used by any other ODL institution. The study focused on the perception of the Academic Staff on e-examinations since Lecturers' perceptions of technology have great influence on the acceptability of the technology (Fabry and Higgs, 1997; Keller and Cernerud, 2002; Murphy and Greenwood, 1998; Samuel and Bakar, 2006). The study found that 81.9% of the Lecturers are computer literate, while the remaining 28.4% are still getting use to basic computer usage skills which implies that most academic staff (lecturers) employed by National Open University of Nigeria are computer literate hence should appreciate e-exams. It was also found that 63% of the Lecturers found maple ta (the software used) quite challenging while 47.3% found it very easy with time after training which implies that more can still be done to make the e-exam platform more user friendly for the Lecturers.

Oduntan and Ojuawo (2018) studied the conduct of examination using an electronic approach. This involves the development of an electronic examination system using the Client –Server approach on an intranet environment to cater for questions presented in multiple choices multiple answers and multiple choice single answers. The study comparatively analysed data on students score from the paper pencil test (PPT) and the electronic examination system (EES). It was found that students' performance in the computer based test is better than the performances in the paper pencil test.

Adebayo, Abdulhamid & Fluck (2014) compares the e-Examination system in Nigeria with that of Australia. They considered the experiences of working with commercial firms such as Electronic Testing Company (eTC) and using open-source software. This is because according to them it is vital to advance good relationships with accreditation authorities (such as University Authorities, West African Examination Council (WAEC), Joint Admissions and Matriculation Board (JAMB) etc. and the Tasmanian Qualifications Authority) to assist in the transition from paper based assessment to post-paper assessment. Their study took into cognisance the relative convenience for students, administrators and lecturer/assessors; and to gauges the reliability and security of the two systems in use. It examines the challenges in conducting e-Examinations in both countries by juxtaposing the systems in the two countries and suggests ways of developing more acceptable e-Examination systems.

Their result showed that shows that both systems are becoming accepted as part of assessment in their individual countries. In Nigeria, there is evidence of widespread systemic adoption for university entrance merit selection, whilst in Australia this has been confined to one subject in one state. Within undergraduate courses, the Nigerian experience appears to be quite extensive in one university (all first year courses), while in Australia this adoption has been slower but has penetrated a wide variety of disciplines (Adebayo, Abdulh amid & Fluck, 2014). In another comparison of the nature of the assessment, they found that the Nigerian case study shows candidates are limited to selecting from a list of prepared answers to each question. This allows automatic marking and provides an extremely fast turnaround time for assessment results. The Australian technology supports essays

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(marked conventionally by a human assessor) and sophisticated software use within the identical operating system environment for all candidates (Adebayo, Abdulh amid & Fluck, 2014).

In another aspect, Ayo, Akinyemi, Adebiyi and Ekong (2007) conducted a study on the prospect of e-examination implementation in Nigeria. Their study was motivated by the massive examination leakages, demand for gratification by teachers, bribe-taking by supervisors and invigilators of examinations which has resulted to general fallen standards of education of many country which Nigeria inclusive. Consequently, Nigerian universities have resorted to conducting post-entrance "Post-JAMB" examination/screening because of lack of confidence in the conduct of the entrance examinations. The study administered questionnaire on students and the result revealed that the system has the potentials to eliminate some of the problems that are associated with the traditional methods of examination such as impersonation and other forms of examination malpractices. They proposed a model which is easy to use and candidates can get use to it with time. The timing of examination can be spaced without compromising the quality and integrity of the examination.

Egbe (2014) examined the attitude of students towards e-learning in selected south-west Nigerian universities. It looked at the relationship between attitude and e-learning with the application of Technology Acceptance Model (TAM). Questionnaire was used to collect data from a sample of 387 postgraduate and undergraduate students. The study found that students have a positive attitude towards e-learning because they find the system easy to use and useful for their course work. Also, attitude influences the intention to use an e-learning system.

However, Anene (2016) conducted a study which empirically assessed student's perception of Joint Admission and Matriculation Board (JAMB) Computer Based Examination in Nnamdi Azikiwe University, Awka, Anambra state, Nigeria. The study was orchestrated on five objectives. The study found that students general perceived Joint Admission and Matriculation Board computer based examination as a concrete and rewarding experience and also computer based examination as enjoyable than paper based examination. The study also revealed that poor computer literacy affect students" perception on computer based examination and lack of a well designed examination instruction on the use of computer based examination. Based on these findings it was concluded that the management of Joint Admission and Matriculation Board should take into cognizance the perception of students towards computer based examination for full operational of the innovative techniques in Nigeria. It was recommended that students should be encouraged to improve their computer literacy so as to enhance their flexibility during the Joint Admission and Matriculation Board computer based examination.

There are also pending issues with the introduction of the e-examination system. To this end, Onyibe, Juliana, Abdulh akim (2015) examines the challenges militating against CBT in Nigeria and the prospects of full adoption of CBT in all public examinations in the country. Secondary data sources including relevant journals, conference papers, and internet resource materials among others were mainly used for the study. Several challenges were identified, but the chief among them is gross inadequacy of ICT infrastructure in the country. The prospects of CBT in Nigeria were found to be very high owing to JAMB, Nigeria Immigration Service (NIS), and other key government agencies' acceptance of CBT for public examination. They argued against building of one CBT centre per local government area as being planned by federal government, rather recommends that at least four (4) government owned standard CBT centres should be built and equipped in each of the 774 local government areas to facilitate seamless transition from paper and pencil test (PPT) to CBT.

VII. Theoretical Framework

The study employed the propositions of Technology Acceptance Model (TAM) to explain students' knowledge, acceptance and perception. Technology Acceptance Model (TAM) has two major constructs: perceived usefulness (PU) and perceived ease of use (PEOU) (Egbe, 2014). TAM has been widely used to predict user acceptance and use, based on perceived usefulness and ease of use. Davis and Davis (1989) developed TAM by tailoring the Theory of Reasoned Action (TRA) (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975), to understand the causal chain linking external variables to IT usage intention and actual use in a workplace. Abbad (2009) stated that the model was developed under contract with IBM Canada Ltd. in the mid-1980s where it was used to evaluate the market potential for a variety of then-emerging PC-based applications in the area of multimedia, image processing, and pen-based computing in order to guide investments in new product development. According to the TAM, PU and PE are primary motivational factors for accepting and using new technologies (Egbe, 2014). The relevancy of the theory is that it explained the factors that lead to the acceptance of technologies. These factors include perception toward the invented technology which is often driven by the nature of knowledge or prior awareness about the innovation. This serves as important pillar that explain knowledge, acceptance and perception.

VIII. Methodology of the Study

The research used quantitative research method and survey methodology, using Questionnaire

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as instruments for data collection. This was done to pave way for collecting adequate information to serve the thirst of the study and give opportunity for large human population like this one to be properly studied. A questionnaire consisting of closed and open ended questions would be employed for the quantitative approach to this study. The questionnaire will be divided into two sections: section 1 will elicit information from the respondents' demography and socio-economic needs. Sections 2 will focus on finding out the perception of the students about electronic examination.

The study purposely selected 220 students. The parameter for the selection are; being student of the university, affected by the e-examination system and sat for e-examination. The breakdown of the selection thus; 44 students from each Faculties of Social Sciences, Faculty of Art, Faculty of Sciences, Faculty of Education And Faculty of Agriculture were selected. The copies of the questionnaires were personally administered by the researchers.

IX. Data Presentation and Analysis

Data were obtained from self administered questionnaires. A total of 220 questionnaires were distributed. However, 215 questionnaires were retrieved and 200 were found usable for this study and met the required inclusion criteria. The success was achieved because of the curiosity and determination of the students to participate in the study because of how the issues had affected them. The data presentation will take the sections that directly answer research questions and analyse them. Thus;

Section 1: Demographic Data of the Respondents

Table 1: Gender of the respondents

S/N	Response	Frequency	Percentage
1	Male	120	60%
2	Female	80	40%
3	Others	0	0%
Total		200	100.00%

Source: Field Study, 2019.

The table above presents the gender distribution of the total respondents. It shows that 120(60%) of the respondents are male while 80(40%) of the respondents are female.

Table 2: Age Distribution

S/N	Response	Frequency	Percentage
1	18- 25	101	50.5%
2	26- 35	68	34%
3	36-45	24	12%
4	46 years and above	7	3.5%
Total		200	100.00%

Source: Field Study, 2019.

The table above contained the age distribution of the respondents which shows that 101(50.5%) of the respondents aged between 18-25 years, 68(34%) of the respondents aged between 26-35 years, 24(12%) of the respondents aged 36-45 years while 7(3.5%) of the respondents aged 46 years and above.

Table 3: Marital Status

S/N	Response	Frequency	Percentage
1	Married	34	17%
2	Single	160	80%
3	Divorced	6	3%
4	Others	0	0
Total		200	100.00%

Source: Field Study, 2019.

The result from the marital status of the respondents is presented in the table above. It shows that 34(17%) respondents are married, 160(80%) respondents are single while 6(3%) respondents were divorced.

Section 2: Study Data

Table 5: Do you think is good to introduce e-exam?

S/N	Response	Frequency	Percentage
1	Yes	107	53.5%
2	No	72	36%
3	Undecided	21	10.5%
Total		200	100.00%

Source: Field Study, 2019.

The study inquires into the introduction of the E-exam as new system of exam in the institution. The result contained in the table above shows that 107(53.5%) of the think it is good to introduce the electronic examination system in the university. There are 72(36%) respondents who felt that it is not good to introduce electronic examination system while 21(10.5%) have undecided opinion about the introduction of the new examination system. This means that there are competing opinions regarding the introduction of the new exam system. Even though the number that affirmed its appropriateness is the majority, there is significant number of the students that have counter opinion.

Table 6: Do you think it is better means of assessment than the pen-paper system?

S/N	Response	Frequency	Percentage
1	Yes	89	44.5%
2	No	77	38.5%
3	Undecided	34	17%
Total		200	100.00%

Source: Field Study, 2019.

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The data in the table above indicated the comparative opinion of the students between pen-paper examination and the electronic examination. The result shows that 89(44.5%) respondents think electronic examination is better than the pen-paper examination, 77(38.5%) respondents believe pen-paper examination is better than the electronic examination. However, 34(17%) respondents have undecided opinion. This means that they neither choose pen-paper nor electronic examination system. The table 6 result indicated that majority of the respondent believe e-examination is better than the pen-paper examination. Despite having huge number that oppose this opinion, it obviously shows that higher number of the students have accepted electronic examination system.

Table 7: Do you think it is the best time to introduce it?

S/N	Response	Frequency	Percentage
1	Yes	74	37%
2	No	120	60%
3	Undecided	6	3%
Total		200	100.00%

Source: Field Study, 2019.

The result in the table above shows that 74(37%) respondents believe that it was the best time to introduce the electronic examination system, 120(60%) respondents believe it was not the best to introduce the new examination system while 6(3%) respondent have undecided opinions. This entails that despite accepting the new examination system by the students as shown in the previous table, majority of them indentified that it was not introduced in the best time. This means that even those that think it is better than the pen-paper examination believe that the timing is not suitable.

Table 8: Why do you think it was introduced?

S/N	Response	Frequency	Percentage
1	To improve efficiency of examinations	14	7%
2	To improve effectiveness of examinations	23	11.5%
3	To fasten the completion of examinations	47	23.5%
4	To improve the quality of examinations	39	19.5%
5	To eliminate examination malpractice	43	21.5%
6	To create strictness for students	34	17%
Total		200	100.00%

Source: Field Study, 2019.

The result contained in the table above shows the perception of the students about why the school management decided to introduce the electronic examination. The result shows that 14(7%) respondent believe the electronic examination was introduced to improve the efficiency of examinations, 23(11.5%) respondent believe the electronic examination was introduce to improve the effectiveness of examinations, 47(23.5%) respondents believe it was introduced to fasten the completion of examinations, 39(19.5%) respondents believe the electronic examination was introduce to improve the general quality of examinations in the institution, 43(21.5%) respondents believe it was introduced to eliminate the cases of examination malpractices while 34(17%) respondents believe the electronic examination was introduced to incur strictness on students. The result shows diversity of opinions among the respondent and further expand the understanding of the students towards the introduction of the system thus, different perceptions.

Table 11: E-examination system provides students with easy process to write examination

S/N	Response	Frequency	Percentage
1	Strongly Agree	73	36.5%
2	Agree	69	34.5%
3	Disagree	33	16.5%
4	Strongly Disagree	25	12.5%
Total		199	100.00%

Source: Field Study, 2019.

The result contained in the table above shows that 73(36.5%) respondents strongly agreed that electronic examination provide students with ease during the examination process, 69(34.5%) respondents passively agreed that the electronic examination system gives the students ease of process. On the other hand, there are 33(16.5%) respondents that disagree with the fact that electronic examination provides students with ease of process whereas 25(12.5%) respondents strongly disagree with the position. This shows that majority of the respondent perceive electronic examination as an easy process.

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Table 12: E-examination system provides student with opportunity to obtain good result

S/N	Response	Frequency	Percentage
1	Strongly Agree	41	20.5%
2	Agree	63	31.5%
3	Disagree	74	37%
4	Strongly Disagree	22	11%
Total		200	100.00%

Source: Field Study, 2019.

The table above contained data obtained from perception of the respondents regarding electronic examination as an assessment system that provide students with opportunity to obtain good result. The result shows that 41(20.5%) respondents strongly agree with the assertion, 63(31.5%) respondents passively agree, 74(37%) respondents disagree whereas 22(11%) respondents strongly disagree with the fact that electronic examination provides students with opportunity to obtain good results. This indicates that majority of the respondent perceive electronic examination as a system of assessment that will provide them with opportunity to pass their examination with good results. There is significant number of respondents who disagree with this position, which means that the perception towards the new system is not out-and-out positive.

Table 13: E-examination system is suitable for every course

S/N	Response	Frequency	Percentage
1	Strongly Agree	78	39%
2	Agree	67	33.5%
3	Disagree	44	22%
4	Strongly Disagree	11	5.5%
Total		200	100.00%

Source: Field Study, 2019.

The table above shows that 78(39%) respondents strongly agreed that electronic examination is suitable for every course of study in the university, 67(33.5%) respondents passively agreed that the electronic is suitable for all courses while 44(22%) respondents passively disagree and 11(5.5%) strongly disagreed. This affirms that the electronic examination is not suitable for every course to majority of the students.

Table 14: There are adequate facilities such as (computers, light, centers etc) to undertake e-examination

S/N	Response	Frequency	Percentage
1	Agree	123	61.5%
2	Disagree	77	38.5%
Total		200	100.00%

Source: Field Study, 2019.

The table 14 contains result obtained from the respondents regarding the adequacy of facilities in conducting the electronic examinations. The result shows that 123(61.5%) respondents agree that there are adequate facilities to aid the conduct of the examinations while 77(38.5%) respondents disagree. This revealed that majority of the respondents submit that there are adequate facilities in that aid the conduct and general implementation of the electronic examination system.

Table 15: The computers, application and the server fail during exams

S/N	Response	Frequency	Percentage
1	Agree	189	94.5%
2	Disagree	11	5.5%
Total		38	100.00%

Source: Field Study, 2019.

The data contained in the table above shows that 189(94.5%) respondents affirm that there were computer, application and server failure during the conduct of the electronic examinations while only 11(5.5%) respondents disagree. This entails that despite the adequacy of facilities, there were eventual failures by computers, applications and server during exams.

Table 16: How often do the computers, application and the server fail during exams?

S/N	Response	Frequency	Percentage
1	Most Often	45	22.5%
2	Often	36	18%
3	Rarely	69	34.5%
4	Very Rare	50	25%
Total		200	100.00%

Source: Field Study, 2019.

The table above presents data on the frequency of failure of the facilities during the conduct of electronic examinations. The result shows that 45(22.5%) respondents affirm that it happen most often, 36(18%) respondents affirm that it often occur, 69(34.5%) respondents affirm that it rarely occur while 50(25%) respondents assert that it happen on very rare occasions. In this regard, 40.5% of the respondents affirmed that the failure of the facilities occur often while 59.5% of the respondents affirmed that it rarely occur.

Table 17: The time allocated for e-exam is fair

S/N	Response	Frequency	Percentage
1	Agree	144	72%
2	Disagree	56	28%
Total		200	100.00%

Source: Field Study, 2019.

The table above present data obtained from the assessment of the fairness of time allocated for the conduct of the examinations. It shows that 144(72%) respondents agree that the time allocation is fair while 56(28%) respondents disagree with the fairness of the time allocation. This means that the time allocated for the conduct of the examination has satisfied large number of the respondents whereas significant number still think it is not fair.

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Table 18: The format of questions in e-examination is fair

S/N	Response	Frequency	Percentage
1	Agree	89	44.5%
2	Disagree	111	55.5%
Total		200	100.00%

Source: Field Study, 2019.

The data contain in the table above shows that 89(44.5%) respondents affirm that the format of examination questions being ask via electronic examination system is not fair while 111(55.5%) respondents affirm that the format of the questions is fair. This means that majority of the respondents are against the format of the questions being ask via electronic examination.

X. Summary of Findings

1. The study found that there are competing opinions regarding the introduction of the new exam system. Even though the number that affirmed its appropriateness is the majority, there is significant number of the students that have counter opinion.
2. It was found that majority of the students believe e-examination is better than the pen-paper examination. Despite having huge number that oppose this opinion, it obviously shows that higher number of the students have accepted electronic examination system.
3. Despite accepting the new examination system by the students, majority of them identified that it was not introduced in the best time. This means that even those that think it is better than the pen-paper examination believe that the timing is not suitable.
4. Diversity of opinions was also found among the students. It was as a result of their understanding of the students towards the introduction of the system thus, different perceptions.
5. Majority of the students perceive electronic examination as an easy process.
6. Majority of the students perceive electronic examination as a system of assessment that will provide them with opportunity to pass their examination with good results. There is significant number of the students that disagree with this position, which means that the perception towards the new system is not out-and-out positive.
7. The study also found that the electronic examination is not suitable for every course to majority of the students.
8. Majority of the students submit that there are adequate facilities that aid the conduct and general implementation of the electronic examination system.
9. Despite the adequacy of facilities, there were eventual failures by computers, applications and server during exams.
10. It was found that the time allocated for the conduct of the examination has satisfied large number of the students whereas significant number still think it is not fair.
11. Majority of the respondents are against the format of the questions being ask via electronic examination.

XI. Discussion of Findings

a) *What are the perceptions of the students regarding the introduction of e-exam?*

The introduction of Electronic Examination as substitute to pen-paper examination system in the University of Maiduguri was welcomed with mixed reactions. The reactions were revealed based on perception toward the time and nature of introduction of the new exam system. As found by the study there are competing opinions regarding the introduction of the new exam system. The study delve into the diverse perceptions that greeted the new e-exam and found that even though the number that affirmed its appropriateness is the majority, there is significant number of the students that have counter opinion. This means that despite the acceptance, there are students who still believe that the introduction of e-exam has inappropriateness either of time, readiness or nature.

In a related development, it was found that majority of the students believe e-examination is better than the pen-paper examination. It is not arguable to say that pen-paper examination takes longer timing than the e-examination. This is not unrelated to the fact that student choose exam system that last shorter. However, despite having huge number opposite perception, it obviously shows that higher number of the students have accepted electronic examination system. To harmonise the finding, the study argue that the students used prior perceptions and judged the introduction of the e-exam but still accept it because it provides them with more features and less time. On this brink, the study found that despite accepting the new examination system by the students, majority of them identified that it was not introduced in the best time. This means that even those that think it is better than the pen-paper examination believe that the timing is not suitable. However, the acceptance is not unrelated to the fact that the majority of the students perceive electronic examination as an easy process.

b) *What are the perceptions of the students regarding e-exam as means of assessment?*

Pen-paper examination system has been the means of assessment during Continuous Assessment and examination at different levels of academic structure regardless of country. The development in technology has influenced many academic conducts which examination is inclusive. However, the introduction of e-exam to facilitate the conduct of examination in University of Maiduguri was not unconnected with the

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frequent irregularities recorded while compiling examination results. To this end, the study inquires into the comparative perception of the students regarding the e-exam as means of assessment. The study found that 7% respondent believe the electronic examination was introduced to improve the efficiency of examinations, 11.5% respondent believe the electronic examination was introduce to improve the effectiveness of examinations, 3.5% respondents believe it was introduced to fasten the completion of examinations, 19.5% respondents believe the electronic examination was introduce to improve the general quality of examinations in the institution, 21.5% respondents believe it was introduced to eliminate the cases of examination malpractices while 17% respondents believe the electronic examination was introduced to incur strictness on students. It was also found that majority of the students perceive electronic examination as a system of assessment that will provide them with opportunity to pass their examination with good results. There is significant number of the students that disagree with this position, which means that the perception towards the new system is not out-and-out positive.

Moreover, there are different courses in the university system and each course requires a distinct way of measurement and evaluation. Just as some courses require oral and laboratory test, there are other courses that require more experimented and field assessment. This entail that each course require certain measurement system. On this basis, the study inquires into the suitability of the e-exam in measuring students in all the university courses. The study found that the electronic examination is not suitable for every course to majority of the students even though there are adequate facilities that aid the conduct and general implementation of the electronic examination system.

c) *What are negative and positive perception of the students regarding the appropriateness of facilities, timing and format of question?*

As stated earlier, the introduction of e-exam system was greeted by mixed reaction. The study collected such perception thus; despite the adequacy of facilities, there were eventual failures by computers, applications and server during exams. Students identified that there were failures with the new examination system. This negative perception shows that there are hurdles attached to the conduct of the electronic examinations. It was found that the time allocated for the conduct of the examination has satisfied large number of the students whereas significant number still think it is not fair. Majority of the respondents are against the format of the questions being asked via electronic examination. The overriding position of the perceptions towards the appropriateness of facilities, timing and format of question is negative.

XII. Conclusion

It is the conclusion of this study that the introduction of e-examination in University of Maiduguri was a success despite having few challenges. The challenges have influenced the perceptions of the students toward the new examination system. The students perceived the new system as better means of assessment than pen-paper, even though they expressed dissatisfaction with the format of questions, examination timing and its suitability for some courses. This suggested that the authorities in the university need to readjust the implementation of the new examination system. It is the recommendation of the study that the University of Maiduguri need to review the implementation of the new examination system in order to examine its suitability to all courses. Technical failures and limitation should be checked to improve effectiveness of the conduct of the examinations.

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