

PERCEPTION OF POSTGRADUATE DISTANCE LEARNERS ON THE VIRTUAL EXAMINATIONS OF THE NATIONAL OPEN UNIVERSITY OF NIGERIA

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Abstract

As the extension of the lockdown period of Covid-19 that was declared as a pandemic persisted, the problem of conducting face-to-face teaching-learning process was overcome with online classes. Examinations that are used to make decisions about an individual learner's progress could not hold as the pandemic continued. The National Open University of Nigeria (NOUN) being an open and distance learning institution came up with the resolution of conducting on-demand virtual examinations for distance learners in 2020 but a few numbers of them participated and this called for attention. The study investigated perception of distance learners of the NOUN on the virtual examinations. The descriptive survey design was adopted and 247 participants of the NOUN were randomly sampled in all the six geo-political zones. Two research questions were stated to guide the study. Data were collected using a survey questionnaire. Reliability and validity of the instrument were ensured. Data obtained were analysed using descriptive and inferential statistics. Findings revealed that majority of the respondents perceived the virtual examination to be highly beneficial, secure and credible and devoid of missing scores, immoral and unethical practices. It was recommended that university authorities should embrace the new norm of global digital development to be relevant for quality virtual examinations.

Keywords: Perception, Virtual Examination, Distance Learners

Introduction

A virtual examination or remote examination is an examination that a student takes from a location other than the physical classroom or any physical examination center. In a virtual examination, the student is not supervised at a physical location but through a software and webcam. A virtual examination is conducted with the help of the internet, making it location agnostic for both the students and the invigilators. A virtual examination is similar to a traditional examination. It is time bound and is audited or monitored by an AI-based proctor or a human proctor or both. It works through an online examination management system with remote proctoring features to make it secure, credible, and scalable. Virtually proctored examinations are administered through a robust examination platform that allows students to take the examination from anywhere.

From these articulations, learners' perception of virtual examination involves how learners regard or see the quality of examination they are supposed to in the course of training. Where learners perceive quality of examination to be high and therefore secure, credible, and scalable to achieve their lifelong goals; there is tendency that they will place much premium on it by participating in it. In contrast, where they perceive it to be low, there is the likelihood that they will withdraw themselves from it. Therefore, learners' participation in virtual examinations is a function of their perception of the quality.

Arella (2016) has explained that a more authentic, reliable and valid image of the students' learning can be achieved through a blend of formative and summative assessments over time, collected from different websites and books. Chang (2020) in the fourth UNESCO COVID-19 Education Webinar, organized on 9 April 2020 has focused on some common issues emerging related to the fairness, authenticity, validity and feasibility of alternative assessments. He advised that learner's progress can be assessed to identify learning gaps and offer remedial and accelerated learning and assessment when schools reopen. It can be viewed that online assessment remotely is quite difficult and it can fail to justify the fairness and validity of students' performance in online testing. Alternative assessment including both formative and summative assessments can be applied with interactive online teaching.

There are traditional assessment tools and alternative assessment tools in open and distance learning. These may be written tests on examinations which may be objectives and essay-based tests/examinations. True/false items, multiple choice, completion and short answer items are all examples of objectives items used in ODL. Technology is seen to have evolved tremendously to offer robust, scalable, authentic

and auditable solutions to authorities and institutions, willing to take that step and test new-age technologies to bring in the age of digital examination.

As a result of the Covid-19 pandemic, the initial response in higher education across many countries was to postpone examinations (Crawford, Butter-Henderson, Rudolph, et al, 2020). The benefits of virtual examinations include provision of question banks and randomization of questions and automated analysis of results (Fluck, Pullen & Harper, 2009) and reduction in the cost of assessment per student particularly for a large number of students (Karama, 2011). It has the capacity to remove all human errors associated with pen on paper examinations and generate opportunity for students to access their results immediately (Adewale, Ajadi & Inegbedion, 2011).

Online teaching seems to be an integral part of post Covid-19 period. Karaman (2011) remarked that online teaching and learning would continue to suit more significant to world universities in order to stay competitive and economically viable. As online teaching and learning become widespread, the attention to online evaluation increases. In the online environment, evaluation is no less critical than in traditional face-to-face environment (Byrnes, Ellis & Ellis, 2006) because measurement and evaluation became an even more exacting part of the educational process. Basically, assessment plays different roles in teaching-learning process. It provides teachers with a means of evaluating the characteristic of their indoctrination. Students also use it to drive and direct their learning. It assesses to measure attainment that is to determine if learning and programmes goals were achieved. Online assessments can be offered at different time, location or even different test or different student (Harvey and Mogy, 1999). This is the modern way of assessment which has come on the scene as a result of the evolution of networks and computers. Although, most of the principles that guide assessment procedures in traditional assessment still apply in e-assessment, e-assessment is largely characterized by online conference discussions which largely depend on technologies that assess communicative ability, demonstration of knowledge and understanding of a topic as well as the demonstration of aesthetic on the spot problem solving skill (Osuji & Okonkwo, 2011).

Conduct of Examinations at the National Open University of Nigeria

Examinations in NOUN are conducted through continuous assessment known as Tutor Mark Assignment (TMA) and pen on paper examinations. The continuous assessment is a web -based assessment that carries 30% of students' final grade. The pen on paper examinations involve essay mode of assessment which carries 70% of students' overall grade. Emphasis in this study is on the pen and paper examination as a major determinant of students' assessment and certification. However, the pen and paper is restricted to students in 300 level and above in all the faculties except in the Faculty of Law where students in all the levels are examined using pen and paper examinations. The conduct of examination as well as the process of producing results at the NOUN had been fraught with various problems leading to inability to release results on time (Adewale, Ajadi & Inegbedion, 2011); certain developmental processes in preparing pen and paper examination questions are fraught with inadequacies which include inappropriate wordings of several questions which led to ambiguity and vague questions (Ukwueze & Eya, 2020). Apart from these anomalies, it is yet to be established through research the perception of distance learners to virtual examination in open and distance learning institutions, particularly in National Open University of Nigeria. This underscores the need for this investigation.

As extension of lockdown period of Covid-19 persisted, the problem of conducting pen on paper examinations nationwide in a consistent and transparent manner within a reasonable period of time started becoming intractable. The National Open University of Nigeria came up with the resolution of conducting on-demand virtual examination for students in June 2020 with a rider that once a course is selected for virtual examination, it cannot be made available to the student for physical examination after lockdown order is lifted. In view of this, very few number of NOUN students indicated their willingness to participate in on-demand virtual examinations. This development might not be unconnected with the submission of Adewale, Ajadi and Inegbedion (2011) and Ukwueze and Eya (2020) on the conduct of examinations at the National Open University of Nigeria.

Statement of the Problem

School campuses closed due to the Covid_19 pandemic. There is a need to work out how teaching-learning process continued without been able to meet physically with learners. Different countries, institutions and teachers viewed challenges of the Covid-19 on the conduct of examinations in different ways but the common response was the genuine move towards virtual evaluation as people seemed to have found working online from home interesting. Many answers to the problem and measures are being introduced for the examination that learners have been preparing to take. There are many research findings which stated the benefits of virtual assessment from the

perspectives of systems, facilitators and students. The perceptions of academics with regards to online examinations showed concern with using online examinations as the potential for cheating, unreliability of the internet connectivity, ease of use of technology both for the students and for academic.

Apart from these challenges, it is yet to be established through research the distance learners' perception of virtual examinations particularly in Nigeria. This underscores the need for this investigation. On this note, the problem of this study is what is the level of postgraduate distance learners' perception of virtual examination in National Open University of Nigeria? The difference in the perceptions of the three sets of postgraduate distance learners admitted into the Postgraduate Diploma, Masters and PhD. programmes of the National Open University of Nigeria was also the subject of examination of this study.

Purpose of the study

Specifically, the study sought to:

- i. determine the perception of postgraduate distance learners towards the virtual examinations at the National Open University of Nigeria?
- ii. determine if there is any difference in the perceptions of postgraduate distance learners on the virtual examinations in relation to their programme of study.

Research Questions

The following research questions guided the study:

- i. What are the perceptions of postgraduate distance learners towards the virtual examinations at the National Open University of Nigeria?
- ii. Is there any significant difference in the perceptions of postgraduate distance learners on the virtual examinations in relation to their programme of study?

Methods

The descriptive survey design was adopted to determine the perception of the postgraduate distance learners of the National Open University of Nigeria towards quality virtual examinations. The population of the study comprised all postgraduate distance learners of the National Open University of Nigeria where 247 of them were drawn to constitute the sample using convenience sampling technique. During 2021 academic session, the number of study centres of the National Open University of Nigeria rose to 102 and under normal conditions, the stratified random sampling would have been employed, so that we could have a good representation of the population. A breakdown of this sample size indicated 90 were drawn from Postgraduate programmes, while 106 were from Masters' programmes and 51 from PhD programmes. However, the e-mails of the respondents that registered for postgraduate programmes were collated and only those that responded within a stipulated period were contacted.

The research instrument was constructed, titled: "Perception of Postgraduate Distance Learners on the Virtual Examination", to elicit distance learners responses on the quality of virtual examination. The instrument was validated by other scholars with necessary amendments and reliability test as ensured before it was finally administered on the respondents. It contained two sections – A and B. Section A had demographic variables while Section B, arranged on four-point rating scale consisted of 22 items. Validity of the instrument was established by two experts in measurement and evaluation. Reliability of the instrument was conducted using Cronbach Alpha method which yielded a coefficient index of .83, a confirmation that the instrument is reliable enough. Data obtained were subjected to statistical analysis using mean, standard deviation, t-test statistics and analysis of variance (ANOVA).

Results and Findings

Question One: What are the perceptions of postgraduate distance learners on the virtual examinations at the National Open University of Nigeria?

Table 1: Descriptive Statistics of Respondents' Perception of Postgraduate Distance Learners on the Virtual Examination

Description	N	Mean	Std. Dev.
Virtual examination is not associated with missing scores	247	2.30	1.06
The issue of sex for marks is more prominent in the conventional methods	247	2.91	1.03
The issue of giving bribes to enhance high marks is less reported in virtual	247	2.22	1.13

exams			
The purchase of a few lecturers course materials goes a long way to determine who will pass the course in conventional examinations.	247	2.04	1.04
The incidence of irregular matriculation number of students during the virtual examination is not possible.	247	2.92	1.20
The technology used in virtual examination is unreliable.	247	3.17	0.72
Virtual examination are appropriate for my discipline	247	2.48	1.27
Pen on Paper examinations are fairer than virtual examinations.	247	2.30	1.23
When students take examinations without an invigilator, they may find it easier to check answers elsewhere or to discuss the process with others.	247	2.30	1.06
One of the most challenging aspects of conducting remote examinations is ensuring students are not using the internet or other resources to assist.	247	2.91	1.03
Each examination will have a different set of rules, but when conducted remotely it is more difficult to ensure students abide by the rules that are set.	247	1.85	1.14
Students who live in remote areas or areas where connections are bad can face difficulty in completing their examinations on time or even appearing in it.	247	1.68	0.49
Security is one of the critical challenges of virtual examinations.	247	3.53	0.51
Timely examinations can be bad as timing is to be set according to the level of questions.	247	2.11	1.35
Virtual examination provides backup for examination scripts in case of missing scores.	247	2.93	0.58
Carelessness on the part of the examiners could lead to the incidence of missing scripts and irregular matriculation numbers.	247	3.53	0.51
Students who fail to submit the scripts before signing out may not see the results of virtual examination.	247	2.11	1.35
High cost of acquiring computer electronic devices is a challenge to virtual examination	247	1.68	0.49
Learners learn one thing or the other about computers in the process of preparing to write virtual examinations.	247	2.93	0.58
Virtual examination motivates learners to be self-dependent	247	3.53	0.51
Virtual examination can be written at the comfort of my home.	247	2.11	1.35
Erratic power supply is a major challenge to virtual examination	247	1.68	0.49
Aggregate		2.51	

The table 1 above showed the mean, and standard deviation of postgraduate distance learners' perception of quality virtual examinations. The mean responses of all the 22 items ranged from 1.68 to 3.53 while the values of the standard deviation ranged from 0.49 to 1.35 with the aggregate mean of 2.51. The table also revealed that 15 out of the 22 items have mean scores above 2.00 which was the yardstick. From this, it could be understood that majority of the respondents perceived the virtual examination to be secure and credible and devoid of missing scores, immoral and unethical practices. It further revealed that virtual examinations provided backup for examination scripts. While only a few indicated that virtual examination have different set of rules, requires huge amount to buy laptop, and those who lived in areas where there are network challenge would find it difficult.

Question Two: Is there any significant difference in the perceptions of postgraduate distance learners on the virtual examinations in relation to their programme of study?

Table 2: Descriptive Statistics of Perceptions of Distance Learners on the Virtual Examination based on programme of study

Programmes	N	Mean	Std. Deviation	Std. Error
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PGD	90	60.26	1.88	0.20
Masters	106	59.75	1.93	0.19
Ph.D	51	59.51	2.03	0.28
Total	247	59.89	1.95	0.12

Table 3: ANOVA of Perceptions of Distance Learners on the Virtual Examination based on programme of study

	Sum of Squares	Df	Mean Square	F	Sig.	Decision
Between Groups	21.34	2	10.67	2.86	0.06	No Difference
Within Groups	911.49	244	3.74			
Total	932.826	246				

$p > 0.05$ (not significant)

The results in Tables 2 and 3 showed that the difference in distance learners' perception ($F_{(2,246)} = 2.86$) on the virtual examination based on programme of study was not significant ($p = 0.06 > 0.05$). The mean (60.26; 59.75 and 59.51) and standard deviation (1.88; 1.93 and 2.03) values respectively also show insignificant differences in the perception of distance learners on the virtual examination based on programme of study.

Discussion of Findings

In the current study, the finding revealed that a good number of the respondents perceived the virtual examinations to be helpful, secure and credible. The finding of this study is in tandem with the earlier findings of Attia (2014); Schmidt, Ralph, and Buskirk (2009) who reported that students perceived that virtual examinations saved time, more economical, provided flexibility and they trust the result of online than pen on paper examinations. Also, Pagram, Cooper, Jin and Campbell (2018)) stated that marking virtual scripts was easier and preferred over pen on paper because of the reduction in paper and academics want a system that is easy and quick to create, manage and mark examination. This study negates the insinuations going around with using virtual examination as the potential for cheating and unreliability of the internet connectivity. The finding of this study further revealed that nearly a quarter of the respondents perceived that the conduct of examination, cost of gadgets and internet connectivity cum erratic power supply could pose problems for virtual examinations. The result of this supposition may, therefore, confirm the assertion of Butler and Crawford (2020) that the reliability of the internet connectivity as well as software issues is the more critical concern of the academic. The outcomes of the study might be due to the fact that majority of the learners use smartphones for online engagements and not laptops because some laptops were found to be owned by their parents, relatives, and friends.

No statistically significant difference was observed among postgraduate distance learners on the quality of virtual examination based on programme of study. It contradicts the findings of Rios and Liu (2017) that not all students preferred the idea of virtual examination, yet studies that considered age and gender identified only negligible differences. Also contradict the earlier findings of Wilcox (2013) that no statistical differences between groups such as academic discipline, age, enrolment status, or previous exposure to college level online coursework, were found to have any effect on students' perceptions of quality in online courses. One possible reason for this unanticipated lack of statistically significant differences between postgraduate distance learners' programme of studies may have been due to the use of a Likert scale with only four choices. Initially, it was thought that a survey using a Likert scale with an even number of options would force students to ultimately decide if they agreed or disagreed with each topic. This lack of choice diversity, ultimately coded to values ranging from one to four instead of one to five, could have possibly led to the statistically similar averages found in the current study.

Conclusion and Recommendations

From the findings in this study, it could be said that the virtual examinations should be encouraged across all distance education, since it is helpful, secure and credible and it would help to maintain high standard. The findings of the study have led to the conclusion that no statistical significant difference in the perception of postgraduate distance learners on the quality of virtual examination of the National Open University of Nigeria. It was also

established that no statistically significant difference was observed among postgraduate distance learners on the quality of virtual examination based on programme of studies. One might have expected differences to emerge in the perceptions of postgraduate distance learners based on programmed of studies (Postgraduate Diploma, Masters and PhD). In line with the outcomes of this study, the following recommendations are made: Since the findings showed that the mean, and standard deviation of postgraduate distance learners' perceptions on the virtual examinations was above average, this implies that the university authorities should embrace the new norm of global digital development to be relevant for quality virtual examinations. Such a measure is the provision of equipment and internet connectivity at the various study centres and preference should be given to use university computers instead of the learners using their laptops mainly due to issues around operating system compatibility and data loss. There is also a need for the learners to get sophisticated laptops that will enable them to participate actively.

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