## FACTORS UPSETTING THE USE OF E-ASSESSMENT IN PUBLIC SECONDARY SCHOOLS IN EKITI STATE

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#### Abstract

This paper examined the factors upsetting the use of electronic -assessment in public secondary schools in Ekit State. The study revealed related literatures, two research hypotheses were tested. The study adopted a survey research design, the research instrument used was a self-constructed instrument, and reliability coefficient of 76.4 was obtained, while a face and content validity were carried out. The Instrument was administered to 4 public secondary schools and 40 teachers which were selected using the sample random sampling technique. Data collected were analyzed using inferential statistics (ANOVA statistics) at 0.05 level of significance. The tested hypotheses were rejected. This implies that the computer anxiety, literacy, funding and electricity supply affects the practice e-assessment in the study area. It was recommended among others that, stakeholders should be fully involved in school funding, teachers, administrative staff should acquire computer skill that will aid the practice of computer based examination, by this computer anxiety will be reduced. Finally school stakeholders should purchase solar power supply for use in e-learning and e- assessment,

Keywords: e-assessment, computer anxiety, computer know-how, funding, electricity supply.

#### Introduction

Test is an instrument useful of providing information about learners' abilities about a particular subject. Testing and in education is like the oxygen to human beings. This is because educational assessment cannot be done without test items of any form. This explains why test remains a vital tool in the hands of a teacher and in education (Udi & Udemba, 2021). Assessment is made up of test items used to elicit information about testees abilities. Assessment involves both defining students' standing in learning (summative assessment) and producing significant feedback to learning progress (formative assessment). Assessment monitors the teaching and learning process by providing reciprocal feedback to both teachers and students in other to bring improvement in their respective tasks.

Assessment has been described by

Sanders and Voget (2012), as the process of obtaining information used in making educational decisions about learners; to give feedback about their progress, strengths and instructional weaknesses; judge to effectiveness and curricular adequacy; and to make informed policy. Based on this description, it is very important that teachers are well trained in students' assessment. Having the capacity to make use of information properly when making important decisions about the students, instructions or curriculum, is an integral part of the professional teaching practice. This is why Nenty (2016) highlighted the importance of assessment in education, and agreed that there is the need for teachers to use a variety of assessment methods in order to make informed and appropriate decisions about testees academic performance.

Adeoye (2017) stated that educational

assessment is viewed from three major areas such as students' assessment, programme assessment and system assessment. For the purpose of this paper, the students based assessment (SBA) was considered. Student assessment is the mechanism whereby students are graded in the cognitive, affective and psychomotor domains of behaviour in a systematic way of all his performances during a given period of time in a school system. According to Osuji (2018) educational a process assessment is by which characteristics of individuals or group of individuals, the setting, goals, objectives and materials or teaching strategies are identified and understood for the purpose of making decisions judgment and relevant to educational activities. In addition, assessment provides data used to accomplish several purposes such as identification and placement, programming and instructional planning, and analysis of ongoing skills, interests and behaviours. They are also used for the activities of diagnosis in order to make informed and sound decisions. Assessments yield data which can be used for monitoring teaching styles, check classroom management and select instructional materials.

The use of manual (Pen on paper) tests, oral tests and projects (traditional methods of educational assessment), have become inadequate in this 21<sup>st</sup> century, because of distance learning, large class size or large number of examinees, and other human errors that are likely to influence test marking and scoring. The COVID-19 pandemic demanded nationwide lockdowns, which caused a major disruption to education but working virtually and social distancing were some of the measures used to management the spread of the virus. This in that way increases the need for innovation, flexibility and adaptability, while hastening the inclination towards online teaching and learning and there is need to adopt educational assessment techniques within the context of Information and Communication Technologies (ICTs) advancement. Globalization and the popularity of Open and Distance Learning (ODL) have brought about an opportunity to rethink and repackage educational assessment in terms of what, how, where, and when. Test designers and measurement experts are to deign assessment to the new technologies in education. Today, most of the common kinds of assessments in use can be said to be the products of technologies. Some of these include CBT, automated scoring and item bank management. (Adeoye,2017).

The connection between technology and educational assessment lies in the fact that various technologies have been used to bring efficiency, timeliness greater and sophistication multiple to aspects of educational assessment design and implementation. Only teachers well trained in the use of these modern technologies in assessment will be able to cope with the future educational assessment. Information, of communication technologies (ICT) in testing involves electronic breeding of test items, analysis items, administering and scoring testees responses. Huda & Siddig (2020) It should be noted here that most of the technologies have been used to implement an effectively methods assessment of in education. Online assessment with the use of current technologies in education as very important tools is a very vital need in the students' based assessment. The students should be vast in the use of computers in testing.

Electronic Assessment or Eassessment, also known as online assessment is comparatively more open and flexible learning platform, that is becoming more popular than a pencil-and-paper and a primary mode of assessment in tertiary education (Elsalem & Yong 2021). This mechanism of assessment is usually done on e-learning platforms without the physical presence of students and lecturers at the same venue and has added benefit of enabling rapid and specific feedback to large cohorts of students on their performance. Feedback allows learners to target their fallible spots for remediation. This is possible because electronic assessment includes quick marking or scoring of students' responses, unlike the non-electronic assessment.

Electronic assessment has enhanced the measurement of learner outcomes and made it possible for them to obtain immediate and direct feedback-assessment has improved how learner outcomes are measured and made it feasible for them to get quick feedback. Accordingly, online assessment is an important component of e-learning solutions that provide a true and fair assessment of students' performance. Online assessments are superior to traditional assessments because immediate feedback, auto-grading. of automated record-keeping and ease of preparation and schedule (Mate & Weidenhofer, 2022). Online essays and computer-marked online exams are just two examples of the wide variety of assessment activities that are included in online assessment, or e-assessment (Theresa & Shakeel 2021). Online assessment and eassessment are used interchangeably because both concepts serve the same purpose and use technology to manage and deliver assessments which can be diagnostic, summative, or formative (Huda & Siddiq, 2020). Thus, practically, online assessment is a novel approach in online teaching and learning designed to solve traditional assessment challenges. Changing instructional and evaluation approaches is no easy task, particularly when technology is involved. Adopting and integrating computer-based instruction and computer based testing strategies has a long history of challenges, but it comes with a great understanding of how to achieve success with them.

#### **Computer Anxiety**

Anxiety is seen in human when the person is nervous or unease with the task or satiation confronting him/her. This is as responsive because of the individuals' trait or ability or interest, perception or past experience towards the task. The Use of technology sometimes has unpleasant side effects, which may include strong, negative emotional states that arise not only during interaction but even before, when the idea of having to interact with the computer begins. Frustration, confusion, anger, anxiety, and similar emotional states can affect not only the interaction itself, but also productivity, learning, social relationships, and overall well-being. According to Leso & Patrick (2019) defined computer anxiety as a feeling of being fearful or apprehensive when using or considering the use of a computer. Computer anxiety otherwise known as computer-related phobia, it is associated with a decrease use and worse, avoidance of information technology. Computer literacy is defined as the ability to use computers and competently, with skill levels ranging from elementary use to computer programming and advanced problem solving. (Ogbidi, 2023) defined Computer literacy as the knowledge and ability to use computers and related technology efficiently, with skill levels ranging from elementary use to computer programming and advanced problem solving. Computer literacy can also refer to the comfort level someone has with using computer programs and applications. Another component understands valuable how computers work and operate. Computer literacy may be distinguished from computer programming, which primarily focuses on the design and coding of computer programs rather than the familiarity and skill in their use.

Computer literacy is directly related to the information and communication technology (ICT) literacy which describes a learner's ability to adopt or adapt any digital devices, applications and services. Computer literacy refers to a teacher's ability to navigate the technical requirements of being online teachers that carry out his/her task with the computer. The five computer literacy skills are: Basic knowledge of computer hardware and software, Proficiency in operating systems, Internet and email proficiency and Understanding of computer security and privacy (Adanir, Ismailova, Omuraliev and Muhametjanova, 2020).

Literature reveals that lecturers and learners who lack digital skills are likely to face problems in using online assessment platforms since this type of assessment is conducted on digital platforms (Alruwais et al., 2018; Bashitialshaaer et al., 2021). Thus, digital skills are a precondition for the adoption and usage of an online assessment.

# School Funding and Electricity Supply

School funding involve all financial contributes brought in by stakeholders to ensure the functionality of all the school activities. The educational funding generally in Nigeria has not received a higher percentage compare to other sections in the country, and this has affected the standard of educational in Nigeria. The ideas in school funding may include, school child feeding, scholarship, and provision of basic school materials to students and teachers, staff motivational packages and staff rewards.

Electricity supply in many schools across Nigeria is a major problem. Just as the country cannot meet the energy needs of the citizens so is also the inability of school management to provide sufficient electricity power for teaching, learning and practical in most of the higher institutions of learning in Nigeria. This conundrum has no doubt, often, if not regularly, created tension in many academic campuses. Obviously, lack of power supply stultifies learning! It stifles teaching and frustrates, generally, academic enterprise! It impedes progress! It thwarts productivity among other negative tendencies.

Ghanbari, Nowroozi and Ghanbari, 2021) conducted an in-depth semi-structured retrospective interview with the teachers at Persian Gulf University to determine the online assessment challenges posed by COVID-19. The analysis of the findings showed that the adoption of online assessment pedagogical, depends on technical. administrative, and affective factors. Guangul (2020) examined the challenges of remote assessment during the COVID19 incident in higher education institutions that were taking Middle East College as a case study. The study identified four distinct challenges: academic dishonesty, infrastructure, coverage of learning outcomes, and commitment of students to submit assessments. Alruwais et al. (2018) investigated the benefits and drawbacks of using e-assessment in learning for different domains. The authors reported that the challenges faced in e-assessment are poor technical infrastructure and a lack of digital skills.

Globally, the adoption of online assessment in tertiary education has pull in the attention of scholars. Rayan et al. (2021) carried out a study on the challenges of robust electronic examination performance under COVID-19. The study concluded that internet speed - 82%, cost -99%, and authenticity -68%, among others were some of the most challenges faced by e-exams centers. The findings also. showed that internet connectivity has a higher effect on the adoption of an online assessment. Muzaffar et al. (2021) performed a systematic review of online examination from 55 studies conducted between 2016 and 2020. The review identified four key online assessment adoption factors: network infrastructure. hardware requirements, implementation complexity, and training requirement.

On the other hand, Sanders H. and

Voget U. (2012) did a systematic literature review to discern the academic threats in using the online examination. The report tells that electronic examinations have always been avoided reasons tried to the perceived lack of academic integrity. Similarly, Raymond and Frankline (2021) applied mixed-method research to explore the perceptions of lecturers and learners to student cheating behaviours in online assessment. The results showed that examinations in a digital world are allergic to cheating. The study concluded by giving suggestions for enhancing academic integrity in digital examinations and assessments.

(2022) planned an online Nilly examination implementation process for South Africa. Although the authors claimed that the proposed structure can provide universities with initial guidelines for the adoption of online examination, the solution cannot be suitable for all tertiary institutions due to differences in contextual characteristics. Accordingly, contexts, where the electronic examination is used, differ widely. Bashitialshaaer et al. (2021) used an exploratory descriptive approach with a sample of 300 drawn from lecturers and learners to identify and understand the obstacles and barriers in the successful adoption of electronic examinations. The findings revealed that power outages, unreliable internet access and the digital divide were the key factors that influence the adoption of an online assessment. The study concluded that disparities in access to suitable devices or the internet pose a major concern in the usage of online examinations. Reliable internet connectivity ensures that digitally mediated assessment is sustainable.

According to Das et al. (2022), an online examination can be affected by digital level efficiency and willingness to adapt and accept the system. Also, Chakraborty et al. (2021) claim that stable connectivity to the internet and digital skills are a precondition for online learning. Online assessment requires a stable and high-speed internet connection. As a result, lecturers and learners who have poor connectivity to the internet and lack digital skills are likely to face problems in using online assessment platforms. Shakeel et al. (2021) maintain that the adoption of online assessment is largely constrained by the digital divide, too. Besides, not all lecturers and students have equal access to and expertise on online technologies. While these inequalities existed prior, the COVID-19 pandemic has exposed this digital divide. This is attributed to the fact that the pandemic has introduced a paradigm shift to online education. Thus, part of the findings suggests that online assessment is more relevant to "digital-native" lecturers and learners (Mate and Weidenhofer, 2022). Therefore, poor internet connectivity, lack of access to the internet and lack of digital skills results in partial adoption of the online assessment.

Henry (2023) carried out a study on factors influence the practice of CBT on students' performance. In Lagos public secondary school. Variables such as computer anxiety and know-how and study sampled 4,976 students and 398 teachers and the instrument used was self-constructed tool. data analysis was done using descriptive statistics. It was revealed that teachers level of computer anxiety influence them and affect the students' performance in the use computer testing or CBT. Also, Ogbidi (2024) who studied the drive of technology in educational testing, among science education teachers. The result showed that teachers and students technical know-how that is efficiency in computer manipulation influence the technology-driven practice in educational assessment. According to Momoh (2018) carried out a research on the attitude and anxiety of 21st century students on the use of computer among secondary school teachers and students in Lagos. With a sample of 3,000 and 9,000 students, in public teaches

secondary schools. A self-constructed instrument was used to collect data on students' anxiety and attitude to ICT. Data were analyzed using chi-square. The result revealed that's 21<sup>st</sup> century secondary school students have positive attitude and zero anxiety on computer usage. It was concluded that students and teachers of the 21<sup>st</sup> century has positively embrace ICT or computer in education because of its benefits and worldwide recognition thereby reporting a high knowledge in computer application.

#### **Research Hypotheses**

The following research hypotheses were formulated for the study;

- Ho 1. Computer anxiety and know-how have no significant effect the practice of eassessment amid public secondary schools in Oye-Ekiti.
- Ho 2. Funding and Electricity supply have no significant effect on the use of e-assessment amid schools in Oye-Ekiti.

#### Methodology

The study adopted a survey research design of the descriptive. The population of the study comprises teachers from 8 private secondary schools in Oye-Ekiti. Purposive sampling technique was used to select 40 teachers and 4 public secondary schools from the study area. The instrument used was a self-constructed 20 items eliciting information concerning the variables for the study. They are; computer anxiety and technical know-how on eassessment(CATKHEA) and funding and electricity power on e-assessment (FEPEA), presented in a four likert-scale form of strongly agree(SA), Agree (A), Disagree (DA) and Strongly disagree (SD). Split half reliability method was used and a coefficient of 0.69 and 0.81 were obtained, Content validity was also carried out. The null analyzed Analysis hypotheses were of Variance (ANOVA) statistics at 0.05 level of significance.

#### Results

#### Hypothesis one

Ho 1: Computer anxiety and know-how have no significant effect on the practice of e-assessment amid public secondary schools in Oye-Ekiti.

**Table 1:** ANOVA statistics of Computer anxiety and know-how on practice of eassessment technique

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	Sum of squares	df	Mean Square	F	Sig.					
Between group	435.600	1	435.600		5.091	0.30				
Within group	3251.500	38	85.566							
Total	3687.100	39								

The result in table 1 above shows Fvalue of 5.091 with a significant value of 0.30 As a result of this, the null hypothesis is rejected, which implies that, computer anxiety and know-how significantly affect the practice of e-assessment amid public secondary schools in Oye-Ekiti.

#### Hypothesis two

Ho2: Funding and Electricity supply have no significant effect on the use of e-assessment amid schools in Oye-Ekiti.

**Table 2:** ANOVA statistics of Funding and Electricity supply and practice of e-assessment

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	Sum of squares	df	Mean Square	F	Sig.	
Between group	23.741	1	4.748	0.635	0.53	
Within group	2863.247	38	7.478			
Total	2886.981	39				

Table 2 revealed teachers responses on the effect of funding and electricity supply on the practice of e-assessment. The statistical mean test for the level of

significance of the variables in relation to the study shows that there is significant effect of funding and electricity supply on the practice of e-assessment in the study area, with F value of 0.635 and p-value of 0.53. The null hypothesis is rejected, which implies that, funding and electricity supply significantly affect the practice of e-assessment amid public secondary schools in Oye-Ekiti.

## Discussions

The study showed that computer anxiety and know-how significantly affect the practice of e-assessment in public secondary schools in Oye-Ekiti. The findings of this study supports Henry (2023) whose study revealed that teachers level of computer anxiety influence them and affect the students' performance in the use computer testing or CBT. Also, this is in line with Ogbidi (2024) who study the drive of technology in educational testing, the result showed that teachers and students technical know-how that is efficiency in computer manipulation influence the technology-driven practice in educational assessment. These reports contradicts the report from Momoh (2018) carried out a research on the attitude and anxiety of 21st century students on the use of computer among secondary school teachers and students in Lagos. It was concluded that students and teachers of the 21st century has positively embrace ICT or computer in education because of its benefits and worldwide recognition thereby reporting a high knowledge in computer application. This is in support of Bashitialshaaer et al. (2021) the study concluded that disparities in access to suitable devices or the internet pose a major concern in the usage of online examinations. Reliable internet connectivity ensures that digitally mediated assessment is sustainable.

The Second hypothesis result is rejected, which implies that, funding and electricity supply significantly affect the practice of e-assessment in public secondary schools in Oye-Ekiti. This result supports the findings from Alruwais et al. (2018) investigated the benefits and drawbacks of using e-assessment in learning for different domains. The study reported that the challenges faced in e-assessment are poor technical infrastructure and a lack of digital skills and lack of digital skills and internet connectivity.

## Conclusion

Based on the findings of the study, it was indicated that teachers and students in the study area are not practicing e-assessment, because of the factors examined such as; funding and electricity supply, computer anxiety and know-how. By this the null hypotheses were rejected

## Recommendations

Based on the findings and conclusion from the study, the following recommendations were made; (i) teachers should undergo ICT skill training on e-assessment by this computer anxiety will be eliminated and their level of computer Known how will improve.

(ii) Government and school management should collaborate with financial firms or sources for other means of generating funds to purchases computers and other facilities.

(iii) School management should source for solar power supply, alternatively purchase solar power inverter.

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