



# Attitude of Students and Lecturers towards Electronic Examinations in Borno State

Dr Aliyu Idris

Department of Public Administration, Ramat Polytechnic Maiduguri

**Abstract:** *This study investigates the attitudes of students and lecturers towards electronic examinations (e-exams) in Borno State, Nigeria, with a focus on Ramat Polytechnic Maiduguri. The integration of technology in education has led to the widespread adoption of e-exams, offering benefits such as immediate feedback and enhanced learning outcomes. Through a survey-based approach, data were collected to examine the perceptions of students and lecturers regarding the usability and effectiveness of e-exams. The findings indicate a positive attitude towards e-exams, with respondents recognizing the advantages of immediate feedback and the potential for promoting learning. Recommendations are provided to support the successful implementation of e-exams, including efforts to improve scripting ease, promote electronic examinations, and raise awareness among students about the benefits of computer-based assessments. Overall, this study contributes to the understanding of attitudes towards e-exams in Borno State and provides insights for enhancing assessment practices in educational institutions*

**Keywords:** *Attitudes; Students; Lecturers Electronic examinations*

---

## 1.0 INTRODUCTION:

The integration of computerized and online systems has become ubiquitous in education, revolutionizing the way we teach and learn (Bates, 2019). In the contemporary educational landscape, Information Technology (IT) stands as a cornerstone, catalyzing profound changes across all levels of academia (Selwyn, 2018). The advent of computers and the internet has fundamentally reshaped educational paradigms, facilitating efficiency, accessibility, and flexibility in the delivery of knowledge (OECD, 2015). Traditional paper-based resources have yielded ground to dynamic online and offline applications, ushering in an era where vast databases of information are readily accessible at our fingertips (Garrison & Vaughan, 2013). This transformative power of information technology has accelerated the exchange of knowledge, revolutionizing education and various sectors of industry alike (Wong & Looi, 2011). As technology continues to advance, its benefits in education and beyond are manifold (Means et al., 2013). The utilization of technological advancements has streamlined transactions, rendering them faster, more accurate, and highly efficient (Zheng & Warschauer, 2015). Over time, computers have evolved into indispensable tools for myriad tasks, permeating every facet of our daily interactions (Prensky, 2001). One notable application of this technological progress is the development of

online examination systems, such as the Introduction to Management Online Examination System designed to cater to the needs of both students and lecturers. The pervasive diffusion of information technology, coupled with the proliferation of online assessment platforms, has led to the widespread adoption of online examinations in higher education institutions (Picciano, 2017). These electronic examinations, also known as e-exams, represent a paradigm shift in assessment methodologies, offering a web-based or intranet-based approach to conducting exams (Wheeler et al., 2019). Functionally, these systems can be integrated into dedicated platforms or embedded within existing Learning Management Systems (LMS) like Blackboard, Moodle, or Sakai (Wiley & Sisson, 2006). By leveraging diverse question types and customizable exam configurations, online examination systems streamline the assessment process, particularly in large classes, from exam creation to grading, result reporting, and statistical analysis (Conrad & Openo, 2018). Therefore, there is need for this paper to investigate and understand the attitudes of both students and lecturers towards electronic examinations within the educational context of Borno State.

## **1.2 AN-OVERVIEW**

In the realm of educational assessment, the rapid evolution of Information and Communication Technologies (ICT) has triggered a paradigm shift from traditional paper-pencil-based examinations to computer-based assessment methods (Uysal & Kuzu, 2014). This transition encompasses various terms such as Computer Assisted Testing, Computerized Assessment, and Online Assessment, reflecting the integration of technology into the examination process (Whittington, Bull & Danson, 2000). Such computer-based examinations leverage technology for tasks ranging from question delivery to response storage and result reporting, offering a streamlined and efficient approach to assessment (Citigrad Technologies, 2015).

Stakeholders in the education sector emphasize the advantages of computer-based examinations, particularly in curbing malpractices and expediting feedback processes (Citigrad Technologies, 2015). However, the successful adoption of these systems relies heavily on the perceptions and attitudes of lecturers, who play a pivotal role in implementing such methodologies (Edumadze et al., 2014). Despite the potential benefits, challenges persist in terms of awareness, proficiency, and institutional support for e-learning platforms (Nyagorme et al., 2017). While students generally exhibit positive perceptions of e-learning, barriers such as low computer literacy and inadequate infrastructure hinder widespread adoption (Nyagorme et al., 2017). The importance of examinations in evaluating educational objectives cannot be overstated, as they serve multiple purposes, including promotion, employment, and scholarship awards (Jimoh, 2014). However, traditional examination practices are fraught with challenges such as malpractices, inadequate invigilation, and delays in result dissemination (Jimoh, 2014). Of particular concern are examination malpractices, which undermine the integrity of certificates and compromise the assessment of academic performance (Jimoh, 2014). In light of these challenges, the adoption of computer-based examination systems emerges as a potential solution to enhance the efficiency, reliability, and security of assessments (Akpan, 2011; Ajibola, 2011). By leveraging technology, institutions can mitigate the risks associated with traditional examination practices and ensure the validity and authenticity of assessment outcomes. However, addressing barriers to adoption,

including technological proficiency and infrastructure limitations, remains imperative to realize the full potential of computer-based assessment methodologies in educational settings.

**Table 1: Comparison of Computerized Systems, Web-Based Applications, and Programming Languages on the World Wide Web**

Aspect	Computerized Systems	Web-Based Application	Programming Languages on the World Wide Web
Definition	Automated systems integrated with computers	Applications accessed via the web	Languages enabling creation of interactive web interfaces
Efficiency	Minimizes time and manual effort (Malolos et al., 2002)	Updates and maintenance without software installation	Facilitates creation of interactive and visually appealing interfaces
Reliability	Highly reliable and powerful (Janes, 2001)	Ubiquitous client access (Bohle, 2002)	Supports interactive elements and user responsiveness
Speed	Faster processing compared to manual methods (Gurewich, 1999)	Worldwide distribution and broadcasting capability (Jurca, 1999)	Enables development of dynamic virtual environments (Ames, 1997)
Storage	Stores large amounts of data (Mane, 2000)	Capacity for data distribution (Nijaz, 2000)	Provides graphical and text-based information storage (Enright, 1999)
Access	Allows easy access to stored information (Bryan, 2018)	Enables collaboration and interaction (Nijaz, 2000)	Facilitates interaction with servers and execution of tasks (Newton, 1998)
Maintenance	Economical and supports improvement of maintenance (Adamski, 2007)	User-friendly and flexible to users (Shakya et al., 2017)	Allows development and editing with standard text editors (Enright, 1999)
Interactivity	Enhances user interactivity (Harold, 1997)	Supports real-time responsiveness (Newton, 1998)	Facilitates user interaction through scripting (Newton, 1998)
Challenges	- Need for ICT infrastructure and skill development	- Concerns about technical issues (Ilgaz & Adanir, 2019)	- Scripting complexities and errors (Valenti et al., 2002)
	- Essay writing challenges (Valenti et al., 2002)	- Security and validity concerns (Shraim, 2019)	- Need for infrastructure and expertise (Fluck et al., 2017)
	- Scripting difficulties (Valenti et al., 2002)	- Requirement for large question banks (Fluck et al., 2017)	- Contingency plans for technical faults (Fluck et al., 2017)

## 2.2 Electronic Examination

Ayo et. al. (2007) defines e-examination as a system that “involves the conduct of examinations through the web or the intranet” (p. 126). Though the definition of Wikipedia is that of e-assessment, it is related to e-examination. E-assessment in its broadest sense is the use of information technology for any assessment related activity Ayo et al. (2007) also say that e-

examination reduces the large proportion of workload on examination, training, grading and reviewing, thus bringing the ability for the institution to release examination results in record time. This is because where the lecturer would spend weeks marking scripts manually, the computer would grade the students as soon as they finish their paper.

### **2.3 Benefits of Online Examination**

Online teaching and learning will continue to become more important to world universities in order for them to remain competitive and economically viable. As online teaching and learning become widespread, the attention to online assessment increases. In the online environment, assessment is no less critical than in traditional face-to-face environments (Byrnes and Ellis, 2018) because assessment and measurement became an even more critical part of the educational process (Kerka and Wonacott, 2000). Basically, assessment plays different roles in teaching and learning process. It provides teachers with a means of evaluating the quality of their instruction. Students also use it to drive and direct their learning. Online assessments can be offered at different time, location or even different test or different students (Harvey and Moge, 1999). Thus, online exams are appropriate solution for assessment in online learning environment in which students learn at their convenient time and location (Xu and Wang, 2018).

### **2.4 Theoretical framework**

An individual attitude is an important variable in the learning process. Gattikor and Huaton (1992) observed that research accessing the attitude of the students and lecturers to the electronic examination is lacking. Al-Bayati and Hussein (2008) presents an applied generic software of multiple kinds of electronic examination packages, these package electronic examination materials of this package is translated into language of HI persons like sign language and finger spelling. The idea of the generic software is to present empty translate to the teacher who would like to develop his required his electronic examination for the needful topic such as mathematics, languages, science e.t.c

## **3.0 METHODOLOGY:**

### **3.1 Research Design**

The research was conducted by adopting a descriptive survey design to investigate the attitudes of students and lecturers towards electronic examinations in Borno State, focusing specifically on Maiduguri metropolitan council. Maiduguri, also known as Yerwa by its native inhabitants, serves as the capital and the largest city of Borno state in North-eastern Nigeria. Founded in 1907 as a military outpost by the British, Maiduguri has experienced rapid growth, with its population exceeding a million by 2007. Situated along the seasonal Ngalla River, which disappears into firkin Maiduguri, the city is estimated to have had a population of 1,197,497 as of 2007. The population of interest for this study were comprises students and lecturers from various tertiary institutions within Maiduguri metropolitan council. The residents of Maiduguri predominantly consist of Muslims, including Kanuri, Babur, Shuwa, Hausa, Shuwa, Marghi, and Fulani ethnic groups. Additionally, there is a significant Christian population, as well as people from Southern states such as the Igbo, Ijaw, and Yoruba. Given its status as the center of trading for northeastern Nigeria, Maiduguri offers a diverse and representative sample for the research on electronic examinations. The descriptive survey design was allowing for the collection of data regarding the

attitudes, perceptions, and experiences of students and lecturers towards electronic examinations in the context of Borno State. This design enables the researcher to gather comprehensive information from participants through the administration of structured questionnaires and interviews. The data collected was analyzed to provide insights into the acceptance, challenges, and preferences concerning electronic examinations among students and lecturers in Maiduguri

**3.2 RESULTS AND DISCUSSION:**

This chapter presents the findings of the study, focusing on the analysis and interpretation of data collected through structured questionnaires and interviews. The information obtained from the respondents was systematically organized to provide a clear understanding of their attitudes and perceptions towards electronic examinations in Borno State. Various tables were utilized to illustrate the opinions and responses of the participants within the scope of the study.

**3.3 Respondents' Ages:**

The distribution of respondents' ages is depicted in Table 1 below, based on data collected during the field survey conducted in 2023.

**Table 1: Distribution of Respondents' Ages**

Age Range	Number of Respondents	Percentage
20-24 years	93	66.4%
25-29 years	28	20.1%
30-34 years	15	10.7%
35-39 years	03	2.1%
40+ years	01	0.7%

The data indicated that the majority of respondents, 93 (66.4%), were between the ages of 20-24 years. This age group represents the largest proportion of participants in the study. Level of Education:

Table 2 illustrates the level of education of the respondents, categorized into ND I and ND II students.

**Table 2: Level of Education of Respondents**

Level of Education	Number of Respondents	Percentage
ND I	70	50.0%
ND II	70	50.0%

The results show an equal distribution, with 50% of respondents each being ND I and ND II students.

### 3.4 Respondent Analysis on Questionnaire:

Table 3 presents the respondents' analysis of the questionnaire items, particularly focusing on the difficulty level of using computers during e-examinations.

**Table 3: Respondent Analysis on Questionnaire**

Response	Number of Respondents	Percentage
Strongly Agree	109	77.9%
Agree	14	10.0%
Disagree	08	5.7%
Strongly Disagree	09	6.4%

The majority of respondents, 109 (77.9%), strongly agreed that the use of computers during e-examinations is not very difficult at all. This indicates a high level of confidence and comfort among participants regarding the technological aspect of electronic examinations.

### 3.5 General Discussion:

The findings suggest a positive attitude towards electronic examinations among the respondents, with a significant majority expressing confidence in the use of computers during e-examinations. This reflects a growing acceptance and adaptation to technological advancements in the academic sphere, particularly in assessment methods. However, further analysis and discussion are needed to explore the reasons behind the observed trends and to address any challenges or concerns raised by the respondents. Additionally, strategies for enhancing the implementation of electronic examinations, such as providing adequate training and support for both students and lecturers, should be considered to optimize the benefits of this mode of assessment.

### 4.0 Conclusion and Recommendations

This study explored the attitudes of students and lecturers towards electronic examinations at Ramat Polytechnic Maiduguri. The findings revealed a positive perception of e-exams, with participants acknowledging the benefits of immediate feedback and the potential for enhancing learning outcomes. The majority of respondents agreed that e-exams are suitable for both formative and summative assessments, highlighting the importance of constructive feedback in the learning process. In conclusion, this study has provided valuable insights into the attitudes of students and lecturers towards electronic examinations at Ramat Polytechnic Maiduguri. The findings reveal a generally positive perception of e-exams, with participants recognizing the benefits of immediate feedback and the potential for enhancing learning outcomes. The majority of respondents agreed that e-exams are suitable for both formative and summative assessments, highlighting the importance of constructive feedback in the learning process.

## **4.2 Recommendations:**

Based on the findings, the following recommendations are proposed to support the successful implementation of e-exams:

**Improve Scripting Ease:** Efforts should be made to enhance the scripting process in platforms like Maple, making it more user-friendly and compatible with commonly used applications such as Microsoft Word. This would help alleviate challenges faced by lecturers and promote wider adoption of e-exams.

**Promote Electronic Examinations:** Institutions should actively promote the adoption of e-exams over traditional pen-and-paper assessments, especially in open and distance learning environments in Nigeria. This can lead to greater efficiency and effectiveness in assessment processes.

**Develop Essay-Type Examinations:** Consideration should be given to the development and implementation of essay-type examinations, particularly for disciplines such as law. This would provide a more comprehensive assessment of students' knowledge and skills.

**Institutional Support:** University administrators and government authorities should prioritize the provision of necessary facilities and infrastructure for the full implementation of computer-based examinations in tertiary institutions. This includes ensuring access to reliable internet connectivity and adequate technological resources.

**Student Awareness:** Efforts should be made to raise awareness among students about the advantages of e-exams over traditional testing methods. This can help facilitate smoother implementation and wider acceptance of computer-based assessments.

## **REFERENCES**

- A. A. Olubiyi, O. Ajadi, and J. Inegbedion, (2011). "Perception of learners on electronic examination in open and distance learning institutions: case study of national open university of Nigeria, US, China," *Educational Review Journal*.
- Aborisade and Akinwale, (2010). "NOUN students grumble over poor academic environment," *The Punch*, vol. 30 May, pp. 8.
- Al-Saleem, S.M. & Ullah, H. (2014). *Security Considerations and Recommendations in Computer-Based Testing*. *The Scientific World Journal*. Retrieved February 20, 2018 from
- Anusha, N. S, Soujanya, T. S. & Vasavi, D. S. (2012). Study on techniques for providing enhanced security during online exams," *International Journal of Engineering Inventions*, 1(1), 32–37.
- Awoseyan and Kunle, "Stress and Success of NOUN examinations," *Nigerian Tribune*, July 1, pp.10, 2010
- Ayo, C. K., Akinyemi, I. O.; Adebisi, A. A. & Ekong, U. O.(2007). The prospects of e-examination implementation in Nigeria. *Turkish Online Journal of Distance Education*, 8(4), 125-134.

- Baleni Z. (2015). Online formative assessment in higher education: Its pros and cons. *The Electronic Journal of e-Learning*, 13(4), 228-236.
- Bernik, I., & Jereb, E.(2016). Students' Readiness for Electronic Examinations. *Proceedings of the 5th WSEAS International Conference on Education and Educational Technology*, Tenerife, Canary Islands, Spain, December 16-18,2016 142-145.
- C. A. Okonkwo, "Adapting on demand examination system in national open university of nigeria end of semester examination," *Online Journal on Distance Education* May 2011
- C. K. Ayo, I. O. Akinyemi, A. A. Adebisi, and U. O. Ekong, "The prospects of e-examination implementation in Nigeria."
- Chua, Y. P. C., & Don, Z. M.(2013). Effects of computer-based educational achievement test on test performance and test takers' motivation. *Computers in Human Behavior*, 29(5), 1889–1895.
- Conrad, R. M., & Openo, J. (2018). *The Cambridge Handbook of Instructional Design*. Cambridge University Press
- Cook, J. & Jenkins, V. (2010). *Getting Started with e-Assessment*. University of Bath. Retrieved February 13, 2017 from <http://opus.bath.ac.uk/17712/>.
- Dermo, J.(2009). e-Assessment and the student learning experience: A survey of student perceptions of e- assessment. *British Journal of Educational Technology*, 40(2), 203-214.
- Bates, A. W. (2019). *Teaching in a Digital Age: Guidelines for Designing Teaching and Learning*. Tony Bates Associates Ltd.
- Garrison, D. R., & Vaughan, N. D. (2013). *Blended Learning in Higher Education: Framework, Principles, and Guidelines*. John Wiley & Sons.  
<https://www.hindawi.com/journals/tswj/2014/562787/>
- Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2013). *Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies*. US Department of Education.
- OECD. (2015). *Students, Computers and Learning: Making the Connection*. OECD Publishing.
- Picciano, A. G. (2017). Blending with Purpose: The Multimodal Model. *Journal of Asynchronous Learning Networks*, 21(2), 29-40.
- Prensky, M. (2001). Digital Natives, Digital Immigrants Part 1. *On the Horizon*, 9(5), 1-6.
- Selwyn, N. (2018). *Education and Technology: Key Issues and Debates*. Bloomsbury Publishing
- Wheeler, S., Yeomans, P., & Wheeler, D. (2019). The Good, the Bad and the Wiki: Evaluating Student-Generated Content for Collaborative Learning. *British Journal of Educational Technology*, 40(1), 24-31.
- Wiley, D. A., & Sisson, J. (2006). Learning Objects. In R. K. Sawyer (Ed.), *The Cambridge Handbook of the Learning Sciences* (pp. 129-144). Cambridge University Press.
- Wong, L. H., & Looi, C. K. (2011). What Works and Why: Designing Educational Technologies that Foster Collaborative Learning. *Educational Technology*, 51(2), 8-22.
- Zheng, B., & Warschauer, M. (2015). Participation, Interaction, and Academic Achievement in an Online Discussion Environment. *Computers & Education*, 84, 78-89.