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CANDIDATES' EXPERIENCE WITH JOINT ADMISSIONS AND MATRICULATION BOARD (JAMB) E-FACILITY: THE CASE OF PRE-DEGREE STUDENTS OF DELTA STATE UNIVERSITY ABRAKA, NIGERIA

Esharenana E. Adomi[1], Violet E. Ikolo[2] and Sandra Amieke[3]
Department of Library and Information Science, Delta State University, Abraka, Nigeria[1,3]
Delta State University Library, Abraka, Nigeria[2]
Corresponding author: [1]eeadomi@delsu.edu.ng; esharenana.adomi@gmail.com

Abstract

The study examined candidates' experience with Nigerian Joint Admissions and Matriculation Board (JAMB) e-facility using students of Delta State University Abraka, Nigeria. The descriptive survey research design was adopted and the multistage sampling technique was used to select a sample size of 140 (but a total of 120 of them responded to questionnaire) from a population of 900 pre-degree students of Delta State University during the 2021/2022 academic session to participate in the study. Data were collected using a structured self-developed questionnaire entitled "Candidates' Experience with Joint Admissions and Matriculation Board (JAMB) E-facility Questionnaire". A response rate of 86% was recorded and collected data were analyzed using percentage, frequency and mean. The study found that a majority of the respondents had positive perception of the JAMB e-facility; the respondents are moderately satisfied with the some of the features of the JAMB e-facility and majority of the students indicated that they had great challenge of time constraint/management with use of the e-facility. Others indicated challenge of poor state of computer facility and malfunctioning of computer accessories and ICT access/use skills. The study recommended that candidates should be trained on time management techniques during UTMEs and on the features of the e-facility as well how to efficiently make use of it. This training should be done online by the Joint Admissions Matriculation Board before commencement of the sale of registration forms yearly. This will reduce the complaints of inadequate examination time/use of the e-facility and other challenges; that JAMB should ensure that it is easy to navigate its e-facility and make it user friendly.

Keywords: Joint Admissions and Matriculation Board (JAMB); E-facility; Delta State University Abraka, UTME

Introduction

Examination is one of the ways of testing knowledge and ability of individuals. Electronic examination is one of the products of advancement in information and communication technology (ICT). Its development was geared towards providing solutions to problems and limitations confronting the processes and procedures of conducting paper examinations. The concept of electronic examinations has widely become acceptable in many academic settings and by several examination bodies across Nigeria (Ndunagu, 2013). Among

such examination organizing bodies is the Joint Admissions and Matriculation Board (JAMB) (Adebayo & Abdulhamid, 2014).

The decision by JAMB to jettison the traditional paper and pencil test (PPT) mode and adopt the standardized Computer-Based Test (CBT) in 2015 was due to factors such as issues of security for examination officials, increased cost of producing writing materials for paper-based tests, increased cost of transporting materials and increased incidences of examination malpractices. Hence, a platform to successfully register for, conduct and carry out its online activities was activated. Known as the JAMB e-facility, it is a portal designed solely for students to perform all actions concerning its examinations (JAMB, 2015). The Unified Tertiary Matriculation Examination (UTME) is a computer-based examination conducted yearly by JAMB for registered candidates that seek admission into higher institutions (such as universities, polytechnics and colleges) in Nigeria.

The use of the JAMB e-facility has been found to hold several advantages such as its use to register and process all documentation before partaking in the UTME examinations. In addition, it has helped to reduce the cost of examination production, automatic marking, and fair grading, as well as standardization of the examination are among ways that the e-facility has been of value to not just the JAMB as an organization but also to candidates (Abah et al., 2022). Similarly, Khan et al. (2021) explained that, online examinations are having more advantages over conventional paper-based exams because of authenticity, and efficiency, however, there are strong challenges in security, validity, and impartiality.

However, despite all the obvious advantages to the deployment of JAMB e-facility for decades now, there are numerous reports of inadequacies and challenges faced by candidates when using JAMB e-facility before or during JAMB/UTME examinations (Abubakar & Adebayo, 2014; Ogechukwu, 2019). There are limited empirical evidence that survey UTME candidates' perception, satisfaction and challenges of using JAMB e-facility across the country, specifically, no studies have been found to focus on candidates from Southern Nigeria. This study aims to capture candidate's experience with the JAMB e-facility with particular focus on students of pre-degree programmes of the Delta State University, Abraka, Nigeria.

Objectives of the Study

This main objective of this study is to explore candidates' experience with the JAMB e-facility with particular focus on students of pre-degree programmes of the Delta State

University, Abraka, Nigeria. The specific objectives are to:

1. Determine the candidates' perceptions of the JAMB e-facility.
2. Examine how satisfied candidates are with the features/functions of JAMB e-facility.
3. Investigate the challenges faced by the candidates with the use of the JAMB e-facility?

Research Questions

The following questions are answered in the study:

1. What are the candidates' perceptions of the JAMB e-facility?
2. How satisfied are the candidates with the features/functions of JAMB e-facility?
3. What are the challenges faced by the candidates with use of the JAMB e-facility?

Literature Review

The Joint Admissions and Matriculation Board (JAMB) is a Nigerian board of examinations into tertiary level education in Nigeria. Established in 1978, the board was responsible for ensuring a uniform standard for the conduct of matriculation examination and placement of suitable candidates into the nation's Universities. In 2010, JAMB upgraded its examination practice from just the university entrance conducting body and became a body for entrance examinations into all categories of tertiary institutions in Nigeria. Thus, the Unified Tertiary Matriculation Examination (UTME) was born. UTME could be referred to as 'common entrance' examination conducted by the Joint Admissions and Matriculation Board (JAMB) of Nigeria on yearly basis for the sole purpose of selecting and placing suitably qualified candidates into Nigerian Universities (Imasuen & Ebuwa, 2020). Computer-based test was introduced in 2013. This gave rise to the installation of e-facilities across the country. According to JAMB (2015), JAMB e-facility is an online portal activated to cater for all activities concerning UTME examinations.

Since the introduction of CBT examinations by JAMB, several studies have been done to investigate different aspects of examinations. For instance, Sanni and Mohammad (2015) investigated Ahmadu Bello University (ABU), Zaria student's perception about e-facility use for CBT examinations in Nigeria. Using a sample of 237 students, results showed that the majority of the respondents preferred CBT examinations to the conventional pen and paper

examination, and that CBT was effective in curbing examination malpractice. Odo (2019) focused on student's perception of computer-based examination in Federal College of Education, Eha-Amufu, Nigeira. With a sample size of 300 students, the findings revealed a positive perception among the students on computer-based examination, the study however highlighted several problems hindering effective administration of CBT in the institution.

A recent study by Oyetola, et al (2022) concerning how students perceive availability, accessibility and the use of CBT examinations in the institution at the Ladoke Akintola University of Technology (LAUTECH) found that, 78% of the students were favorably disposed to the use of CBT for text and exams, however, most of the students, (98.8%) were of the opinion that the LAUTECH management needs to improve on facilities at the exam centers. Similarly, the study of Okocha (2022) examined the perception of undergraduate students towards computer-based testing by comparing several modules studied by undergraduate students in Nigeria, Results showed that the majority of students preferred computer-based testing to paper-based testing but were not willing to adopt this technique in all courses. Shobayo et al. (2022) also found that undergraduate students in Southwestern Nigeria had positive experience in the use of CBT and they perceived it as effective, while revealing concerns that the facilities at the CBT centers were insufficient.

Bello and Abdullah (2022) investigated students' satisfaction with computer-based assessment centers from three higher education institutions in Nigeria. Data were collected from 459 students using structural equation modelling. Their study revealed that satisfaction is influenced by the convenience of the CBT program and the quality of test facilities, such as computer monitors and chairs. Improvements in these areas can further enhance satisfaction. Leading the authors to conclude that student satisfaction with computer-based assessment centers in higher education is crucial. Also, this study carried by Kim et al. (2020) aimed to identify needed improvements to current evaluation methods in medical school computer-based test (CBT) programs and test environments in medical schools in Nigeria. To that end, the authors reported that it is essential to improve computer monitors, desks and chairs, and consider the student's body type. Their findings identified factors that require improvement in the CBT program and test environment in assessment tools.

Challenges as identified by Obioma et al. (2013) include inadequate ICT infrastructure such as hard-wares, soft-wares and bandwidth accessibility, the obsolete nature of facilities and infrastructures for automated examinations. The authors further observed that in some cases,

the facilities are overstretched in terms of capacity, accessibility, reliability and security. Again, the absence of internet facilities, high cost of internet access was seen as major setbacks to conducting CBT examinations in Nigeria. Ogechukwu (2019) also observed that challenges such as lack of infrastructural facilities, insufficient accommodation, equipment, power outage, incompetence on the part of the examinees among others affect the academic performance of senior secondary school entrants during CBT Jamb examinations in Anambra State. Students/candidates inadequate ICT skills have also been called to question as a challenge to the successful conduct of CBT examinations in Nigeria. Students, and sometimes teachers in primary and secondary schools cannot boot a computer not to talk of using any application, thus bringing about situations where the students cannot be adequately equipped for CBT (Ilesanmi & Lasisi, 2015).

Some studies from other African countries have also x-rayed students and how they perceive these computer-based examinations. Bahati et. al. (2019) observed that students from the University of Rwanda, also expressed satisfaction with the quality of e-assessments and facilities. Bello and Abdullah (2021) attempted to map quality factors that determined user satisfaction with an e-assessment system and found that the model dimensions explained about 49% of users satisfaction with e-assessment in Nigeria. In the same vein, Jaap et al. (2021) conducted an anonymous study to explore the experience of candidates during online examinations. The study reported that few students experienced technical or practical problems in completing their exam remotely. However, most of the students preferred the traditional setting of invigilated exams.

Methodology

This study adopted the descriptive survey design. The population consists of all the 900 cpre-degree students of Delta State University for the 2021/2022 academic session. The choice of pre-degree students was because of their familiarity with and immediate experience with the UTME e-facilities. The study adopted the multistage sampling technique to select the sample size for the study. In the first stage, two departments were purposely selected from 7 faculties running pre-degree programmes. This made it a total of 14 departments that participated in the study. Next, 10 students were randomly selected from each of the departments, giving a sample size of 140 students used as sample for the study. Data were collected using structured self-developed questionnaire entitled “Candidates’ Experience with Joint Admission and Matriculation Board (JAMB) E-facility: The Case of Pre-degree Students of Delta State

University Abraka, Nigeria Questionnaire". It was a five-point Likert scale. A total of 140 copies of questionnaire were self-administered to students in the different faculties over a period of one week and 120 (86%) were retrieved and found usable for the study. Data were analyzed using frequency, percentage and mean.

Results

Table 1: Department of Respondents in the Pre-Degree Programme

Faculty	Department	Frequency	Percentage (%)
Arts	Music	8	6.6
	Linguistics	7	6
Basic Medical Science	Nursing Science	8	6.6
	Pharmacology	9	7.5
Social Sciences	Economics	10	8.3
	Business Administration	8	6.6
Sciences	Botany	9	7.5
	Science Laboratory Technology	7	6
Education	Library and Information Science	9	7.5
	Science Education	10	8.3
Engineering	Civil Engineering	9	7.5
	Electrical Engineering	8	6.6
Agricultural Sciences	Agricultural Economics	9	7.5
	Fisheries	9	7.5
Total		**120**	**100**

Table 1 shows the faculties and departments of the respondents. A total of 140 copies of questionnaire were administered but 120 (86%) were completed and retrieved. From the results, Economics and Science Education departments accounted for 10(8.3%) each of the respondents. Pharmacology, Botany, Library and Information Science, Civil Engineering, Agricultural Economics and Fisheries each attracted 9(7.5%) respondents, while the lowest number of respondents were students from linguistics and Science Laboratory Technology 7(6%) respectively.

Research Question One: What are the candidates' perceptions of the JAMB e-facility?
This question is answered with the data in Table 2.

Table 2: Perception of JAMB e-facility

JAMB e-facility perception	Mean $\bar{x}$	Decision
Jamb e-facility use provides immediate feedback about my performance	3.64	Agee
Jamb e-facility provides unbiased grading	3.09	Neutral
Jamb e-facility reduces the exam stress	3.73	Agree
Jamb e-facility is convenient and flexible	4.13	Agree

Jamb e-facility is fast	3.95	Agree
Grand $\bar{X}$	3.70	Agree

Decision rule: **Strongly Agree 4.51 – 5, Agree 3.51 – 4.5, Neutral 2.51 – 3.5 Disagree 1.51 – 2.5, Strongly Disagree 1.5 - 1**

Table 2 shows the candidates' perception of the JAMB e-facility. Convenient and flexible attracted the highest mean score ($\bar{x}$= 4.13), This represented 82.6% of the respondents who saw the e-facility as convenient and flexible for them to use. Facility was regarded as being fast ranked second ($\bar{x}$ = 3.95). It is very surprising that the JAMB facility providing unbiased grading attracted the mean score of 3.09. This mean score represents 61.8% of the respondents, which implies that more than half of the respondents are unsure about the integrity of the grades the e-facility provides. However, the data in the table generally implied that a majority of the respondents had positive perception of the JAMB e-facility.

Research Question Two: How satisfied are the candidates with the features/functions of JAMB e-facility?
This question is answered with the data in Table 3.

Table 3: Candidates Satisfaction with features of JAMB e-facility

Jamb E-Facility Features	Mean $\bar{x}$	Decision
Registration for UTME examination	2.88	Moderately Satisfied
Checking of UTME result	3.50	Moderately Satisfied
Correction of data	2.24	Slightly Satisfied
Jamb regularization	2.29	Slightly Satisfied
Submission of indemnity form	2.08	Slightly Satisfied
Uploading of O' level result	4.06	Very Satisfied
Update of profile	2.76	Moderately Satisfied
Check all transactions that occur	3.00	Moderately Satisfied
Print admission letter	2.66	Moderately Satisfied
Print mock result	3.47	Very Satisfied
Change of password	3.09	Moderately Satisfied
Apply for transfer	2.08	Slightly Satisfied
Normalization of irregular admission	2.23	Slightly Satisfied
Sandwich registration	1.87	Slightly Satisfied
Part-time registration	2.26	Slightly Satisfied
Grand $\bar{X}$	**2.69**	**Moderately Satisfied**

Decision rule: **Extremely Satisfied 4.51 – 5, Very Satisfied 3.51 – 4.5, Moderately Satisfied 2.51 – 3.5; Slightly Satisfied, 1.51 – 2.5, Not At All Satisfied 1.5 - 1**

The respondents were requested to indicate their level of satisfaction with the various

features of the JAMB e-facility they used. Table 3 shows that the feature of uploading of ordinary level (O'Level) result had the highest mean of 4.06 of respondent who were very satisfied with its use. Thus, 81.2% of the respondents are very satisfied with the use of JAMB e-facility for uploading results. Printing of mock result ranked second with $\bar{x}$=3.47 (Very Satisfied). Implication of these mean scores is that the features of results are easy for the JAMB candidates to use. The table further reveals the grand mean to be 2.69 which is moderate satisfaction. The grand mean implies that 53.8% of the respondents are moderately satisfied with the use of the features of the JAMB e-facility.

Research Question Three: What are the challenges faced by the candidates with use of the JAMB e-facility?
This question is answered with the data in Table 4.

Table 4: Challenges with the use of the JAMB e-facility

Challenges	Mean $\bar{x}$	Decision
Poor network	2.01	Somewhat of a challenge
Fluctuation of Internet Network	2.03	Somewhat of a challenge
Power supply failure during examination	1.43	Not a challenge
Poor State of Computer Facility and Malfunctioning of Computer Accessories	2.98	Moderate challenge
Time constraint/management	3.85	Great challenge
High Cost of Data	2.55	Moderate challenge
Limited ICT access/use skills	3.42	Moderate challenge
Grand $\bar{X}$	**2.61**	**Moderate challenge**

Decision rule: **Extreme Challenge 4.51 – 5, Great Challenge 3.51 – 4.5, Moderate Challenge 2.51 – 3.5 Somewhat of a Challenge, 1.51 – 2.5, Not a Challenge 1.5 - 1**

Table 4 reveals the challenges encountered by the candidates with the use of JAMB e-facility. From the response, majority of candidates indicated that they had great challenge with time constraint/management ($\bar{x}$ = 3.85) when using the e-facility. The mean score ($\bar{x}$ = 3.85) shows that77% also have great challenge of time constraint/management with use of the e-facility. Poor state of computer facility and malfunctioning of computer accessories attracted $\bar{x}$ = 3.73 limited ICT access/use skills ($\bar{x}$ = 3.42), which implies that 68.4% of candidates have moderate challenge. The $\bar{x}$ = 2.03 and 2.01 for fluctuation of Internet network and poor network respectively show that these are somewhat of a challenge to candidates. This implies that fluctuating network is not much of a problem and lastly, the $\bar{x}$ = 1.43 reveals that power supply is not a challenge at all.

Discussion

The study surveyed candidates experience with the use of e-facility of JAMB with focus on the Pre-degree students of the Delta State University, Abraka, Nigeria. responses were recorded from pre-degree students in Economics, Science Education, Pharmacology, Botany, Library and Information Science, Civil Engineering, Agricultural Economics and Fisheries, linguistics and Science Laboratory Technology départements. Majority of the candidates reported a positive perception of JAMB e-facility. They perceived the e-facility to be convenient, flexible and fast. However, they also indicated that they are unsure about the integrity of the grades the e-facility provides. This finding is in accord with the reports presented by Sanni and Mohammad (2015), and Odo (2019), where they reported from their respective studies that there was positive perception among students about e-facility use for CBT examinations in Nigeria.

Overall, candidates are moderately satisfied with JAMB e-facility features. The feature which had the highest satisfaction was uploading of ordinary level (O' Level) and printing of mock result features. Candidates were moderately satisfied with features such as registration for UTME examination, checking of UTME results, updating of profile and checking of all transactions; others were slightly satisfied with features such as correction of data, regularization, submission of indemnity form, transfer application forms etc. This result corroborates that from several authors which show that student's overall satisfaction with CBTs is based on for various reasons, such as improved performance outcomes, immediate feedback they provide and the quality of services and facilities at the CBT centers (Kim, et al., 2020; Bello & Abdullah, 2022). This finding is also in tandem with Oyetola, et al (2022) who reported that most LAUTECH students wanted the university management to improve facilities at the CBT exam centers.

Candidates encountered moderate challenges with using the JAMB e-facility. Majority of them indicated that they had great challenge with time constraint/management when using the JAMB e-facility. This may be attributed to slow systems/network response when using the e-facility as some of them may not have adequate bandwidth to carry the number of systems they have. This challenge of time constraint/management may also be attributed to candidates' inability to plan and manage the time allotted to JAMB computer-based tests. Also, some candidates indicated poor state of computer facility and malfunctioning of computer accessories, limited ICT access/use skills as moderate challenge. This implies that most of the

candidates ICT skills are deficient. Also worthy of not from the result is that candidates indicated that fluctuating Internet network and poor are not much of a challenge and electricity power supply is not a challenge at all. This is good news and could probably be attributed to various Internet service providers in the country today, while many centers have different sources of alternative power supply, so that during UTME examinations, the incidences of failure of electricity are no longer noticeable. The finding disagrees with Ebimgbo and Igwe (2021) because the authors listed power and software failure as main challenges to the use of CBT in Nigerian universities.

Conclusion

The study surveyed candidates experience with JAMB e-facility using students undergoing pre-degree programme at the Delta State University, Abraka as case study. Candidates have positive perception towards the use of the JAMB e-facility. In addition, they are moderately satisfied with the use of the features of the JAMB e-facility. However, the major challenge to the use of JAMB e-facility for the candidates is time constraint/management.

Recommendations

Based on the findings, the following recommendations are made:

1. Students should be trained on time management techniques during UTMEs through orientation, video tutorial, on how to efficiently make use of the JAMB e-facility. This training should be done online by the Joint Matriculation Board before commencement of the sale of registration forms yearly. This will reduce the complaints of inadequate examination time/use of the e-facility etc.

2. JAMB should ensure that it is easy to navigate its e-facility and make it user friendly.

References

Abah, J. A., Honmane, O., Age, T. J., & Ogbule, S. O. (2022). Design of single-user-mode computer-based examination system for senior secondary schools in Onitsha north local government area of Anambra state, Nigeria. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.4061818

Adebayo, O., & Abdulhamid, S. M. (2014). E-exams system for Nigerian universities with emphasis on security and result integrity. *arXiv [Cs.CY]*. https://doi.org/10.48550/ARXIV.1402.0921

Bahati, B., Fors, U., Hansen, P., Nouri, J., & Mukama, E. (2019). Measuring learner satisfaction with formative e-assessment strategies. *International Journal of Emerging Technologies in Learning (iJET)*, *14*(07), 61. https://doi.org/10.3991/ijet.v14i07.9120

Bello, H., & Abdullah, N. A. (2022). Modelling students' satisfaction with computer-based assessment (CBA) environments in higher education: The roles of CBA center service satisfaction and perceived trust. *Electronic Journal of E-Learning*, *20*(5), 605–622. https://doi.org/10.34190/ejel.20.5.2595

Ebimgbo, S. O., & Igwe, N. J. (2021). Perceived effectiveness of computer-based test examination mode for large classes among undergraduates of Nigerian Universities. *Journal of Social Work in Developing Societies*, *3*(1). https://journals.aphriapub.com/index.php/JSWDS/article/view/1256

Ilesanmi, O. A., & Lasisi, F. A. (2015). Nexus of change management on organizational performance and survival in Nigerian universities: A case study of university of Ilorin. *International Journal of Business and Management Review*, *3*(4), 66–81.

Imasuen, K., & Stanley, O. E. (2020). Unified Tertiary Matriculation Examination (UTME) and the Post Unified Tertiary Matriculation Examination (PUTME) as predictors of undergraduate students' final grades. *International Journal of Interdisciplinary Research Methods*, *7*(3), 48–60.

Jaap, A., Dewar, A., Duncan, C., Fairhurst, K., Hope, D., & Kluth, D. (2021). Effect of remote online exam delivery on student experience and performance in applied knowledge tests. *BMC Medical Education*, *21*(1). https://doi.org/10.1186/s12909-021-02521-1

Joint Admissions and Matriculation Board (JAMB). (2015). *Application statistics*. Joint Admissions and Matriculation Board (JAMB). http://www.jamb.gov.ng

Khan, M. A., Vivek, V., Khojah, M., Nabi, M. K., Paul, M., & Minhaj, S. M. (2021). Learners' perspective towards E-exams during COVID-19 outbreak: Evidence from higher educational institutions of India and Saudi Arabia. *International Journal of Environmental Research and Public Health*, *18*(12), 6534. https://doi.org/10.3390/ijerph18126534

Kim, S. G., Lee, A., & Hwang, I. (2020). Analysis of the satisfaction with computer based test

program and test environment in medical school. *Korean Medical Education Review*, *22*(3), 198–206. https://doi.org/10.17496/kmer.2020.22.3.198

Ndunagu, J. (2013). *The electronic examination in Nigerian universities: A case study of NOUN*. [Conference presentation]. Commonwealth of Learning. https://oasis.col.org/items/1771e305-d1ce-436f-9c27-fa3fdf0f4241.

Obioma, G., Junaidu, I., & Ajagun, G. (2013). *The automation of educational assessment in Nigeria: Challenges and implications*.

Odo, J. A. (2019). Students' perception of Computer Based Examination in Federal College of Education Eha-Amufu. *Journal of Pristine,* 15(1), 1-6.

Ogechukwu, O. (2019). Challenges of 2018 Computer Based Test (CBT) jamb examination for senior secondary school students' academic performance in Anambra State, Nigeria. *Nigeria. European Journal of Education Studies*, 6(3), 266-277. https://oapub.org/edu/index.php/ejes/article/view/2506/5144

Okocha, F. (2022). Student perception of computer-Based Testing in Kwara state, Nigeria. *International journal of web-based learning and teaching technologies*, *17*(1), 1–11. https://doi.org/10.4018/ijwltt.294575.

Oyetola, S. O., Ogunmodede, T. A., & Sobalaje, A. J. (2019). Student's perception of computer-based test (CBT) in a university of technology in Nigeria: Librarians' perspective. *Lagos Journal of Library and Information Science,* 11(1). https://www.journalquality.info/jpps-criteria/inactive-title.

Sanni, A. A., & Mohammad, M. F. (2015). Computer based testing (CBT): An assessment of student perception of JAMB UTME in Nigeria. *Computing, Information Systems, Development Informatics & Allied Research Journal*, 6(2), 13-28.

Shobayo, M. A., Binuyo, A. O., Ogunmakin, R., & Olosunde, G. R. (2022). Perceived effectiveness of Computer Based Test (CBT) mode of examination among undergraduate students in south-western Nigeria. *International Journal of Education, Library and Information Communication Technology*, *1*(1). https://ijelict.acu.edu.ng/index.php/ijelict/article/view/88.