

Original Paper

Current Trends in Assessment and Research in Global Education: The Computer Based Test of Joint Admission and Matriculation Board: Retain or Discard in Nigeria

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Abstract

The study investigated the current trends in assessment and research in global education. The computer based test of Jamb retain or discard in Nigeria. The current knowledge driven era have caused many changes in order to catch up with the rest of the world. Computer Based Test of Jamb is one. Maintaining a level of integrity is another driving force for the introduction of computer based test. The study used three workforce of the society viz stakeholders, secondary school teachers and secondary students. Survey research design was introduced in the study. Three sampling methods were used to get the sample, they are purposive, cluster and stratified random sampling. Nine hundred (900) respondents were selected in the process. The instrument used for data collection was "Computer Based Test of Jamb Questionnaire (CBTOJQ)" developed by the researchers. The instrument contained two sections A and B, "A" was all about bio-data of the respondents while "B" had fifteen items which was used to generate data for the study. Face and content validities were used to ascertain the validity of the instrument while Cronbach alpha method was used to determine the reliability of the instrument which resulted to 0.75. Data were analyzed using percentages to answer the research question while chi-square and Analysis of Variance (Anova) were employed to test the hypotheses at 0.05 level of significance. The results were discussed and certain recommendations were also made. That even

though computer based test is fraught with malpractice, it could be strengthened the more with necessary paraphilia so as to catch up with the global trend. It should be retained.

1. Introduction

The issue of assessment have evolve in various dimensions culminating to what is now known as current trends globally. Assessment is data gathering strategies, analysis and reporting processes which, provide information that can be used to whether or not the intended learning outcomes are being achieved (Emaikwu, 2011). Furthermore, assessment is a process of assembling relevant data that would aid evaluation process. There are various forms of assessment which are sources of information to generate data that will be used to evaluation a programme or students' performance. Test particularly can be used in a predictive form where students are required to write examination with those who make the criterion mark and above from those that fell below the criterion mark and below. This is the role of Joint Admission and Matriculation Board by the enabling Act, it was vested with the responsibility of conducting entrance examination into all tertiary institutions in Nigeria. In (2010) there was this merging of universities Matriculation Examination, Monotechnics, Polytechnics and Colleges of Education under the umbrella of unified Tertiary Matriculation Examination. The aftermath of this development was integrity, it was characterized with lots of examination malpractice making the examination to lack credibility. With this merger, students became more apprehensive, the testees construed the examination as serious hindrance amidst the avid, get it by all means syndrome and their life's goal was conceived to be hanging in the balance, applicants employed various means ranging from every hook and crook means to achieve their aims without minding whose horse was gored. At a point the exam became very violent. This trend culminated to Unified Tertiary Matriculation Examination's Computer-Based Testing as introduced by erudite scholar Prof. DibuOjerinde (OON). The wisdom behind this innovation was to reduce examination malpractice to its bearest minimum and give the test a human face with civility.

With the introduction of computer based test more sophisticated methods of cheating emerged. Smuggling of live questions, collusion with officials within examination halls, refusal to follow marking guides/schemes, impersonation, use of mobile phones, Ipads and wearing of mobile phone wrist watches, organized cheating, wireless earpiece, use of social media to cheat and lack of e-registration slip. Jambs experience in conducting the CBT examination more complex forms of cheating emerged like Faraday cage; global positioning system; collusion and hackers checked; close circuit television and cheat resistant laptops.

Cyberspace Ltd (2014). This is a training manual of JAMB CBT which outlined most of the challenges plaguing the organization which are mostly logistics and technically related challenges. Some of them are computer hardware and peripheral devices, viruses, Trojans, spywares malwares, equipment failures, slow internet connection, lack of inverters, universal power storage, just to mention a few.

There is no doubt that in this era of knowledge driven society, computer has become inevitable, hence

Computer Based Test (CBT) have come to stay as a recent innovative system in the world of testing and assessment. In view of the factors outlined above, as challenges of this innovative testing and the students' protest, should this type of selection test continue or be discarded in Nigeria? This forms the bases upon this study is built.

It should be noted that, the issue of examination did not start now. The crime began long before Nigeria had her independence Fassi (2008) reported in chronicle of January 9, 1992 how live question. Papers of senior Cambridge local examination syndicate was leaked. Arijesuyo (2010) reported several efforts made by successive government to forestall examination malpractice tantamount to the repel of the former and replacing it with Examination Malpractice Act of 33 of 1999 which was a corrective measure, prescribing fines of N50,000; N100,000 and a three-to-four year jail term for convicts.

There is no doubt that, many schools in Nigeria do not have computers, moreso the schools cannot afford the exorbitant fees for internet connection (Adina-Ogiegban & Iyami, 2005) this becomes a disservice to students who may be preparing for the CBT examination.

There is no examination that is devoid of anxiety, Dukes, Discenta, and Couger (1999) in Emecheta (2015) reported a study by Weinberg (1980) and Wemberg, England, and Niod (1981) in their studies that computer anxiety were prevalent. These scholars described computer anxiety as a response to interaction or anticipation of interaction with automated data or information processing system. Test of computer most times affect their performance. Lack of requisite telecommunications, Infrastructures capable of transporting multimedia messages (Osei, 2007). This is a very vital and sensitive factor that dictates the success or failure of a test using the computer in an area where there is no coverage, will surely witness incontrovertible connectivity hiccup surajo and Rislan (2013) Information and Communication Technology (ICT) applicants in both primary and secondary schools have some of the failing factors. Some of them are lack of interest in teachers due to their inability to use the ICT facilities and lack of computing facilities in most of the public schools and lack of access to computing facilities after school hours.

2. Theoretical Framework: Drive Reduction Theory

The theoretical framework in this study is the Drive Reduction Theory (DRT). This theory states that, man by nature must satisfy certain primary needs such as hunger, thirst, need to avoid pain, activities and sleep etc. He also needs to satisfy secondary needs such as crying, sucking and laugh inability to satisfy these needs results in tension or anxiety. This anxiety can be acquired through the association of the physiological reactions of fear with painful stimuli. To reduce anxiety requires the property of reinforcement. This means that reinforcement through the reduction of a primary drive gives way to motivation, which in turn gives rise to reinforcement through the reduction of secondary drives. This exercise **is carried out by the process of stimulus generalization and stimulus** substitution (Burns, 1980; Ibeh, 1991; Iwundu, 1995; Uzoeshi & Iwundu, 2002).

Until you get admitted into a university, and graduate you will not vouched of having a meal ticked for

life. You will be in comatose hence the primary needs of hunger, thirst, avoidance of pain and sleep will remain a mirage or unfulfilled. Anxiety would be ushered into your life and so to reduce this you need reinforcement in order to reduce the primary drive through the acquisition of a comfortable score in the UTME which will guarantee you a slot in the university. Thereafter you need motivation to enable you come out with a resounding success as a graduate. It is on this note that hunger, thirst, pain and sleep can become a forgotten issue.

3. Purpose/Objectives

The purposes or objectives of the study are to:

- (1) Determine the continual existence of Unified Tertiary Matriculation Examination Computer Based Testing.
- (2) Find out areas of modification since the global trend is tilting towards computer and e-assessment.
- (3) Identify mindsets of respondents towards JAMB's Computer Based Testing (CBT).

4. Research Questions

- 1) What are the perceived factors militating against the running of computer based testing.
- 2) What are the perceived factors hindering the smooth conduct of computer based testing by JAMB as a corporate body.

4.1 Hypotheses

Ho1: There is no significant difference between the means of opinions of respondents based on gender.

Ho2: There is no significant difference in the means of stakeholders, secondary school teachers and students towards the state of Computer Based Testing (CBT).

4.2 Methods

The study examined the current trends in assessment and research in global education: Computer Based Assessment Test (CBT) of Joint Admission and Matriculation Board Retain or discard in Nigeria. The survey research design was used, while the population of the study comprised of all stakeholders in South-South Geo-political zone including teachers and students. The sample of the study consisted of nine hundred stakeholders, three hundred secondary school teachers three hundred and students 300 who are directly involved in the test (CBT) of Jamb. The instrument for the study was titled "Computer Based Test of Jamb Questionnaire (CBTOJQ) which was developed by the researchers to generate data for the study. The validity of the instrument was ascertained by the use of face and content validities by three psychometricians. Their comments and observations were incorporated in the final copy of the instrument. The instrument was divided into two sections A and B. A was all about the bio-data of the respondents while section B contained the 15 items that were raised to generate data for the study. Scoring was dichotomous of Yes and No. This was done in order to capture the "observed" and expected frequencies. Cronbach alpha method was used to determine the reliability of the instrument which resulted to a co-efficient of 0.75. Data generated was analyzed using count and percentages to

answer the research questions while chi-square and one way Analysis of variance were used to test the hypotheses at 0.05 level of significance.

Research Question 1: What are the factors militating against the running of Computer Based Test of Jamb.

Table 1. Frequencies and Percentages of Computer Based Test of JAMB Challenges

| S/N | Description of Items | | Yes | No | Total |
|-----|----------------------|---|---------------|---------------|---------------|
| 4 | Cluster | The use of modern electronic gadgets to cheat in the examination is the in thing now | 700 (77.8) | 200 (22.2) | 900 (100%) |
| 6 | | Touts and communities collude to attack examination officers | 500 (55.6) | 400 (44.4) | 900 (100%) |
| 7 | | Teachers provide solutions to the questions for a general fee as the examination progresses | 800 (88.9) | 100 (11.1) | 900 (100%) |
| 9 | | Impersonation is common practice in any examination | 200 (22.2) | 700 (77.8) | 900 (100%) |
| 10 | A | Passing prepared answers through invigilators and other mercenaries are common centre custodians are not part of the malpractice trend. | 740 (82.2) | 160 (17.8) | 900 (100%) |
| 11 | | Centre custodians are not part of the malpractice trend. | 100 (11.1) | 800 (88.9) | 900 (100%) |
| 213 | | Hackers are not helping matters in CBT examination of JAMB | 850 (94.5) | 50 (5.5) | 900 (100%) |
| 14 | | The exam is generally hitch free in all cases | 360 (40) | 540 (60) | 900 (100%) |
| 15 | | Security operatives and town vigilantes help to secure the examination. | 34(92.7) | 73 (7.3) | 900 (100%) |

Table 1 shows that, the frequencies and percentages of perception of factors militating against the swift running of Computer Based of Jamb Test. It was observed that 5 items were in the affirmative ienos 4,6,7,10 &13 with means of 22.2, 44.4, 11.1, 17.8 and 5.5 an indicating that the items were factors that were responsible for examination for malpractice in CBT of JAMB while 4 items had a no response on them. The respondents were of the view that impersonation are no longer common, custodians are practically part of the game security operatives and vigilantes also support the art. With CBT hitch free is not in all cases. These four items generated a mean of 77.8; 88 & 60.0

Research Question 2

Table 2. Frequencies and Percentages of Jamb's Challenges

| S/N | Description of Items | Yes | No | Total |
|-----|---|---------------|---------------|---------------|
| 1 | Cluster Solutions to the question are copied on alms and thighs in order to cheat | 780 (86.7) | 120 (13.3) | 900 (100%) |
| 2 | Candidates are charged 500 to 1,00 to ensure that the fraudulent operation is carried out smoothly. | 842 (93.6) | 58 (6.4) | 900 (100%) |
| 3 | Unequal access to computers in public schools | 780 (86.7) | 120 (13.3) | 900 (100%) |
| 5 | Computer teachers are few and are unable to meet up the workload | 850 (93.3) | 60 (6.7) | 900 (100%) |
| 8 | The issue of power supply is a bane to the system of CBT | 760 (84.4) | 140 (15.6) | 900 (100%) |
| 12 | Maintenance personnel are handy to effect repairs on dysfunctional facility | 110 (12.2) | 790 (87.8) | 900 (100%) |

From Table 2, it was seen that items in cluster B, 1, 2, 3, 5 and 8 were all factors on the part of Jamb in executing the Computer Based Test (CBT) with a mean above 50 were items while item 12 as the respondents said no meaning that maintenance personnel were not always handy during CBT examination in case of any breakdown of the equipment. Even where you have them the tendency is that after the breakdown it would have been obsolete to fix the equipment and continue the exam without schemes.

Hypothesis I

There is no significant difference between male and female respondent's opinions towards computer based test

Table 3. Chi-Square Testing of Respondents' Opinion on CBT of Jamb

| Variable | N | CBT Examination | | |
|----------|-----|-----------------|----------|-----|
| | | Agree | No | |
| Male | 450 | 450(345) | 70(105) | 520 |
| Female | 450 | 240(345) | 140(105) | 380 |
| | | 690 | 210 | 900 |

$$Df = (R-1)(C-1) \text{ Row and Columns} \\ (2-1)(2-1) = 2$$

$$X^2 = \text{Calculate Value} = 7.54$$

$$X^2 = \text{critical value} = 5.99$$

Result Reject

Table 3 shows that since the calculated value of 7.54 was more than the critical value of 5.99. The null hypotheses is rejected implying that opinions of respondents towards computer based test depended on sex males and females and both sexes have different opinions towards the computer based test.

Hypothesis 2

There is no significant difference among the three groups of stakeholders, secondary school teachers and students in their opinions towards computer based test of Jamb.

Table 4. Analysis of Variance Result on the Opinions of Stakeholders, Secondary School Teachers and Students towards CBT

| Source of variance | Sum of square | Df | M.sum of square | T.cal value | T-tab value | Result |
|--------------------|---------------|-----|-----------------|-------------|-------------|-----------------|
| Between Group | 10,825 | 2 | 486.381 | 2.84 | 2.99 | Not significant |
| Within Group | 16,462 | 897 | 897 | | | |
| | 27,28 | | | | | |

Table 3 presented the result of Anova of the three groups that was used for the study. The sum of square was 10,825 with a degree of freedom of 2 mean sum of squares was 486.381 against within group sum of squares of 16,462 with a degree of freedom of 897 and a means sum of squares of 549.082 at the end, calculated value was 2.84 while the Table value was 2.99. Since the calculated value of 2.84 was lesser than the Table value of 2.99, the hypothesis remains not significant there was no need for a scheffe test since the result show that no significant difference existed the mean of the groups of stakeholders, secondary school teachers and students in their opinions towards computer based test of Jamb

5. Discussion

In identifying the factors that are, militating against computer based Test Jamb, Table I in cluster A shows that the respondents were in total agreement, and that all the items except 9, 11, 14 and 15 that the respondents disagreed that they were not challenges of CBT of Jamb.

In Table 2 of cluster B respondents opined that items were related to issues boarding on CBT of Jamb operations while 87.8% said no that maintenance personnel were not always handy whenever the equipment's breakdown in the process of the examination. This finding is in line with that of Onogie (2012) who discovered that the greatest challenge plaguing CBT of jamb and most electronic oriented examination are the problem of maintenance personnel they are always not their whenever you need them seriously. Table 3 indicates that there was no significant difference between male and female respondents towards computer based test of Jamb. Based on the outcome of the study the null

hypothesis of no difference was found, this is in corroboration with Osemeke (2011). There was no significant difference between male and female respondent's opinions towards CBT of Jamb. In Table 4 indicates that, there is no significant difference among the three groups in their opinions towards CBT of Jamb using Anova it was salient that the three categories of respondents were concord in their opinion of no difference existing in their choice of opinions to CBT of Jamb. This finding is in agreement with that of Ukwuije (2002) who found that no significant difference existed when Anova was used in determining relationships among three different groups of uniform tendency.

6. Conclusion and Recommendations

The study clearly shows that all the issues raised as challenges in the smooth conduct of CBT of Jamb were all vindicated by the respondents meaning that they exist but all that were not enough to discard the CBT of Jamb rather government should intensify all available machinery to ensure that internal challenge of Jamb are ameliorated, while on part of the students, awareness campaign on the mass media on the implications of examination malpractice should be stressed so as to reduce examination malpractice to the bearest minimum.

- * Based on the above the following recommendations are made.
- * Electricity supply should be stable especially throughout, the period of the examination.
- * Functional equipment should be provided for the students and government should establish special centers where routine practices would be carried out by the students aspiring to take Jamb CBT.
- * The activities of hackers should be closely monitored, anyone caught should be dealt with as a deterrent to other.
- * Men and women of integrity should be used as ad-hoc personnel to conduct such examinations.
- * An alternative mechanism should be introduced so that the emphasis on paper qualification syndrome would be drastically reduced.

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