



Research Paper

## An Assessment of Examiners and Students' Attitudes in Joint Admission and Matriculation Board towards Computer-Based Tests in Kaduna State, Nigeria

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**Abstract:** As the world in advancing in technological assessment so also the process of assessing learners in cognitive domain takes a new assessment format with respect to science and technology known as Computer-Base Test (CBT). On these bases, the study focused on an assessment of examiners and students' attitudes in Joint Admission and Matriculation Board (JAMB) towards Computer-Based Tests (CBT) in Kaduna State, Nigeria. Two research questions and its corresponding hypotheses guided the study. The study adopted an exploratory cross-sectional survey research design and 1,400 examiners and students were used as a sample size drawn from the total population of 1.90001,436 examiners and students who registered and sat for JAMB/UTME 2020/2021 in Kaduna State using a multi-stage stratified random sampling technique. The researchers developed an instrument for data collection entitled "Examiners and Students Attitude Scale toward Computer-Base Test" (ESASCBT) contained 16 structured items used for data collection. ESASCBT was anchored on the 4-point scale was validated which yielded 0.85 validity index and 0.79 reliability index. Descriptive statistics was used to answered research questions while Chi-square ( $\chi^2$ ) was used to test the null hypotheses at 0.05 level of significance using SPSS version 23 on the arrayed of cross-tabulation and the findings revealed that poor internet network, failure of electricity, unfavourable examination halls among others. Further results revealed that there was a significant different in attitude of examiners and students in JAMB toward CBT and there was no significant different in the attitude of male and female students in JAMB toward CBT in Kaduna state. It was recommended that appropriate measures should be taken by concerned stakeholders to find out means of eliminating and minimizes the challenges confronting examiners and students in subsequent CBTs.

**Keywords:** Assessment, examiners, Students, Attitudes, JAMB, CBT

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### I. INTRODUCTION

Education is the process of becoming critically aware of one's reality in a manner that leads to effective action upon it. Education therefore, remains the bedrock for national development. For a country to be technologically sound, economically reliant and politically vibrant, it will depend on the quality of education of its citizenry. It is in recognition of this, that the Federal Government of Nigeria posited in its National Policy on Education [1] that education is adopted as an instrument par excellence for effective national development. In view of this, the second National Development plan spelled out five goals to be achieved through Education which includes the following: a free and democratic society, a just and egalitarian society, a united strong and self-reliant Nations, a just and dynamic economic, and a land of bright and full opportunity. In recent years, Computer-Based Test (CBT), also known as Computer-Based Assessment (CBA), e-Examination/Assessment, Computerized Testing (CT) and Computer-Administered Testing (CAT), is a method of administering tests in which the responses are electronically recorded, assessed, or both. CBT enables examiners/teachers to author, schedule, deliver, and report on surveys, quizzes, tests, examinations and other forms of testing. It may be a stand-alone system or a part of a virtual learning environment, possibly accessed via the World Wide Web [2, 3, 4, and 5]. This involves teaching and learning in a systematic ways of assessment under the auspices of teacher/examiners.

Teaching is the guidance on learning which involves the action a teacher takes in order to aid the students to acquire and retain knowledge, attitude, beliefs, values and skills. [6] Defined teaching as a complex act of guiding learners through variety of selected and sequentially planned and arranged learning experience for the acquisition, utilization and manifestation of knowledge. Learning is the act or process of acquiring knowledge, attitude, beliefs or skills which is associated with behavioural changes in the cognitive, affective and psychomotor domains. [7] Defined learning as an activity that occurs inside an organism and it cannot be directly observed and inferred from the behaviour of the organism which takes place through systematic assessment of learners/students under observation. The predominant mode of students' assessment in Nigeria is the traditional method, in which students are assessed using paper and pen on cognitive abilities. This method of assessment has imposed serious limitations to the effectiveness of the method. The traditional method is characterized by various forms of examination malpractices such as bringing in un-authorized materials, writing on currency notes and identity cards, spying of other candidates in examination hall, substitution of answer sheets and change of examination scores or grades. Others include, impersonation, leakage of questions to students before the examination, conniving with supervisors and school authorities to cheat, body writing or tattoo in which students especially females write on hidden parts of their bodies [8].

Assessment is defined as the process of investigating the status or standard of a learner's achievement/attainment or the achievement of a group of learners, where group instruction prevail, with reference to expected outcomes which must have been specified as objectives [9]. Assessment it is the practical application of measurement and just as all testing could be subsumed under assessment, so could all assessment be subsumed under measurement [10]. It involves collecting data with a view to making value judgment about the quality of a person, object, group or event [11]. Assessment practices provide the ways to measure individual and institutional success, and so can have a profound driving influence on systems they were designed to serve [12]. According [13] posited that paper based assessments are faced with many problems such as tedious processes as the examinations are conducted at various and distant centre's simultaneously and marked manually; high risks of accidents during travels by both the staff involved and the prospective students for the paper examination; cost of conduct of the examination on the part of the examination bodies including honoraria for invigilators, coordinators, markers collators and other allied staff; subjective scoring and plausible manipulation of results; late release of results and missing grades; bank draft method of payment by candidates riddled by fraud, loss of money, stress and trauma. The threat of examination malpractices on the validity of examination has made some examination bodies to give excessive attention to checking examination malpractices even at the test development stage.

Examinations play an important role in determining what goes on in the classroom in terms of what and how teachers teach, what students learn and can have effect on both teaching and learning. Several examination modes utilized in secondary education in Nigeria to assess academic progress includes, paper and pencil based examinations, assignments, presentations, etc. The rapid advancement of Information and Communication Technologies (ICT) in teaching and learning has started the shifting of the paradigm from paper-pencil-based to computer-based-system of examinations, commonly termed Computer Based Testing (CBT). According to [14] CBTs are the form of assessment in which the computer is an integral part of question papers' delivery, response storage, marking of response or reporting of results from a test or exercise. It has been observed that electronic assessment tools had reduced the load of teachers and facilitated examinations execution purposefully because of inclusion of ICTs in education. It has also been widely believed that CBTs can be applied to promote further efficient learning by examining students' knowledge and understanding in many fields. [15] Believe that the benefits of standardized computer-based tests, such as quick and objective results and the ease of comparing results with others make this method very popular.

In Nigeria, computer based assessment technique is becoming more and more widespread in the educational system. Recent development was the adoption of the system by Joint Admission Matriculation Board (JAMB) to assess every prospective students aiming for admission into the tertiary institutions in the country. Also, the system has been widely adopted by so many private secondary schools especially in the urban area. Computer-based testing is viewed with optimism as an approach that would make testing less expensive in the long run, and that would produce better assessments of the wide range of students, from primary level, secondary and even higher learning. [16] Conducted on an evaluation of the challenges encountered in the first general computer based test in Nigeria. The results indicate that 54% of the candidates of the 2015 JAMB/UTME in Gombe State were not familiar with computer usage prior to the CBT. As much as 47.2% of the candidates did not receive training about CBT prior to the examination. The major challenges encountered by the candidates' of the 2015 JAMB/UTME were that: the test did not start on time, erratic internet networks during the examination, incidents of power failure during the examination, and unfavourable conditions of examination centers. The study recommends that appropriate measures should be taken by concerned stakeholders to find out means of eliminating and reducing the reoccurrence of such challenges in subsequent CBTs.

Although support for use of computerized testing is gaining momentum, there are those skeptics who voice concern about the trend toward greater use of computers in the assessment process. Some are concerned about the appropriateness of CBT for assessing particular skills such as reading comprehension [17]. Others are

worried about the fidelity and comprehensiveness of computerized tests [18]. While others are concerned about the degree to which variables, such as computer-familiarity or computer anxiety might be injected into the assessment process to impact examinee performance in negative ways, thus affecting performance [19]. The researcher believed that the attitude of the teachers and students towards the CBT is also an important factor to be considered before widespread adoption in order to avoid bottlenecks during implementation. Attitude of individuals involved in learning process is an important variable to be measured [20]. It is also important to assess the attitudes based on gender differences. [21] Stated that there is discrepancy in the students' attitudes towards CBT when segregated by gender while [22] reported that both genders have positive attitudes towards CBTs. Additionally, they state that the attitudes of males and females towards CBTs are under the influence of social environment; the boys focus on the usefulness while the girls stress the ease of use.

According to [23] stated that gender does not have significant influence on students' views and attitudes towards computer-based testing/examination. It is important to be sure that gender does not influence differential attitudes towards CBT in order for its adoption. The researcher also believed that school type is a variable that needs to be studied to understand its interactive effects on teachers and students' attitudes towards CBT. Attitude is varied according to each researcher's points of view. A literature review based on [24] defined attitude comprehensively as "a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations to which it is related. Several literatures were discussed related to this study among which that of [25] investigated the attitudes of primary school students towards computer based testing and assessment. The results of the study revealed that significant differences exist between attitudes of students from different schools. Such a difference does not exist between attitudes of students when their genders, grade levels, and participation periods to computer based assessment are taken into account.

Meanwhile, [26] investigated the perception of students on the use of computer based testing in examinations. The findings revealed, among others, that majority of the respondents confirmed that CBT can curb examination malpractice. Majority of candidates were also found to prefer CBT to the conventional way of writing examination. The Chi-square and Pearson's correlation analysis showed that the respondents' preference for CBT was sensitive across gender, age distribution and student faculty. While improving electricity supply was identified as critical in enhancing CBT Exams, poor ICT skill on the part of students and the invigilators were identified as the major problem facing the implementation of JAMB CBT Exam. For [27] examined the attitude of the students towards computer-based test (CBT) at the University of Ilorin, Nigeria. The results demonstrated that; generally, respondents have positive attitude towards CBT. More than average of the respondents prefer CBT to paper and pencil test. Respondents also demonstrate strong perception of increase in their learning performance as a result of taking CBT/examination. On the other hand, problems such as shortage of computers, lack of skills, loss of data in the process of writing CBT, slow network and hazard of reading on the screen were identified. It is also possible that some of these candidates might be having their first contact with computer usage during the 2015 JAMB/UTME Computer Based Test, a challenge that might have negatively affected their performances [28, 29, and 30].

Consequently, [31] studied the stakeholders' attitude towards the introduction of computer based testing and assessment in the National examination by the Kenya National Examination Council. The study found that more than an average number of the respondents preferred Computer Based Testing than Assessment to paper and pencil test. Respondents also demonstrate a strong perception of increase in their learning performance if they were to undertake National examination using Computer Based Testing and Assessment. On the other hand, problems such as shortage of computers, lack of skills, loss of data in the process of writing Computer Based Testing and Assessment, slow network and hazard of reading on the screen were identified.

### **Statement of the Problem**

In Nigeria, students are assessed using paper and pen on cognitive abilities. This method of assessment is however, characterized by different forms of examination malpractices. The threat of examination malpractices on the validity of examination outcomes has resulted in some examination bodies adopting a different method of administration. One of such is the Joint Admissions and Matriculation Board (JAMB) that has introduced Computer Based Testing (CBT) in the conduct of Unified Tertiary Matriculation Examination (UTME). CBTs adoption has faced varied opinions amongst examiners and students. It has been noticed through literatures that so many different views exist on the CBT issue. Some studies have observed that students' complaints on CBT involve issues such as inability to navigate back to rework problems, easier and quicker reading on paper than on a computer screen, liability of computer to hanging or crashes, etc. Some students' lack of prior knowledge in the use of computer has also pre-empted their attitudes towards CBT. Similarly, teachers also have issues with competencies in handling the computer system, lack of adequate facilities, etc. All these are problems necessitating an investigation of the varied attitudes of students towards CBT. However, the advantages of using computer technology for educational assessment in a global sense have been recognized and these include lower administrative cost, time saving and less demand upon teachers among others. On the bases

of the above challenges the researchers investigated assessment of Examiners and students' attitudes in JAMB towards Computer-Based Tests in Kaduna State, Nigeria

### **Research Questions**

The following research questions were posed to guide the study.

1. What is the attitude rating of examiners and students in JAMB towards Computer-Based Tests?
2. What are the challenges facing male and female students attitude in JAMB towards Computer-Based Tests

### **Statement of Hypotheses**

The following null hypotheses were tested at the 0.05 level of significance:

1. **HO<sub>1</sub>**: There is no significant difference between examiners and students attitude in JAMB towards Computer-Based Tests
2. **HO<sub>2</sub>**: There is no significant difference between challenges facing male and female students attitude in JAMB towards Computer-Based Tests

## **II. MATERIAL AND METHODOLOGY**

### **Design**

This study adopted an exploratory cross-sectional survey research design. The exploratory cross-sectional survey captured the attitudes of teachers and students in the study area. The resulting data were used to make general statement about the attitudes of teachers and students towards computer based testing. The reason why the exploratory cross-sectional survey techniques was used was because the technique allows the researcher to use only a small portion of the population, to collect a large amount of data in a relatively short period of time and also allows the researcher to include a wide range of other variables. [32] states that exploratory studies are such in which the researcher is totally ignorant of what the findings might be while cross-sectional survey involves the collection of data from a wide geographical area within a short span of time.

### **Population and Sample**

The population of the study consisted of all 35 accredited JAMB- CBT Centre's 1,436 examiners and 1,900,000 students who registered and sat for Joint Admission Matriculation Board (JAMB)/Unified Tertiary Matriculation Examination (UTME) 2020/2021 in Kaduna State [33]. The sample for the investigation consisted of 1,400 examiners and students who registered and sat for Joint Admission Matriculation Board (JAMB) 2020/2021 in Kaduna State. The accredited JAMB- CBT centers' were randomly selected from across all the 35 accredited JAMB- CBT centre's in Kaduna using the multi-stage stratified random sampling technique, 50 examiners' (30 male and 20 female) and 1,350 students (800 male and 550 female) who registered and sat for JAMB 2020/2021 in Kaduna State. The study adopted a multi-stage stratified random sampling technique. The accredited JAMB- CBT centre's were stratified according to approved accredited JAMB- CBT centre's across Local Government Areas of Kaduna State, Nigeria while the examiners and students were stratified along male-female dichotomy before simple random sampling was employed.

Lottery method of simple random sampling was also employed in the selection of sample size of 1,400 from across ten (10) accredited JAMB- CBT centers' in Kaduna State, Nigeria. Serial numbers of the elements in the sampling frame were recorded on pieces of papers folded and mixed thoroughly before respondents were asked to pick at once without replacement. This technique gave the respondents equal opportunity of being selected thereby, reducing the bias effect that may interfere with the validity and reliability of the study.

### **Instrumentation**

The researchers developed an instrument for data collection entitled "Examiners and Students Attitude Scale toward Computer-Base Test" (ESASCBT) contained 16 structured items used for data collection. ESASCBT was anchored on the 4-point Likert scale from strongly agree (SA), Agree (A), Disagree (DA) to strongly disagree (SDA). Before the administration of the ESASCB, it was subjected to experts' judgment for validation. Two experts from educational measurement and evaluation validated the instrument by checking for appropriateness and relevance of the items, adequacy and agreement with the blueprint, clarity of expression and size of the print. The logical consensus of the experts yielded 0.85 validity index and internal consistency of ESASCBT was determined using Cronbach Alpha statistic, which yielded 0.79 reliability index.

Lastly, data were collected with aid of ten (10) researches assistant each from accredited JAMB- CBT centers' in Kaduna State in a systematic way at the end of their CBT immediately the candidates were channeled to hall to reacted to the instrument. This was possible because to curtailed extraneous variable that could havoc the validity and reliability of this research. Descriptive statistics (mean and standard deviation) were used to answered research questions while Non-parametric statistics (Chi-square- $\chi^2$ ) was used to test the null



hypotheses at 0.05 level of significance using Statistical Package for Social Science (SPSS) version 23 on the arrayed of cross-tabulation and the results are presented in below tables.

### III. RESULTS

**Research Question One:** What is the attitude rating of examiners and students in JAMB towards Computer-Based Tests?

**Table 1: Descriptive Statistics on Attitude Rating of Examiner and Students in JAMB toward CBT**

Item description	Examiners (N=50)				Students (N=1,350)				$\bar{X}$ Mean	Std Dev
	SA	AG	DA	SD	SA	AG	DA	SD		
I enjoyed JAMB Examination using computer based tests	30	10	7	3	1100	100	100	50	3.22	0.88
CBT reduces the chances of examination malpractices in JAMB	25	20	3	2	1250	50	40	10	3.82	0.72
Examiners addressed students well before the JAMB CBT	10	10	20	10	1055	145	100	50	3.11	0.92
I find it difficult to navigate during CBT	10	10	20	10	1055	145	100	50	3.11	0.92
Computer makes it easier to read exam questions during CBT.	24	20	3	3	1002	148	150	50	3.74	0.89
CBT makes it easier to supply answers to questions faster	23	17	6	4	1100	100	60	40	3.13	0.86
CBT is Not time consuming	30	10	7	3	1100	100	100	50	3.22	0.88
CBT makes exam writing process faster than other forms of test	25	20	3	2	1250	50	40	10	3.82	0.72
Examiners guided students in the exam hall during JAMB CBT	10	10	20	10	1055	145	100	50	3.11	0.92
Examiners and student fairness and equity is ensured during JAMB CBT	23	17	6	4	1100	100	60	40	3.13	0.86
Receiving test results automatically using the CBT system makes it more efficient	10	10	20	10	1055	145	100	50	3.11	0.92
I did not have sufficient time during CBT when writing my JAMB	24	20	3	3	1002	148	150	50	3.74	0.89
<b>Pooled mean</b>									<b>3.67</b>	<b>0.89</b>

Table 1 shows descriptive statistics on attitude rating of examiner and students in JAMB toward CBT. The quantification of attitude was based on the mean and standard deviation drawn from the response of the respondents. The pooled mean was 3.67 and the standard deviation was 0.89. This implies that examiners and students during Joint Admission Matriculation Board (JAMB)/Unified Tertiary Matriculation Examination (UTME) 2020/2021 in Kaduna State exhibited almost the same attitudes. This result called for testing of significant difference between the examiners and students as reflected in Table 2 below.

**H<sub>01</sub>:** There is no significant difference between examiners and students in JAMB attitude towards Computer-Based Tests

**Table 2: Chi-Square Tests between Examiners and Students Attitude toward JAMB CBT**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7582.206 <sup>a</sup>	1399	.000
Likelihood Ratio	3392.700	1399	.000
Linear-by-Linear Association	643.613	1	.000
N of Valid Cases	1400		

The Chi-Square Tests ( $\chi^2$ ) result in Table 2 revealed that there was a significant difference ( $P=0.000 < 0.05$ ) via 1,399 df at Asymp-Sig (2-sided). Hence, the null hypothesis was rejected; therefore there was a significant difference between examiners and students attitudes in JAMB toward CBT.

**Research Question Two:** What are the challenges facing male and female students' attitude in JAMB towards Computer-Based Tests?

**Table 3: Descriptive Statistics on Challenges Facing Male and Female Students' Attitude in JAMB towards CBT**

Item description	Male Students (N=800)				Female Students (N=550)				$\bar{X}$ Mean	Std Dev
	SA	AG	DA	SD	SA	AG	DA	SD		
During JAMB exam, students faced shortage of computer in CBT	300	300	100	100	200	250	50	50	3.22	0.88
I face difficulty of Network during JAMB exam on CBT in my centre	340	300	100	60	200	250	50	50	3.82	0.72
I did not started my JAMB CBT on time	300	300	100	100	200	250	50	50	3.11	0.92
I face difficulty of electricity during JAMB exam on CBT	340	300	100	60	200	250	50	50	3.74	0.89
I don't know how to operate computer during JAMB exam	300	300	100	100	200	250	50	50	3.13	0.86
JAMB CBT in my centre was not conducive at all	340	300	100	60	200	250	50	50	3.22	0.88
I hardly understand JAMB questions on the computer screen during CBT	300	300	100	100	200	250	50	50	3.82	0.72
I hardly located my JAMB center on time	340	300	100	60	200	250	50	50	3.11	0.92
I was moved by the examiner to another centre	300	300	100	100	200	250	50	50	3.74	0.89
Too much students in my centre	340	300	100	60	200	250	50	50	3.13	0.86
I wore facemask during JAMB CBT	300	300	100	100	200	250	50	50	3.11	0.92
Too much stress before the commencement of CBT	340	300	100	60	200	250	50	50	3.74	0.89
<b>Pooled mean</b>									<b>3.47</b>	<b>0.83</b>

Table 3 shows descriptive statistics on attitude rating of male and female students in JAMB toward CBT. The quantification of attitude was based on the mean and standard deviation drawn from the response of the respondents. The pooled mean was 3.42 and the standard deviation was 0.83. This implies that the male and female students during Joint Admission Matriculation Board (JAMB)/Unified Tertiary Matriculation Examination (UTME) 2020/2021 in Kaduna State exhibited almost the same attitudes. This result called for testing of significant different between the male and female students as reflected in Table 4 below.

**HO<sub>2</sub>:** There is no significant difference between challenges facing male and female students' attitude in JAMB towards Computer-Based Tests

**Table 4: Chi-Square Tests between Examiners and Students Attitude toward JAMB CBT**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7582.206 <sup>a</sup>	1349	.660
Likelihood Ratio	3392.700	1349	.660
Linear-by-Linear Association	643.613	1	.660
N of Valid Cases	1400		

The Chi-Square Tests ( $\chi^2$ ) result in Table 4 revealed that there was no significant different ( $P=0.660 > 0.05$ ) via 1,349 df at Asymp-Sig (2-sided). Hence, the null hypothesis was retained; therefore there was no significant difference between male and female students' attitudes in JAMB toward CBT.

#### IV. DISCUSSION

Findings from this study in Table 1 show descriptive statistics on attitude rating of examiner and students in JAMB toward CBT. The quantification of attitude was based on the mean and standard deviation drawn from the response of the respondents' pooled mean and the standard deviation. This implies that examiners and students during Joint Admission Matriculation Board (JAMB)/Unified Tertiary Matriculation Examination (UTME) 2020/2021 in Kaduna State exhibited almost the same attitudes. This result called for testing of significant different between the examiners and student. The Chi-Square Tests ( $\chi^2$ ) result in Table 2 revealed that there was a significant different. Hence, the null hypothesis was rejected; therefore there was a significant difference between examiners and students attitudes in JAMB toward CBT. This finding is in agreement with that of [34] whose studied revealed that more than an average number of the respondents preferred Computer Based Testing than Assessment to paper and pencil test. Respondents also demonstrate a strong perception of increase in their learning performance if they were to undertake National examination using Computer Based Testing and Assessment. In line with this, [35] findings revealed, among others, that majority

of the respondents confirmed that CBT can curb examination malpractice. Majority of candidates were also found to prefer CBT to the conventional way of writing examination.

Finally, Table 3 shows descriptive statistics on attitude rating of male and female students in JAMB toward CBT. The quantification of attitude was based on the mean and standard deviation drawn from the response of the respondents' pooled mean and the standard deviation. This implies that the male and female students during Joint Admission Matriculation Board (JAMB)/Unified Tertiary Matriculation Examination (UTME) 2020/2021 in Kaduna State exhibited almost the same attitudes. This result called for testing of significant difference between the male and female students. The Chi-Square Tests ( $\chi^2$ ) result in Table 4 revealed that there was no significant difference. Hence, the null hypothesis was retained; therefore, there was no significant difference between male and female students' attitudes in JAMB toward CBT. This finding is in agreement with that of [36] finding of the study revealed that significant differences exist between attitudes of students from different schools. Such a difference does not exist between attitudes of students when their genders, grade levels, and participation periods to computer based assessment are taken into account. In supporting these findings, [37] stated that gender does not have significant influence on students' views and attitudes towards computer-based tests/examination. It is important to be sure that gender does not influence differential attitudes towards CBT in order for its adoption and for [38] findings revealed that 54% of the candidates of the 2015 JAMB/UTME in Gombe State were not familiar with computer usage prior to the CBT. As much as 47.2% of the candidates did not receive training about CBT prior to the examination. The major challenges encountered by the candidates' of the 2015 JAMB/UTME were that: the test did not start on time, erratic internet networks during the examination, incidents of power failure during the examination, and unfavourable conditions of examination centers.

## V. CONCLUSION

This study was designed to investigate an Assessment of Examiners and Students' Attitudes in JAMB towards Computer-Based Tests. This would go a long way to minimize the challenges confronting examiners and students attitudes in JAMB towards Computer-Based Tests. The findings of the study shown that majority of the respondents enjoyed and exhibited same attitudes in JAMB towards Computer-Based Tests; several challenges emerged such as poor internet network, failure of electricity, unfavourable examination halls among others. The study also concluded that there was a significant difference in attitude of examiners and students in JAMB toward CBT and there was no significant difference in the attitude of male and female students in JAMB toward CBT in Kaduna state. Based on the findings of this study, it was recommended that appropriate measures should be taken by concerned stakeholders to find out means of eliminating and minimizing the challenges confronting examiners and students in subsequent CBTs.

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