

Influence of Cyber-Phobia on Examination Performance of JAMB Candidates in Obio/Akpor Local Government Area of Rivers State, Nigeria

ODIASE JERRY EDOBOR
University of Port Harcourt, Nigeria.

SAM ALERUCHI EGBUCHU
Rivers State University, Port Harcourt, Nigeria.

Abstract. The study investigated the influence of cyber-phobia on examination performance of JAMB candidates in Obio/Akpor L.G.A of Rivers State. In view of actualizing the above purpose, four research questions were designed to guide the study. The study was a descriptive survey with a population comprising the entire 2018 JAMB candidates of Obio/Akpor L.G.A. at University of Port Harcourt (Uniport), Rivers State, and Rivers State University of Port Harcourt. All were 2000 in number. On \square -10% basis, 200 JAMB candidates were randomly drawn as a sample from the above chosen universities through a simple random sampling technique. The instrument for data collection was Influence of Cyber-phobia on Examination Performance of JAMB Candidates Assessment Questionnaire (ICEPJCAQ). The validity was subjected to expert in measurement and evaluation while the coefficient value of reliability yielded an index of 0.82. Mean and standard deviation were used as statistical tools of analysis to provide answers to the three research questions. The study found fear due to time restraint of CBT, fear due to paperless nature of CBT, fear due to the instant award of scores to candidates and fear due to lack of moment to cheat, which are all categories of cyber-phobia influence on examination performance of JAMB, candidates negatively.

Therefore the study recommended among others that JAMB should use other modes such as PPT and DBT in conducting further examination so as to eliminate the incident of poor performance, mostly among computer unfriendly and illiterate candidates.

Keywords: Cyber-phobia examination, JAMB, Candidates and Performance

1. Introduction

In any academic setting, examination is very sacrosanct and indispensable. That is to say that every academic exercise is expected to end with the examination period under which students' or candidates' understanding and knowledge on given fields of study or a particular field of study is put to test. Thus, the main rationale behind the conduct of any academic examination is to ascertain and measure the extent students or candidates understand and know what they have been taught or read.

According to Bridge cited in Quincy (2016), an academic examination refers basically to an intentional and well-structured set of questions, objective or essay based, or practical tasks designed by any competent and authorized person or persons or body called the examiner to

ascertain or measure the extent each student or candidate has able to understand and know the subject matter(s) or skill(s) to which he or she has been exposed to within a given period by way of awarding score to each accordingly. In education, examination could be defined as written exercises, oral questions or practical tasks, set to test a candidate's knowledge or skill.

Generally, academically-designed examination is more of a fact-finding endeavour geared towards forming decisions on what to do next. That is to decide whether or not to promote or demote; whether to admit or not to admit a student or candidate as the case may be. From Bridge's definition, it is clear that, for an academic-based examination to qualify to be so, it must possess the following qualities or characteristics:

- It must be intentional in that the reason for conducting it must be clear and understandable;
- It must be a well-structured set of questions which can be in form of objective or essay or both meant to be answered by examinees concerned;
- The person or persons or body to conduct the examination usually called the examiner must be competent, that means qualified and has the authority to conduct such examination;
- The main reason or objectives of its conduct must be to ascertain or know whether or not the examinees have understood or known what are expected of them at that given time or period: it must be indeed periodic; and
- Each examinee must be awarded score according to his or her performance.

Examination performance therefore refers to the score obtained by each examinee after the conduct of any given academic examination. Examinees may be graded on a poor (low), average, or high basis. For instance, in an examination of 100% grading, 0-45% may be described as low grade; 46-59% as average and 60% and above as high grade.

There is no gainsaying that the conduct of

examinations for students or candidates has some advantages.

For instance, in absence of academic examination, the true test of knowledge and understanding of what has been taught or read about cannot be ascertained. Thus, the efficacy and effectiveness of teaching and learning will be totally defeated. Again, students or candidates can learn their strengths and weaknesses through examination process (Uchendu, 2010). Examination provides a solid basis for assessing, reviewing, modifying and changing the educational system and particularly approaches and methods of teaching and learning. It serves a prerequisite for promoting or demoting of students or candidates. Therefore, it promotes the objectivity of the entire educational system in that the promotion or demotion, admission or non-admission of students or candidates is based on the grades they obtained. It also guarantees educational accountability in that, any educational system is judged by the performance of the students or candidates under examination situation.

It is pertinent to note that the academic grading by JAMB does not include any form of continuous assessment as being done in normal school setting; rather each candidate is graded based on the score obtained in a given academic examination administered by JAMB. This sets the difference between the grading patterns of JAMB candidates and that of the pupils/ students in a normal school setting such as primary, secondary and tertiary institutions.

Examinations for admission into tertiary institutions in Nigeria are usually organized and conducted by JAMB, which in full means Joint Admissions and Matriculation Board. JAMB was established on 13th February, 1978 under the then Federal Military Government headed by General Olusegun Obasanjo by Decree No. 2 of 1978. It has branch offices all over the thirty-six (36) states of the Federation with a headquarters located in Abuja, the Federal Capital Territory. Apart from this, JAMB maintains services outlets in 774 local government areas in Nigeria.

Furthermore, the cyber-based examination otherwise called the Computer-Based Test

(CBT) was introduced on 3rd October, 2012 by JAMB under the leadership of its registrar in the person of Professor Dibu Ojerinde. He announced three (3) options with which the candidates could avail themselves during 2013/2014 session of the Unified Tertiary Matriculation Examination. These were Paper and Pencil Test (PPT), Dual- Based Test (DBT), where questions would be presented in computers and answers would be on paper and Computer-Based Test (CBT), where both questions and answers could be on computers. In 2015, the Board went full-blast with CBT. The use of eight (8) Keys without a mouse, which was basically consolidated innovation of CBT, was introduced by Professor Is-haq Olarewaju, the current JAMB registrar, on 30th March, 2017. The keys are A - for choosing options in response to questions A ; B - for choosing B option; C - represents option C ;D - for selecting option D ;P - represents previous questions; N - is for next; S - is for submit; and R - stands for reverse.

With the above critical innovations, cyber-based examinations (CBT) became reinforced and consolidated in Nigeria. Cyber denotes computer with the internet or intranet connectivity for the purpose of collecting, storing, processing, retrieving, circulating, disseminating, sharing and exchanging information or information resources. It is an integral part of Information and Communication Technology (ICT). CBT has thrown up a challenge which could be called cyber-phobia among JAMB candidates recently. Phobia could be conceptualized as a mental construct resulting in fear of a given thing or object, which may not necessarily cause fear in the minds of others, but still triggers fear in the mind of the fear-sufferer. Thus, phobia is more of psychological discourse. Therefore, cyber-phobia means the state of being under anxiety or fear of computer or other subject matters relating to it such computer software applications, networking, the internet connectivity and the rest. It is the fear of computer by a person or group of persons facilitated by lack of basic computer knowledge, literacy, skills and competence. Studies by Ayodele (2017) and Umezurike (2015) showed a negative influence of cyber-based test on examination achievement

of Post-UTME candidates, which basically is discovered to be induced by fear of computer. The studies further revealed that, despite being able to manipulate their smart phones, high level of CBT-phobia is still prevalent and recorded among the majority of the Post-UTME candidates.

Cyber-phobia among JAMB candidates has been linked to the following categories; fear due to lack of preparation, due to time restraint, due to the high volume of questions to cover under limited time, due to paperless nature of CBT, due to the instant award of scores to candidates, due to the absence of opportunity to ask others for answers, due to lack of moment to cheat, due to highly structured nature of CBT-based questions, due to presence of security agents and fear of being placed under tough and stern invigilation. All these categories of fear have been found to exert some adverse influence on the JAMB candidates in Nigeria.

2. Statement of the Problem

As Nigeria is gradually embracing the adoption of CBT, majority of the candidates still prefer PPT to CBT as clearly demonstrated in the 2013 UTME with the belief that their inadequate familiarity with the computers and the fear of using the computers generally might lower their performances in CBT. CBT was introduced to ensure prompt delivery of raw scores, eliminate cases of incomplete results, eliminate result blackout and check examination malpractices. These objectives will be an illusion if majority of the candidates continue to embrace PPT 'and shun CBT. Again, the abysmal performance of the majority of the JAMB candidates in the immediate past 2018 UTME, which indicated that many of them, especially those seeking admission into universities, obtained a score below 180 as a minimum stipulated cut-off point raises a great deal of concern of the adverse influence of cyber-phobia over the candidate's individual performance. This study was embarked upon to investigate the influence of cyber-phobia on examination performance of JAMB candidates in Obio/Akpor L.G.A of Rivers State.

3. Aim and Objectives

The aim of this study is to investigate the influence of cyber-phobia on examination performance of JAMB candidates in Obio/Akpor L.G.A of Rivers State. More specifically, this study sought to achieve the following objectives:

- To find out how fear due to time restraint of CBT influences examination performance of JAMB candidates in Obio/Akpor L.G.A of Rivers State.
- To examine how fear due to paperless nature of CBT influences examination performance of JAMB candidates in Obio/Akpor L.G.A of Rivers State.
- To ascertain how fear due to the instant award of scores to candidates influences examination performance of JAMB candidates in Obio/Akpor L.G.A of Rivers State.
- To determine how fear due to lack of moment to cheat influences examination performance of JAMB candidates in Obio/Akpor L.G.A of Rivers State.

4. Research Questions

The following research questions guided the conduct of the study:

- How does fear due to time restraint of CBT influence examination performance of JAMB candidates in Obio/Akpor L.G.A of Rivers State?
- How does fear due to paperless nature of CBT influence examination performance of JAMB candidates in Obio/Akpor L.G.A of Rivers State?
- How does fear due to instant award of scores to candidates influence examination performance of JAMB candidates in Obio/Akpor L.G.A of Rivers State?
- How does fear due to lack of moment to cheat influence examination performance of JAMB candidates in Obio/Akpor L.G.A of Rivers State?

5. Significance of the Study

This study would be significant as it would clear some issues on the perceived problems of CBT among the prospective candidates. It would also provide empirical data that will assist university managements and JAMB to improve on the conduct and administration of CBT in Nigeria. The study would add to the pool of scholarly researched works on the subject-matter investigated herein.

6. Methodology

This study was descriptive survey design. It is so because the variables adopted in this study were used to describe the current influence of cyber-phobia on examination performance of JAMB candidates in Obio/Aknor L. G.A. of Rivers State.

The population of this study is 2000, comprised the entire 2018 JAMB candidates of Obio/Akpor L.G.A. origin that chose to study at University of Port Harcourt, and Rivers State University, Port Harcourt.

The sample of the study consisted of 200 JAMB candidates randomly drawn from the above chosen universities. On a 10% basis, 100 students each were randomly selected from the two universities using simple random sampling technique.

The instrument for data collection was a questionnaire code-named the Influence of Cyber-phobia on Examination Performance of JAMB Candidates Assessment Questionnaire (ICEPJCAQ). The instrument had two (2) parts; Part A and Part B. Part A sought information on the personal data of the candidates while Part B contained a-20 item questionnaire with a modified Likert Scale of Strongly Agree, Agree, Disagree and Strongly Disagree which were assigned 4, 3, 2 and 1 points respectively.

The instrument underwent face validation. To achieve this, a copy of the instrument was given to two experts in the Department of Educational Psychology, Guidance and Counseling, University of Port-Harcourt. Corrections, modifications and suggestions made by them

were incorporated into the study, thereby leading to the emergence of the final version of the instrument for collection of data.

In other to ensure that the instrument measures what it purports to measure, test-retest method was used. To achieve this, 10 copies of the instrument were administered to 10 respondents that did not form part of the sample. After two (2) weeks, the same process was repeated using the same set of respondents. The two sets of administration were collated and correlated using the Pearson Product Moment Correlation Coefficient, which yielded the coefficient index of 0.82.

The researcher personally administered 200 copies of the questionnaire to the respondents. Out of 200 copies of questionnaire administered, 192 were well-filled and retrieved, hence used for the study. This (192) constituted 96% of the total copies of the questionnaire administered. Mean and standard deviation were used as the statistical tools of analysis to answer the research questions. In other to obtain the criterion mean for scoring the questionnaire, the modified likert points were summed up and divided by 4, that is $4+3+2+1/4 = 2.50$. Thus, any mean value that is 2.50 and above indicates acceptance of the item measured, while any mean value below 2.50 indicates otherwise.

7. Results and Discussion of the Finding

Research Question 1: How does fear due to time restraint of CBT influence the examination performance of JAMB candidates in Obio/Akpor L.G.A. of Rivers State?

Table 1.1: Mean and Standard Deviation Presenting How Fear Due to Time Restraint of CBT influences Examination Performance of JAMB Candidate

S/N	ITEMS	CANDIDATES: N= 192		
		X	S	Remark
1.	I am afraid of CBT because it does not permit time to think thoroughly.	2.90	0.84	Agree
2.	CBT scares me because time allotted to answer each question is very short.	3.19	1.10	Agree
3.	I do not like CBT.	3.23	0.86	Agree
4.	I am afraid of CBT because computer shuts you out the very moment the programmed time got exhausted.	3.21	1.05	Agree
5.	I am afraid of CBT because enough time is not given to weigh options.	3.30	1.06	Agree
	Grand Weighted Mean	3.17	0.98	

Table 1.1 shows that all the items had their calculated mean value above the criterion mean of 2.50. This result therefore indicates that fear due to time restraint of CBT , which is a category of cyber-phobia adversely influences the examination performance of JAMB candidates in Obio/Akpor L.G.A. of Rivers State in the following ways: it does not permit candidates time to think thoroughly, time allotted to answer each question is very short., computer never gives extra-time, computer shuts candidates out the very moment the programmed time got exhausted, and enough time is not given to weigh options. This result is further affirmed by the calculated grand mean ($x= 3.17$) which fell above the criterion mean of 2.50. Therefore, cyber-phobia of fear due to time restraint negatively influences the" examination performance of JAMB candidates in Obio/Akpor L.G.A. of Rivers State.

Obtaining scores below the expectation of all and sundry attests to such negative influence. This result is in consonance with the studies of Ayodele (2017) and Umezurike (2015) which revealed that time restraint of CBT, which at large is a form of cyber-phobia negatively influences their examination performance.

Research Question 2: How does Fear Due to Paperless Nature of CBT influences examination performance of JAMB candidate in Obio/Akpor L.G.A. of Rivers State?

Table 1.2: Mean and Standard Deviation Presenting How Pear Due to Paperless Nature of CBT influences Examination Performance of JAMB Candidate

S/N	ITEMS	CANDIDATES: N= 192		
		X	S	Remark
6.	I am much more paper friendly than; computer friendly.	3.26	0.74	Agree
7.	I am more comfortable with the paper based exam than computer based one.	3.21	1.06	Agree
8.	CBT makes me very anxious throughout the exam.	3.44	0.78	Agree
9.	Not having questions on the paper makes the exam look difficult and strange to me.	3.46	0.84	Agree
10.	Not having questions on the paper slows down my thinking about best possible options to answers.	3.23	0.93	Agree
	Grand Weighted Mean	3.32	0.87	

Table 1.2 shows that all the items had their calculated mean value above the criterion mean of 2.50. This result therefore indicates that fear due to paperless nature of CBT, which is a category of cyber-phobia, adversely influences the examination performance of JAMB candidates in Obio/Akpor L.G.A. of Rivers State in the following ways: being more paper friendly than computer friendly, candidates are more comfortable with the paper-based exam than computer-based one, CBT makes candidates very anxious throughout the exam, not having questions on the paper makes the exam look difficult and strange to candidates and slows down candidates' thinking about best possible options to answers. This result is further affirmed by the calculated grand mean ($\bar{x} = 3.32$) which fell above the criterion mean of 2.50. Therefore, cyber-phobia negatively influences the examination performance of JAMB candidates in Obio/Akpor L.G.A. of Rivers State.

By and large, all the foregoing bothers on cyber-phobia which is capable of making JAMB candidates to perform poorly in examination. The deduction therefore is that the more paperless the exam, the more afraid non-computer friendly candidates would be, and as such more likely that many candidates will continue in recording poor performance. Available studies indicated that many Nigerian youths are not computer friendly, thus computer phobic. This result is in conformity with the study of Tekinarslan (2008) that revealed that cyber-phobia induced by paperless nature of CBT can influence candidates' performance in CBT negatively.

Research Question 3: How does fear due to the Instant Award of Scores to candidates influence the examination performance of JAMB candidates in Obio/Akpor L.G.A. of Rivers State?

Table 1.3: Mean and Standard Deviation Presenting How Fear Due to the Instant Award of Scores to Candidates influences Examination Performance of JAMB Candidate

S/N	ITEMS	CANDIDATES: N= 192		
		X	S	Remark
11.	I always want the anxiety of exam to cool off before releasing the result.	3.39	0.86	Agree
12.	Instant award of scores of CBT makes anxious about my parents/guardians scorn in the event of performing poorly.	3.22	1.02	Agree
13.	Instant award of scores to me in CBT subject causes anxiety that my friends will scold me in the case of my poor performance.	3.17	1.05	Agree
14.	Instant award of scores to me in CBT will kill my spirit to fight on in the event where performance is poor.	3.39	0.10	Agree
15.	Instant award of scores in CBT subject to me causes unnecessary pressure and anxiety capable of making one forget right answer.	3.15	0.82	Agree
	Grand Weighted Mean	3.26	0.93	

Table 1.3 reveals that all the items had their calculated mean value above the criterion mean of 2.50. This result therefore indicates that fear due to instant award of scores, which is a category of cyber-phobia adversely influences the examination performance of JAMB candidates in Obio/Akpor L.G.A. of Rivers State in the following ways: does not allow the anxiety of exam to cool off before releasing the result, CBT makes candidates anxious about their parents'/guardians' scorn in the event of performing poorly, instant award of scores to candidates subjects them to anxiety that their friends will scold them in the case of their poor performance, kills their spirit to fight on in the event where performance is poor and subjects candidates to unnecessary pressure and anxiety capable of making them forget right answers. This result is further affirmed by the calculated grand mean ($\bar{x} = 3.26$) which fell above the criterion mean of 2.50. Therefore, cyber-phobia negatively influences the examination performance of JAMB candidates in Obio/Akpor L.G.A. of Rivers State.

This result is in conformity with the studies of Tekinarslan (2008), Ayodele (2017) and Umezurike (2015) which revealed that the candidates' mind-frame that they would be instantly award scores by the computer without allowing passion of anxiety to cool adversely influences their overall performance.

Research Question 4: How does fear due to lack of moment to cheat influence the examination performance of JAMB candidates in Obio/Akpor L.G.A. of Rivers State?

Table 1.4: Mean and Standard Deviation Presenting How Fear Due to Lack of Moment to Cheat influences Examination Performance of JAMB Candidate

S/N	ITEMS	CANDIDATES: N= 192		
		X	S	Remark
16.	I am anxious about CBT because it does not allow me ask others for answer I know not.	2.99	1.09	Agree
17.	I am anxious about CBT because it leaves one with the option of minding a computer set without any other option to get answers.	3.06	0.97	Agree
18.	I am not comfortable with CBT for the reason that it removes the possibility of getting answer from friend or fellow candidate.	3.07	1.09	Agree
19.	CBT make me very nervous because answers to question cannot be smuggled in the computer system.	2.97	1.12	Agree
20.	I am nervous about CBT because questions to be answered are randomly selected by the computer thereby giving no room to ask others for answers.	2.99	0.95	Agree
Grand Weighted Mean		3.02	0.82	

Table 1.4 reveals that all the items had their calculated mean value above the criterion mean of 2.50. This result therefore indicates that fear due to lack of moment to cheat, which is a category of cyber-phobia adversely influences the examination performance of JAMB candidates in Obio/Akpor L.G.A. of Rivers State in the following ways: it does not allow candidates ask others for answers they know not., it leaves one with the option of minding a computer set without any other options to get answers, it removes the possibility of getting answers from friends or fellow candidates, CBT makes candidates very nervous because answers to questions cannot be smuggled into the computer system and questions to be answered are randomly selected by the computer thereby

giving no room to ask others for answers. This result is further affirmed by the calculated grand mean ($\bar{x} = 3.06$) which fell above the criterion mean of 2.50. Therefore, cyber-phobia negatively influences the examination performance of JAMB candidates in Obio/Akpor L.G.A. of Rivers State.

This result is in agreement with the study of Tekinarslan (2008) and Ayodele (2017) which revealed that lack of moment to cheat in CBT can influence Candidates' performance in an exam negatively.

8. Conclusion

The overall findings indicated that cyber-phobia

whose categories were investigated in this study as fear due to time restraint of CBT, fear due to paperless nature of CBT, fear due to instant award of scores to candidates and fear due to lack of moment to cheat can have adverse influence on candidates' performance in CBT. Although, computer anxiety alone did not show significant influence in CBT performance but inadequate knowledge of computer could trigger computer anxiety which could invariably influence candidates' performance in CBT negatively. This study implies that human personal characteristics as captured above could influence candidates' performance in CBT, most especially the

CBT candidates of 2018 UTME. CBT was made optional in 2013 UTME, but JAMB is now making it compulsory for all candidates, and also, it is being made mandatory by some universities in conducting POST-UTME without considering whether the prospective candidates are computer friendly, literate or not.

9. Recommendations

Based on the findings, the following recommendations were made:

- JAMB should programme the computers used for CBT in such a way that candidates will be given extra-time.
- Government should provide secondary schools in the country with adequate computers and internet facilities to make students have enough practical sessions.
- CBT training centres should as a matter of urgency be set up by the institutions of higher learning and computer training institutes to train candidates on CBT before their examinations.
- JAMB should use other modes such as PPT and DBT in conducting further examination so as to eliminate the incident of poor performance, mostly among computer unfriendly and illiterate candidates.

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