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RESEARCH ARTICLE

A STUDY OF THE ATTITUDE OF NIGERIAN'S UNDERGRADUATES TOWARDS COMPUTER BASED EXAMINATION

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Abstract

This study was conducted to assess undergraduates' overall attitude towards the trending computer-based test been deployed by tertiary institutions for assessments. A total of two hundred and forty-six undergraduates comprising male and female from science and non-science disciplines were randomly selected for the study. A self-developed scale was used to measure attitude towards CBT. Data were analyzed using multiple regression analysis, and the findings revealed that academic discipline statistically predicted attitude towards CBT. However, gender as a factor was found not to be a significant predictor of attitude towards CBT. Findings, recommendations, and conclusions are discussed.

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Introduction: -

Computer-based tests have been used since the 1960s to test knowledge and problem-solving skills (Daramola, 2018). The recent introduction and eventual widespread acceptance of electronic-based examination in Nigerian universities have significantly impacted educational history trends in the country. Computer-based exams (CBE) have several significant advantages compared to paper-based exams, such as efficiency, immediate scoring, and feedback, especially, in multiple-choice question exams (Boevé, Meijer, Albers, Beetsma, & Bosker, 2015). The impact of computer-based examination in Nigeria tertiary institutions cannot be overruled since research established the roles and immense contributions of ICT for instructional purposes in Nigeria education (Daramola, 2018). The computer-based examination has been highly interested and suitable in both educational and pedagogical aspects. Thus, the relevance CBT in assessments is enormous (Aliyu & Adebayo, 2014). The trend is one of the best methods of evaluating an individual's knowledge and ability compared to the conventional method characterized by massive examination leakages, impersonations, demand for gratification by teachers, and bribe-taking by supervisors and invigilators of examinations.

Computer-based examination is referred to the process by which assessments are delivered, taken, and scored electronically. It entails questions being deployed onto computer workstations (intranet and internet) and candidates answering the computer's questions. The process of writing exams is thus wholly paperless. It is sometimes referred to as CBT (Computer-based testing) or CBA (Computer-Based Assessment). However, traditional evaluation methods are still acceptable in educational systems (Kolagari, Modanloo, Rahmati, Sabzi, & Atae, 2018). CBT testing method is now being extensively used in many parts of the world today. As flexible and online learning mediated by ICT becomes more pervasive (Fluck, Pullen, & Harper, 2009), it becomes imperative for students and educators to embrace the CBT assessment approach. The use of an e-exam simplifies the entire testing cycle, including generation, execution, evaluation, presentation, and archiving.

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Almost all tertiary institutions in Nigeria have adopted CBT to screen prospective (Alabi, Issa, & Oyekunle, 2012) and using CBT for their semester examinations. Employers now conduct aptitude tests for job seekers through electronic means (Onyibe, Juliana, & Abdulhakim, 2015). Various examination bodies in Nigeria, such as the West Africa Examination Council (WAEC), National Examination Council (NECO), National Board for Technical Education (NABTEB), National Teacher Institute (NTI), adopt the CBT system (Aliyu & Adebayo, 2014; Olawale & Shafi'I, 2010).

The Present Study

There is a growing concern that introducing the CBE system of examination in Nigeria is not entirely a welcomed development to some undergraduates. Because the electronic examination system does not give room for sharp practices, most students perceive the process as a hindrance. Despite passing through a series of computer-based tests prior to admission, most undergraduates believe that using the computer for an exam is not part of Nigeria's education culture. This idea should not be allowed to progress. Nugroho et al. (2018) pointed out that most of the current research in CBT compares the two methods without exploring the student's perception about the test. Undoubtedly, understanding student's attitude towards the CBE system is vital in sustaining the process. Based on this, the current study is aimed to investigate undergraduate attitudes towards the use of computer-based examinations in Nigerian universities. The study's main objective is to (i) ascertain whether the students in the science discipline will have a more positive attitude towards CBT than their arts counterparts (ii) assess gender difference in attitude towards CBT.

Thus, it is hypothesized that the science students will have a more positive attitude than their arts counterparts (h^1). Also, gender will not influence attitude towards CBT (h^2).

Method: -

The current study adopted a cross-sectional survey. The population included undergraduates from universities that are currently using the computer-based exam system. A total of two hundred and forty-six (246) undergraduates comprising male and female randomly drawn from both science and arts disciplines were used as the study samples.

Measure: -

Attitude towards computer-based tests was measured using a self-developed instrument designed to measure undergraduates' attitudes towards the computer-based examination. The 10-item scale is answered in a 5-point Likert-type questionnaire. The scale's reliability was ascertained after a pilot study was done with the scale, and a Cronbach alpha $r=.092$ coefficient was recorded on the scale.

Result: -

Table 1: - Table showing the result of the multiple regression analysis conducted to determine the influence of academic discipline and gender on CBT attitude.

	B	95% CI for B		SEB	β	R^2	t	Sig
		LL	UL					
Constant	2.347	2.084	2.610	.133			17.588	.000
Discipline	-.476	-.596	-.396	.061	-.476	.222	-7.830	.000
Gender	-.088	-.208	.32	.061	-.088	.230	-1.448	.149

Note. B = Unstandardized regression coefficient; CI = Confident Interval; LL = Lower Limit; UL = Upper Limit; SEB = Standardized error of the coefficient; β = Standardized coefficient; R^2 = Coefficient of determination.

* $P<.000$. ** $p>.149$

A simple regression analysis was conducted to determine the predictive role of academic discipline and gender on student's attitudes towards CBT. The investigation revealed that academic discipline is a good predictor of attitude towards CBT at $F(1,210)$, 60.035 , $P<.000$. Thus, our first hypothesis that academic discipline will significantly predict CBT's attitude was confirmed, which means that science students showed a more positive attitude towards CBT compared to their arts counterparts. However, our assumption that gender will significantly predict CBT's attitude was rejected $F(1,209)$, 31.222 , $P>.149$, which means that being male or female does not influence CBT's attitude.

Discussion: -

The present study aimed to assess the attitude of undergraduates towards the computer-based test. The findings of the study showed that academic discipline positively predicted attitude towards CBT. Science students showed a more positive attitude towards CBT than their counterparts in the arts discipline, which means that students who are science inclined are more comfortable with the introduction of the computer-based examination. The probable reason for this outcome could be attributed to studying that characterizes the science field (Kumar, 2017).

Furthermore, the findings also revealed that gender as a factor does not predict students' attitudes towards CBT, which means that being male or female has nothing to do with one's cognitive, affective, and behavioral tendencies towards the trending computer approach knowledge testing. This revelation is aligned with previous studies that found no gender differences in perception towards using ICT in learning (e.g., Davis & Davis, 2007; Zhang, 2005).

It is appropriate to point out that despite the findings of the current study, caution should be applied in relation to the generalization of the result in that the participants were drawn from institutions in one geopolitical of Nigeria, and the finding should not be applied to students from other zones of the country. However, prospective researchers are advised to expand the scope and consider other variables such as cognitive patterns and socio-cultural correlates.

Conclusion: -

The present study concludes that student's academic discipline is a factor that predicts attitude towards the use of technology in conducting tests. Understanding students' attitude towards the computer-based test is pivotal in policies targeting the system's sustainability in tertiary institutions. It is implied that non-science students are found to be less accepting of the phenomena and are probably more vulnerable to test anxiety. The study recommends that institutions adopting CBT should employ robust support for non-science students.

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