Attitude of Undergraduate Students Towards Computer-Based Test (CBT): A Case Study of the University of Ilorin, Nigeria

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ABSTRACT

This study examined the attitude of the students towards computer-based test (CBT) at the University of Ilorin, Nigeria. A case study research design was adopted to carry out the study. The sample consists of 2209 undergraduate students selected from seven out of the ten Faculties that made up the university. Data were collected through a computer based test attitudinal survey (CBTAS) and a focus group discussion. 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.

Keywords: Attitude, Computer Anxiety, Computer Assisted Learning, Computer Based Test (CBT), E-Learning, Nigeria, Test Anxiety, Undergraduate Students

INTRODUCTION

As the 2007/2008 academic session of the University of Ilorin, Nigeria ended May 2008, prospective candidates for admission into the university for 2008/2009 academic session were notified that the senate of the university has decided that admission exercise would be

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by computer-based test (CBT) in English and General paper (aptitude test).

An individual’s attitude is an important variable in the learning process, Gattiker and Hlvaka (1992) observed that research assessing the attitude of the undergraduate to a computer-based test is lacking. This is a reflection of the fact that research such as this has never been conducted in the context of the University of Ilorin, Nigeria. The University of Ilorin introduced the process of using computer for writ-
ing test and examination by the undergraduate students in 2008. In the light of this, knowing the attitude of the students towards this mode of tests and examinations writing is important for the university to know where improvement is needed to further enhance the exam delivery method. It is tempting to assume that students entering school today are computer savvy and would prefer computer-based activities to more traditional activities such as reading a book. However, there is little published data evaluating the attitude of students towards computer based testing particularly in the Nigeria university setting. This study therefore, sets out to examine the attitude of undergraduate students towards computer based test/examination at the university of Ilorin, Nigeria.

**Review of the Literature**

There are numerous variables that impact on student’s performance when questions are presented on a computer, such as the quality of the monitor (Schenkman, Fukuda, & Persson, 1999) and others. Attitude is one of the most prominent variables that have not been so much considered in various related studies particularly from the African context and Nigeria particularly. Attitude by definition is an inner psychic state influencing behaviour. We can understand an inner state from actions and words. For instance, we may presume that a person actively avoiding a computer has a negative attitude towards it. Attitude is not an inborn, instinct phenomenon; it mainly depends upon person’s experience and its impact in a new situation (Saparniene, Merkys, & Saparnis, 2002). Consequently, attitudes are formed in the process of experience and their change is possible due to the internal and external factors. In other words, attitude towards computer based test in this study is defined as ways of thinking and feelings of the students towards taking computer-based test.

**Previous Studies**

In early studies, the main research focus was on whether computer-based tests were equivalent to paper-and-pencil tests when computers gave exactly the same tests as those given in paper-and-pencil formats. In order to define score equivalence, the American Psychological Association (APA) in 1986 published the Guidelines for Computer-Based Tests and Interpretations. The guidelines define the score equivalent of computerised tests and conventional paper-and-pencil test in two ways. First, as the rank order of scores of individuals tested in alternative modes closely appropriating each other. Secondly, as the means, dispersions and shapes of the score distributions being approximately the same by re-scaling the scores from the computer tests versions (APA, 1986). The guidelines also require that any effects due to computer administration be either eliminated or accounted for in interpreting scores. In their empirical study, Olsen et al. (1986) compared paper-administered, computer-administered, and computer-adaptive tests by giving third- and sixth-grade students mathematics applications achievement tests. This study found no significant differences between paper-administered and computer-administered tests, and equivalences among the three test administrations in terms of score rank order, means, dispersions, and distribution shapes. Mazzeo and Harvey (1988) (Envisage International Cooperation, 2010) pointed out that computer-based test may affect test scores and consequently their equivalence with paper-and-pencil versions, and that test with reading passages may be more difficult when given on computers Summarising all the mentioned studies, Bugbee (1996) concluded that the use of computers really affects testing; however, computer-based and paper-and-pencil tests can be equivalent provided the test developers take responsibility by showing how the equivalent can come by. Bugbee (1996) stated that the barriers to the use of computer-based testing are inadequate test preparation and failure to grasp the unique requirements for implementing and maintaining computer tests. In other words, Bugbee reminded us that some factors such as the design, development, administration and user characteristics must be taken into consideration when computers are used
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