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Expert Evaluation of a Developed CBT Package for Upper Basic School Student in Civic Education in Ilorin

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Abstract

Innovative assessments that allow students to manipulate data and role play are currently being produced using the CBT method. But when not properly designed, students could lose their interest in adopting it. This study ascertained expert' evaluation of a developed civic education CBT package for upper basic school student in Civic Education in Ilorin. Specifically, the study (i) determined the process in using the designed CBT Package to process real time result and valid test score, & (ii) evaluate the rating of experts on the developed Civic education CBT package for upper basic school student. This study adopted the Research and Development type and Descriptive type while 120 civic education teachers and lecturers in related discipline evaluated the developed CBT system. Findings established that experts rate the designed CBT system to be very good and was highly recommended. The study concluded that the designed CBT is effective, which implies that it can be adopted for assessment in upper basic school. It was thus recommended that the curriculum developer should also add this CBT system to the curriculum as a mode of assessment for upper basic school.

Keywords: Expert, Evaluation, Civic Education, CBT Package, Upper Basic School Student, Civic Education

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Introduction

Assisted assessment, computer-based testing (CBT), computer-aided assessment (CAA), computer-based assessment (CBA), and computerised assessment (Bull, 1999), Whittington and Jupp (2000) changed the paradigm of exams by moving them from paper and pencil to computers (Uysal & Kuzu, 2009). (2001). CBA refers to the interaction between the student and the computer throughout the assessment process. In this kind of assessment, the exam is given by computer, which also gives feedback. The complete assessment process, including test marking, analysis, and reporting, is referred to by the more general name CAA (Charman & Elms, 1998).

The assessment life cycle includes planning, discussion, reaching an agreement, reflection, measuring, evaluating, and improving based on information and artefacts gathered in relation to a learning goal (Martell & Calderon, 2005). For the 2013 Unified Tertiary Matriculation Examination (UTME), the Joint Admission and Matriculation Board (JAMB) provided three exam alternatives: traditional paper-and-pencil testing (PPT), dual-based testing (DBT), and computer-based testing (CBT). The DBT and CBT, which were new to the market, were generally effective despite some obstacles, particularly in the area of infrastructure. The JAMB executive registrar, Ojerinde, stated that all UTMEs will be administered using CBT beginning in 2015. He stated that the e-main testing's objective was to entirely eradicate all forms of examination malpractice, which had been a major problem in the country's public examinations previously (Vanguard, 2012).

Although the implementation of CBT for the 2015 unified tertiary matriculation test had several drawbacks, experts advised against discontinuing it since it could help the Joint Admission and Matriculation Board address examination irregularities and ensure quick results delivery (JAMB). 1,475,477 applicants for admission to various tertiary institutions across the nation recently completed the first iteration of the full-fledged computer-based exam (CBT) approach of the UTME.

The CBT method was implemented in 2015 since JAMB stated in 2012 that the Paper-Pencil Test (PPT) and Dua-Based Test (DBT) alternatives will be phased out in three years and replaced with CBT. (2015) The Economy As a result, JAMB conducted a test of the CBT in 2014, which was widely considered as successful and capable of ending the fraud that had dogged the nation's public examinations. The Joint Admissions and Matriculation Board's (JAMB) Registrar, Professor Dibu Ojenride, stated that a full-scale CBT was essential since it would enable

them to disclose candidate results the same day and deliver them to their phones through SMS a few hours after the exam (The Economy, 2015).

CBT also makes it possible to evaluate students in ways other than the conventional multiple-choice and constructed-response methods. Innovative tests, such those that let pupils change the facts and role-play, are now being developed. States are discovering, though, that it is crucial to consider both the likelihood of positive desired outcomes in addition to any potentially negative unintended consequences as they implement CBT. These include the chance that children with disabilities would need extra instruction in order to interact with computers successfully as well as the challenges associated with deciding on the best way to deliver certain adjustments, like screen readers.

A test type where the responses are scored and recorded electronically is a computer-based test. AJAX, PHP, HTML, and a MySQL database were some of the open source technologies used to build the system. The exam proved the efficacy of using web-based methods to assess students in settings with a large student body. The main building block of the programme Computer Based Testing System is HTML, a markup language used to define and describe the content of a webpage. HTML is used to tell a browser what to display on a page, including how text should look, such as in bold or italics, and how to define images. The two HTML features that were used the most were forms and Cascading Style Sheets. The form was used to gather LOGIN data from a user, such as username and password, and a submit button (Login) was used to transfer the collected data to a web page for processing. The application's style was done via CSS. Layout, link styling, color, photo alignment, and menu creation are among them. CSS (Cascading Style Sheets) is a style sheet language for describing the look and formatting of HTML documents.

Evaluation is the process of determining if something is appropriate or meets a certain level of quality or standards. Evaluation is the methodical assessment of an initiative's conception, execution, or outcomes for the purpose of knowledge acquisition or decision-making. The amount of knowledge that trainees have attained after their learning session is described by the terms evaluation, test, assessment, and examination, among others. In order to assess a learner's level of skill acquisition, intellectual ability, and comprehension after a specific amount of time, according to Emaikwu (2012), exams are used in education. Joshua (2004) described assessment as the methodical collection of information used to assess the worth of a programme, product, process, or goal; or the potential utility of different techniques for achieving certain goals.

Onuka (2006) distinguished between formative and summative evaluation as two different types of evaluation. In order to guide and assist a programme in reaching its purpose, formative evaluation is a sort of assessment that occurs during the development stage of a programme or throughout the teaching and learning process. Summative evaluation takes place once a programme is finished. A computer-based test or a standard paper-based test may be used to evaluate students. The most popular technique of grading students in Nigeria's educational system is the paper-based test. Students react to questions given to them in this way using paper and a pen. By helping people grow their knowledge and skills, many institutions help people develop their civic character and commitments. kinship, church organisations, and the media, and community organizations all have a significant impact.

Many institutions assist individuals in developing their civic character and commitments by assisting them in developing their knowledge and abilities. Family, church institutions, the media, and community organizations all have an impact. Schools, on the other hand, have a unique and long-standing role in the development of civic competency and civic duty. Beginning in the early years and continuing throughout the educational process, schools fulfill this role through both official and informal instruction. Formal civics and government education should offer students with a fundamental and realistic grasp of civic life, politics, and government. It should acquaint students with their state constitutions, since these and other key documents may be used to analyze the methods and objectives of governance. Formal instruction should enable citizens to understand the workings of their own and other political systems, as well as the relationship of the politics and government of their own country to world affairs.

Statement of the Problem

Exam misconduct is already a cankerworm in Nigeria and many other nations across the world. It has grown to dangerous proportions, and it is found in educational institutions all around the world. All stakeholders in education are concerned about the kind of persons participating in examination misconduct, which occurs in both internal and external examinations. The act is carried out by children, adolescents, and adults alike. Exams in Nigeria are currently a disaster for parents, students, the government, and instructors. Exam authorities like the Joint Admission and Matriculation Board (JAMB) are already using a system that manages her exams across 500 CBT centers around the country. This has benefited

the test in overcoming obstacles associated with the PPT examination technique.

Ricketts and Wilks (2001) looked at the suitability of employing the CBT approach to teach numeracy and statistics to first-year Biology students. They noticed that when pupils were given online assessments, their performance was low and that they had trouble communicating with the computer screen. Daly and Waldron (2002) built a model for CBT systems to investigate the elements that allow computer science students to pass programming examinations while having limited problem-solving skills. The study discovered that admittance was contingent on their exam results. This study wishes to bridge the gap established by previous researchers, thereby examining expert' evaluation of a developed civic education CBT package upper basic school student in Civic Education in Ilorin.

Purpose of Study

The main purpose of this study was to ascertain expert' evaluation of a developed civic education CBT package for upper basic school student in Civic Education in Ilorin. Following were the objectives.

1. To determine the process in using designed CBT Package to process real time result and valid test score.
2. To evaluate the rating of experts on the developed Civic education CBT package for upper basic school student in Civic Education in Ilorin

Methodology

This study adopted the descriptive research design with survey method. It was adopted because it enables the researcher to collect large amounts of information about the designed CBT package. Experimental research was also adopted because the researcher observed situation and response by setting up experiment which enabled researcher to elicit appropriate response. The aim of this study was to evaluate CBT Package for upper basic school for Examination in Ilorin metropolis. Therefore, the study was carried out using a researcher-designed questionnaire to gather necessary information from the experts.

The populations for this study were all teachers and lecturers in senior secondary schools of Ilorin metropolis and University of Ilorin. The target population for this study comprised of all civic education senior secondary school teachers in the selected upper basic school of Ilorin metropolis and

lecturers of the department of Educational technology and department of computer studies in universities in Ilorin. Purposive sampling technique was employed based on their subject matter which is civic education to rate the course content and lecturers to rate the design. On the whole, 40 lecturers and 80 civic education teachers were selected to evaluate the designed CBT package.

For data collection, the study employed a research-designed questionnaire and the CBT Package, which was produced by the researchers. The questionnaire was created in such a way that it would answer and test the Research Questions that the research was created to address. The questionnaire is divided into two (2) sections: A and B. The respondents' names, sexes, ages, and classes are all included in section A. Section, B evaluated the designed CBT system. Three academics from the Department of Educational Technology verified the research instrument. They double-checked the questionnaire and made the necessary changes. Their ideas and adjustments were incorporated into the research instrument's final draft.

Before applying the prepared CBT Package and personally presenting the questionnaire to the instructors, the researcher visited the selected schools and obtained permission from the school principal. The responder handed over the completed questionnaire to the researcher. The questionnaire was handled with the utmost discretion. For data analysis, the correctly completed questionnaire and rating scores were employed. The study's data was collected and analyzed through descriptive and inferential statistics. The study questions were answered using frequency and mean.

Results

Process in using the designed CBT package to process real time result & valid test score

The process includes:

1. Log on to the system.
2. Register student in the system.
3. Set examination questions and instructions.
4. Insert options to questions in the database.
5. Specify the correct answers to the questions.
6. Set the time for each test paper.
7. View the scores of his or her own students

Expert evaluation about the designed CBTs

Table 1
Responses of Subject Expert on evaluation of CBT

	Items	Mean
1.	The content is reliable	4.00
2.	Concept and vocabulary relevant to learners' ability	5.00
3.	Information relevant to age group curriculum	4.70
4.	Logical progression of questions	4.33
5.	The content is structure in a clear and understandable manner	5.00
6.	The structure allows learner to move around freely in different frame	4.33
7.	The structure of the package permits learner to advance, review, end the test, or submit	3.33
8.	The package considers individual differences of the learners	4.00
9.	The package allows leaner to work on their own pace	4.33
10.	The interactivity of the package is according to maturity of the students	4.33
11.	The package provides opportunities for interaction at every screens/frame	4.00
12.	Instructions Icon key to get procedural information	4.70
13.	Answer key for answering a question	4.33
14.	Key for moving forward or backward	4.70
15.	Key for submit and end test	4.00
Grand Mean		4.33

From the data gather from the responses above as shown in table 1, the highest mean rated by the expert is 5.00 and the lowest value is 3.33 which indicate that the designed CBT software serve the purpose to which it is designed. Expert rate the designed CBT as very good.

Discussions

Experts rated the CBT system's design as excellent, and it came highly recommended. This is in support of Qiao-fang and Yong-fei, (2012), who designed a self-test online examination system that allows students to choose a test paper at random or utilize a test question assigned by the teacher to test them in order to determine their learning level and alter their learning progress. When the CBT method is used for assessment, it minimizes anxiety since students may get their results right after the test. Furthermore, the Fagbola, Adigun, and Oke(2013) CBT system, which was an online examination method, was anticipated to provide answers to difficulties such as examination malpractices, low-capacity testing locations, insufficient invigilators, and inadequate examination materials.

To lower the amount of examination malpractice, the system can be enhanced by administering questions at random. According to Nwafor and Eze (2014), most secondary schools still do not adopt the CBT method. However, in light of the recent covid-19 epidemic, which has impacted

many sectors, including schools, most schools are likely to adopt the CBT system of evaluation, which will address social distance by allowing crowds to be easily monitored and managed.

Conclusions

The study concluded that computer-based test (CBT) software package can be developed for upper basic school with the help of the Subject experts. With the rating of the experts, CBT is effective and can be used for civic education. The designed CBT is effective, which means that it can be adopted for assessment in upper basic school. The expertise rates the designed CBT as very good, and it can use for upper basic schools. In addition, Indoria, Sharma, and Soni (2012) created a web-based online test system that calculates student scores when the examination is submitted. The system administrator has the ability to create, alter, and delete the exam papers. The system was divided into two sections: an administrator's area and an operator's area (user).

Recommendations

Based on the findings of this research, the following recommendation were made.

- The curriculum developer should also add this to the curriculum as a mode of assessment for upper basic school.
- Student should be encouraged to familiarize themselves with computer and its basic functions.
- That computer-based test (CBT) software package should not just be developed for civic education alone, but also for other subject in the upper basic school.

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