An investigation of Tertiary Level Teachers and Students' Perception of CALT Computer-Assisted Language Testing in Tanzania

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Abstract

This is a qualitative study that aimed at investigating the tertiary level teachers' and students' perceptions of computer-assisted language testing. Furthermore, it aimed at investigating the advantages and disadvantages of CALT in the field of language testing in Tanzanian tertiary level education. The study will employ qualitative methods of research. The researcher used the interview method to collect data from 4 university-level students in Tanzania and two university teachers, the participant is 2 teachers and 4 students from the Open University of Tanzania who are taking language courses in the online-based system in their undergraduate program. The study will answer two research questions, what are the tertiary level students' and teachers' perceptions toward computer-assisted language testing? the question will be what are the advantages and disadvantages of CALT? what are the challenges facing teachers and students in sing computer-assisted language testing? The study will help in the improvement of Computer-assisted language testing (CALT) especially in this COVID19 period as the application of CALT became an alternative for classroom language assessment through the teachers' and students' perception of the advantages and disadvantages of Computer-assisted language testing CALT will be revealed.

I. INTRODUCTION

1.1 Background of the study

Computer-assisted language testing refers to the application of computer technology in language assessment and evaluation (Pathan, 2012). Computer-assisted language tests involve computer-mediated tests, the use of multimedia in the language test task, and automatic responses analysis. (Chapelle & Douglas, 2006), the application of computer-assisted language tests has brought positive changes since it was established (Pathan, 2012). Moreover computer-assisted language testing started in 1935, it started in the United States of America when a computer was used for marking objective test items. In 1980 the CALT improved by the advancement of computer technology which led to the emergency of microcomputers and at the same time led to the rise of item response theory in the field of linguistics. In 1985

large pool of test items were developed for test delivery using a computer. (Pathan, 2012).

1.2. Objectives of computer-assisted language testing

The weaknesses of the traditional way of the test led to the introduction of computer-assisted language testing among the objectives for integrating computer with the field of language assessment and testing includes making test individual-based, providing test taker with freedom while performing the test, to minimize the length of the test, to develop positive test attitude among the test-takers, to provide test result in a short period, and lastly to improve security on language testing process.

1.3. Types of computer-assisted language testing

1.3.1. Computer adaptive testing

Starting from Micro*CAT* which was established in 1984 later on it was replaced by *FastTEST*, developed by the assessment system cooperation 1999 in this program

first the items were available in an item bank that was available in a local machine or network. The information contains in an item includes discrimination, guessing parameters, content, and context. Secondly, the selected item individualizes the test by matching it to the needs of the test takers. The selection of the next test item is depending on the previous responses of the test taker. the next question will be difficult if the test taker gives correct responses to the previous item and the next question will be easier if the test taker' response will be incorrect. Thirdly the computer will terminate the remaining items if the test taker's response reveals the intended ability to be tested. Lastly, the test taker will not have a chance to skip the question, the test taker must be answering all items in the test. (Fulcher, 1998).

1.3.2 Testing on the internet

The standard browser is required to be loaded into any computer which can access internet services or a Smartphone these will allow downloading information from the host server which provides the test, and the test will be delivered to any device which can access the internet (Fulcher, 1998). Downloading may occur for the whole test or item by item from the tester's computer to the test takers' computer (Silye & Wiwczaroski no date). Internet computer-assisted language testing includes the first Test of English as a Foreign Language Internet-Based Test (TOEFL iBT), which is published by the EducationalTestingService,http://www.ets.org/toefl/ibt/about/), the second *BULATS Online Tests* Business Language Testing Service (BULATS) published by Cambridge ESOL, http://www.bulats.org/Bulats/TheTests.html), third is *BEST Plus Computer-Adaptive Version* Basic English Skills Test published by the Center forAppliedLinguistics,http://www.cal.org/aea/best-plus/ca.html),fourth *Pearson Test of English (PTE) Academic* published by Pearson, http://www.versanttest.com/products/english.jsp),

1.4. Statement of the problem

There is little use of computer-assisted language testing in Tanzania. At the university level, there is only one institution that offers online language learning and online language testing, which is the Open University of Tanzania. This is due to the institution's online-based teaching and learning. The current study will aid in determining what teachers' and students' perceptions of online language testing are in order for the respective institution to take appropriate action and to assist other institutions when they decide to introduce computer-assisted language testing.

1.5 Research gap.

There are many pieces of research based on finding the advantages and disadvantages of Computer-assisted language testing, (Laborda & Litzler, 2011), also about teachers' and students' perceptions of the uses of computer-assisted language testing as well as the challenges facing teachers and students in application of CALT (Hussain, et.al. 2021). However, there is very little study on computer-assisted language testing in Tanzania since the use of computer-assisted language learning and computer-assisted language testing in Tanzania is relatively low. Various academics have investigated the benefits and drawbacks of using information and communication technology (ICT) in all courses in secondary school (Mwila 2018), (Mwasha 2017), (Mfaume 2019), and (Messo no date) (Ngeze 2016).

1.6. Research question

1. What are the tertiary level students' and teachers' perceptions toward computer-assisted language testing?
2. What are the advantages and disadvantages of CALT?
3. What are the challenges facing teachers and students in using computer-assisted language testing?

II. LITERATURE REVIEW

2.1. Advantages of CALT

There are many pieces of research have been conducted on the advantages of computer-assisted language testing (CALT). A computer is more accurate in marking the test. A computer can provide the test results in a short period (Pathan, 2012). Also, the computer allows the teachers to measure the ability of the specific test taker furthermore computer-assisted language testing reduces the cheating possibilities (Brown 1997). Computer-assisted language test minimizes test administration cost including invigilating and scoring also through online form test taker can do the test in any location without physical interaction with the tester (Pathan, 2012).

2.2 Disadvantages of computer-assisted language testing CALT.

Computer-assisted language testing requires effective availability of computers, electricity, and good internet connection which may be not available when needed, computer-assisted language tests may lead to different results as far as test items differ from one test-taker to another. In addition to that, the ability to use computers, not all test takers are aware of using a computer (Brown, 1997). CALT failed to meet validity

qualities especially in measuring reading skills (Noijons, 1994)

2.3 Student perception of CALT

A study conducted in Pakistan in 2021 found that students have positive perceptions toward computer-assisted language testing despite the challenges they encounter in performing this kind of test (Hussain, et.al. 2021). Another conducted in Indonesia about online language assessment found that students have positive perceptions towards computer-assisted language testing they show that CALT provides freedom in doing tests also study found fewer students' anxiety toward the language test.

2.4 Challenges faced by the students

A study conducted in Pakistan found that among the challenges facing the student in the implementation of computer-assisted language testing is a low internet connection, inability to use a computer, also reading long text on a computer screen became a problem to some students (Hussain, et.al. 2021).

2.5 Framework for the description of computer-assisted language tests

No	Attribute	Categories
1	Directionality	Linear, adaptive, and semi-adaptive testing
2	Delivery format	Computer-based and Web-based testing
3	Media density	Single medium and multimedia
4	Target skill	Single language skills and integrated skills
5	Scoring mechanism	Human-based, exact answer matching, and analysis-based scoring
6	Stakes	Low stakes, medium stakes, and high stakes
7	Purpose	Curriculum-related (achievement, admission, diagnosis, placement, progress) and non-curriculum-related (proficiency and screening)
8	Response type	Selected response and constructed response
9	Task type	Selective (e.g., multiple-choice), productive (e.g., short answer, cloze task, written and oral narratives), and interactive (e.g., matching, drag and drop)

III. METHODOLOGY

3.1 Introduction.

The qualitative study is based on investigating the students' perception of Computer-assisted language testing at Tanzania's tertiary level. This chapter presents the research paradigm, the theoretical framework of the study, the purpose of the study, research design, data collection, and data analysis.

3.4 Research design.

This is a qualitative study that collected no numerical data. This refers to data gathered by the use of words and sentences to capture emotion, ideas, and perceptions of something (Kabir, 2016). The data for the study was gathered using qualitative methodologies.

3.6 Data collection procedure

3.6.1 Interview

The interview is one of the data collection procedures employed. According to Stukey (2013), there are five sorts of interviews: structured, semi-structured, in-depth, focus, and oral (muratovsk, 2016). The researcher applied semi-structured interview to collect data, that included prepared questions as well as unprepared questions in order to obtain more information from the participants about the prepared question.

3.6.2 Participants

The researcher chooses to use purposeful sampling techniques, in this technique intentionally researcher chooses participants that would contribute to the required formations. (Creswell, 2012), Also, I choose to use maximum variation as a strategy of purposeful sampling. According to Creswell (2018), maximum variation sampling involves the selection of participants with different characteristics. A researcher selected 4 university students from Open University and the researcher selected two university teachers. Moreover, the researcher selected participants based on three criteria. The first criteria were based on participants who were willing to participate in this study as among source of information. The second criteria are based on the student who has experienced computer-assisted language testing.

IV. FINDINGS AND DISCUSSION

4.1 Introduction

The collected data succeeded to answer all the research questions through the interview question asked to the participants. This chapter will discuss the findings of the research in detail. Then there will be limitations of the study and the recommendations. research question was

1. What are the teachers' and students' perceptions of computer-assisted language testing?

2. What are the advantages and disadvantages of computer-assisted language testing?

3. What are the challenges faced by the students in computer-assisted language testing?

4.2 Challenges

4.2.1 Computer availability

The students faced the challenges of the availability of computers for conducting online language tests. Most students especially first-year student does not have a computer also second year and third year to those who are self-funded students. Most students attend online English language tests through their smartphones which become hard for them to be comfortable since the screen of the phone is very small.

4.2.2 Internet issues

The issues of the internet are divided into two problems first one is the poor internet connection and the second is the high cost of internet subscription. The study found that some students are not able to buy internet bundles since the cost of internet bundles increased to 2Usd per one Gigabyte of internet bundles. Moreover, the issue of poor internet connection is a common problem many students faced this problem even the teacher report facing this challenge this problem led instant disconnection of a device when a student is doing the test or while a teacher administering an online test.

4.2.3 Security issues

This challenge was reported by the teacher that computer-assisted language testing is facing the issue of cheating done by the students in their test. The teachers reveals that they found the students' answers were copied from either internet or class notes. All this is because it is hard to monitor a student by using only the camera of his device. Some students claim that the camera of their devices is not working, other students log out from their devices and return claiming that it is because of a poor network connection

4.2.4 Computer application

There is low awareness of computer applications among the students or the teachers. Most students are not aware of how to use online meeting applications like zoom and google meet. For example, the common problem among the students is how to switch the camera and mic. Also, the study found that the teachers have low computer application skills (Royob T & Labordaa J 2009).

4.3 Advantages

4.3.1 Enhance remote learning

Through computer-assisted language testing, students were able to take an exam at whatever place, students claim that before the adoption of computer-assisted language testing, they were learning online but going to the regional campus to do a paper-pencil test. Teachers also said that they can administer their test at any place without going to the campus. (Pathan 2012)

4.3.2 Simplifying marking and grading

Computer-assisted language testing provides immediate test results to the test takers since the marking process is done automatically by the computer itself under the teacher's instructions. The students said that they like this kind of test because their results come in a short period unlike paper-pencil tests also, and they said there is no bias in marking as well. teachers' side said that computer-assisted language testing makes it easier for them to mark to make a test, administer a test and provide the test results in a short period. (Pathan 2012).

4.3.3 Reducing learner anxiety and creating a positive attitude toward the test.

Since the test is conducted on the computer the student motivation toward the test is increased, and the absence of physical invigilation from the teacher decreases the student's pressure and fear of the test. Moreover, the study found that students feel more comfortable with computer-assisted language testing than in traditional testing, in computer-assisted language testing they said that they can do a test in a friendly environment to them (Pathan 2012).

4.3.4 Test security

Computer-assisted language testing provides security of the test, it is reported by the teacher that through this it is impossible to lose any exam script like in traditional method where misplacing and losing some exam script is common. (Pathan 2012)

4.4 Disadvantages

4.4.1 Enhance cheating

The research found that the computer-assisted language testing is enhancing cheating on exams, teacher said that they found the student's answers resemble the internet materials or the class notes, so through computer-assisted language testing the students use the opportunity of online tests to cheat on their language exams, hence the teacher cannot measure the language ability of their students through computer-assisted langue testing.

4.4.2 Full of objective questions

The study found that the computer-assisted language test compresses most objective questions such as multiple choices, matching items, and short answer questions, they said that there is little chance for the subjective question which involve essay questions, the add that for their level and the method they used to learn the language is communicative methods expecting to have the test that will measure their ability to use the language communicatively and not measure the memorizing ability.

4.4.3 Not applicable

The teacher said that the online language test is not applicable in a required manner there is no equipment for the implementation, and there is low awareness from the teacher and the students on how to implement the computer-assisted language testing. The government policy and curriculum do not acknowledge computer-assisted language testing so there is no high-stake test that can be conducted through computer-assisted language testing.

4.4.4 students and teachers' perceptions

Positive. The study found positive perceptions from students and teachers. They view computer-assisted language learning as the method of integrating technology in teaching and learning activities and language assessment and evaluation. They mention advantages of the computer-assisted language testing. Furthermore, they mention the challenges they encounter during perfuming the online test and they suggested the measures to be taken by the government and their institution to improve computer-assisted language learning and computer-assisted language testing (Husain et.al).

Moreover, the study found negative perceptions among a few students and teachers, their negative perception was due to their awareness and motivations for the use of Computer Assisted Language Testing. The students with the negative perception mention the disadvantages of the computer-assisted language testing and say that they prefer traditional paper and pencil exams is better than computer-assisted language testing since the high-stake test is still conducted in the traditional testing method no need for adaptation of the computer-assisted language testing while the teachers' negative perception is because of their limited computer application skills, the study found that the teacher perception may change to positive after seminars and workshops on how to use computer-assisted language testing (Royob T & Labordaa J 2009).

V. CONCLUSION

5.1 The limitation of the study

The research was conducted in a small-scale area, the Open University of Tanzania Has almost ten campuses all over the country but this study was conducted only on one of those campuses. The study took a few of the participants four students and two teachers. The researcher found some challenges including finding the participants since many university activities are conducted online obtaining participants on campus was a challenge and communication was also the problem. Lastly, the participants were reluctant to provide the information because they thought the data was collected by their institution for improvement hence, they based on mentioning the challenges and disadvantages than the advantages of computer-assisted language testing.

5.2 Recommendation

The application of technology in language learning, language testing, and evaluation is crucial in this era of science and technology (Hussain, R et.al 2021). There should be measures to be taken to improve technology in language learning and testing. Government and non-governmental organizations should provide the computer device for the implementation of computer-assisted language testing. The government should modify the national education curriculum so that it can adapt to technological changes including the application of computers in language learning and testing.

The educational institutions should work on challenges facing teachers and students such as providing computer application courses so that they can be aware of perfuming computer-assisted language testing. Lastly, the government should ensure an effective internet connection, especially in rural areas, and provide affordable internet bundles for the students and the teachers.

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