



Assessment Of Standards For Digital Communication Language Laboratory In Rivers State Polytechnics

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ABSTRACT

Education technology is key to the development of effective learning environment. The study understudies the assessment of standards for digital communication language laboratory in Rivers State Polytechnics. The study used two research questions and one hypothesis. The descriptive survey research design was adopted in the study. The study used a population of 15 English language lecturers in various polytechnics in Rivers State. The entire population was used sample for the study. The study adopted an instrument titled “Assessment of Standards for Digital Communication Laboratory” (ASDCL). The instrument reliability was calculated to be 0.83 using kuder-Richardson Formular 21. The instrument was subjected to face validation by an expert in the department of English and literary studies in Niger Delta University, Bayelsa State. The data obtained from the study was analyzed using simple mean and standard deviation, charts and Z-test. Findings from the study revealed that polytechnics do not have adequate classroom facility for digital language communication laboratory, Polytechnic uses the digital language laboratory for class sessions in English language and digital language laboratory is not frequently exploited by students and lecturers for the purpose of teaching. Further findings shows that there is huge improvement experienced by students when learning English language using the digital communication laboratory, there is good communication flow and interaction when learning using digital communication laboratory and students’ interest and participation are sustained when learning using digital language communication laboratory. Further findings showed that there is no significant difference between the extents of utilization of Digital Language Communication laboratory and level of academic gain obtained from utilization of digital language communication laboratory in polytechnics in Rivers State. Finally, it was recommended that polytechnics should set appropriate funds for the building and establishment of special units on language laboratory so as to assist students meet up English language deficiency.

Keywords: Standards, Digital Communication and Laboratory

INTRODUCTION

Technological innovation has been advancing globally for the past two decades. The introduction educational technology had presented a whole new way of teaching and learning. Language laboratory has played an important role in foreign language learning. It offers learners various exposures to learn language more effectively. Take for example; previously, when language learning was aimed at mastering grammatical rules and forms, language laboratory is used to provide learners to gain auditory exposure on the target language while practicing drilling the grammatical forms they are studying.

There are some basic equipment that are found in language laboratory. Conventional language laboratory where the equipment available are audio cassettes and tape recorder, teachers play an audio tape then ask

the learners to listen and learn pronunciation as well. Then, another type of language laboratory is called lingua phone laboratory where the learners may learn the target language by themselves as well as communicate with their teacher. The laboratory consists of workstations, each of which is equipped with a headset with a microphone and a cassette player.

With the recent development of Information and Communication Technology (ICT), especially computer and the internet has transformed language laboratory into so called digital laboratory. Most of the language laboratories can be built by utilizing a computer laboratory available at most schools and universities since nowadays most of them in fact have computer laboratories equipped with adequate multimedia computer components, internet connection, and supported software (AsriSyaifudin, and Rozi: 2015). In setting up a digital language laboratory basically is like setting up a typical language laboratory where teacher is to control all learners' activities with his/her computer knows as teacher's console.

Teacher's console needs to be carefully designed and is considered very important because it helps teacher to monitoring the learners while they are doing self-learning, facilitating broadcast and sharing files to the learners through audio, video, text and image using the internet connection known as streaming technology (Syaifudin, Rozi, and Asri, 2016); pairing and grouping the learners to enhance collaborative activities; managing and creating teaching material and assessment.

A digital language laboratory according to (Davies et.al, 2005) comprises of a network of computers, plus appropriate software, which provides most of the functions of a conventional (analogue) language lab together with integration of video, word processing and other computer applications. It means unlike the two previous language laboratories, this type of language laboratory may be set up in a networked computers, just like those in a typical computer laboratory, and offers not only audio files but also video files as well. Besides, it enables learners not only to practice their speaking and listening skills but also reading and writing ones. In addition, computers are embedded with digital equipment such as audio CD or DVD which has much better qualities than audio cassette because the quality will not degrade because of frequent usage and the noise is much less. Besides, digital recordings can be made from any sources such as audio cassette itself (with certain software), television, radio, the internet, satellite, microphone or camera recorder and saved and copied on a computer, CD, DVD, or USB flash drive. Nowadays, language teaching and learning approaches has moved away from only focusing on learners' grammar competency such as the previous example to processes such as interaction and negotiation from the use of pair work activities, role plays, group work activities and project work (Khampusean, 2013) which are more related to real world contexts. Accordingly, digital laboratory may be one of the effective teaching and learning media for language learners. Learners may find learning language in the laboratory is much more interesting than traditional classroom setting since all of most learners nowadays are technology savvy and computer literate. Thus, it may motivate learners to get better improvement in language learning and may result to better achievement.

There is therefore the need to find out the level of availability and utilization of language laboratory in Rivers State Polytechnics.

Purpose of the Study

The aim of this study is to access the standards for digital communication language laboratory in Rivers State Polytechnics. Specifically, the study sought to:

1. Find out the availability and Utilization of Digital Language Communication laboratory in Polytechnics in Rivers State.
2. Ascertain the level of academic gain obtained from utilization of digital language communication laboratory in polytechnics in Rivers State.

Research Questions

The following research questions were used in this study:

1. What is the extent of utilization of Digital Language Communication laboratory in Polytechnics in Rivers State?
2. What is the level of academic gain obtained from utilization of digital language communication laboratory in polytechnics in Rivers State?

Hypothesis

The null hypothesis was tested at 0.05 level of significance and 5 degree of freedom.

There is no significant difference between the extents of utilization of Digital Language Communication laboratory and level of academic gain obtained from utilization of digital language communication laboratory in polytechnics in Rivers State.

Scope of the Study

The study is limited to assessment of standards for digital communication language laboratory in Rivers State polytechnics.

LITERATURE REVIEW

Conceptual Framework

Digital Language Laboratory

The currently is in its digital stage. Digital equipment are mostly electronic based. Davies et.al, (2005) and Aleman (2014) point out some benefits a digital language laboratory that is used for teaching and learning. First, versatility. Since digital language laboratory is set up by utilizing a network of multimedia-equipped-computers, it enables text, images, audio and video to be integrated, using such supporting software as Audacity and Adobe Premiere. In other words, both teachers and learners can create or record a teaching material in form of a video file consisting of those multimedia elements like creating Digital Storytelling (Asri, et al, 2015). In addition, any language teachers, regardless kinds of language they teach, may remodel and adapt it to their teaching easily for actually the laboratory is a tool designed for teaching any language. Second, ease of movement between different applications. It means both teachers and learners can easily open some different applications simultaneously since most computers nowadays allow their users to do so.

The language laboratory is networked with computers and multimedia tools such as headset, microphone, camera, and the internet to enable learners interact with teachers, classmates, fellow learners, and native speakers. Teachers can improvise in developing or utilizing different devices in language laboratory. It means learners can use the provided material regardless time and space for their own individual practices since materials may be copied easily on portable devices such as CD, DVD, or USB flash drive and may be accessed by using the internet. In terms of enhancing listening and speaking skills, it allows learners to learn pronunciation, accent, stress and all other aspects of the phonetics of a language effectively. In other words, it provides a facility which allows the learners to listen to model pronunciation, repeat and record the same, listen to their performance and compare with the model, as well as do self-assessment.

Learning and interactive skills can be enhanced in language laboratory. The laboratory can also help learners to improve their reading and writing skills because it allows teachers to be creative in providing activities such as finding information on the website or Web Quest (2014), promoting collaborative writing activities like creating web folio (Asri, 2010) and wiki using Wikispace (Asri et al, 2014). In most recent times, the language laboratory has been used to facilitate online and paperless assessments to measure the language learners' competence such as IELTS and TOEFL. Additionally, for assessing learner's speaking skills, the language laboratory enables teachers evaluate the assessment more accurately and objectively since they may separately test learners (Brenes: 2006) , using such video conference applications as Skype. Thus, learners will not have access to other learners' answers. In order to use a digital language laboratory in teaching and learning language, teachers are suggested to consider four things (Davies, et al, 2005):

- (1) Costs of installing, maintaining, supporting and upgrading equipments;
- (2) Time needed staff training, selection and creation of resources;
- (3) Management of resources: storage space, lifespan of resources and the need for regular upgrading;
- (4) Training especially for the teachers to familiarize with the teacher's console, software, and the network and to adapt their teaching instructions with new social and cognitive/constructivist learning theories.

The Application of Language Laboratory

Language laboratory is widely applicable in different areas. For the mastering of sounds and pronunciation the application of its audio systems helps filtering correct words spelling. Indeed, along with the development of technology, the field of applied linguistics requires teachers to keep up with technological innovations and integrate them into their teaching instructions. Furthermore, teachers are suggested to have some knowledge of complex hardware and learning software and should rapidly adapt to these tools of instruction without considering them a teaching method or approach but as a means to facilitate learning (Brenes, 2006). Thus, a digital language laboratory, just like any typical language laboratory, should not be considered as a teacher's substitute or a teaching method. Instead, it should be seen as a teaching tool requiring the implementation of well-constructed tasks based on the students' needs. The effectiveness of the language laboratory directly depends on the teacher's creativity. As suggested by Lado (1964) "language labs require better-prepared teachers who can put the new equipment and techniques to good use as well as conduct the class.

METHODOLOGY

Research Design

The study adopted the descriptive survey research design. The descriptive survey design in this case developed questionnaires which were administered to the respondents. The questionnaire items were used to obtain data for the study.

Population of the Study

The study used a population of 15 English language lecturers in various polytechnics in Rivers State. The figure was obtained from the department heads in the various institutions used for the study. From the population, nine (9) lecturers from Ken Saro Wiwa Polytechnic, Bori and six (6) lecturers from Elechi Amadi Polytechnic, Rumuola all from the Department of English and Literary studies were used in the study.

Sample and Sampling Techniques

The entire populations of 15 English language lecturers were used for the study. This was so because of the small size of population used for the study.

Instrument for Data Collection

The study developed an instrument titled "Assessment of Standards for Digital Communication Language Laboratory" (ASDCLL). The instrument is a four rating scale consisting of Agree (A), Strongly Agree (SA), Disagree (D) and Strongly Disagree (SD). The response options were weighed as 4, 3, 2 and 1. The instrument consists of a total of six (6) items.

Reliability of Instrument

Pilot study was conducted with three (3) English language lecturers in Bayelsa State polytechnic. Two weeks interval was used to collect response from the same set of respondents. The instrument reliability was calculated to be 0.83 using kuder-Richardson Formular 21.

Validation of Instrument

The instrument was subjected to face validation by an expert in the department of English and literary studies in Niger Delta University, Bayelsa State. The expert checked the content of the research questions, topics and instrument for data collection.

Method of Data Analysis

The data obtained from the research question was analyzed using simple mean, chart and Standard deviation. The hypothesis was analyzed using Z-test at 0.05 level of significance.

Decision Rule

Based on the decision rule, accept null hypothesis if z-calculated value is less than z-critical value. Also, reject null hypothesis if z-calculated value is greater than z-critical value.

PRESENTATION OF RESULTS

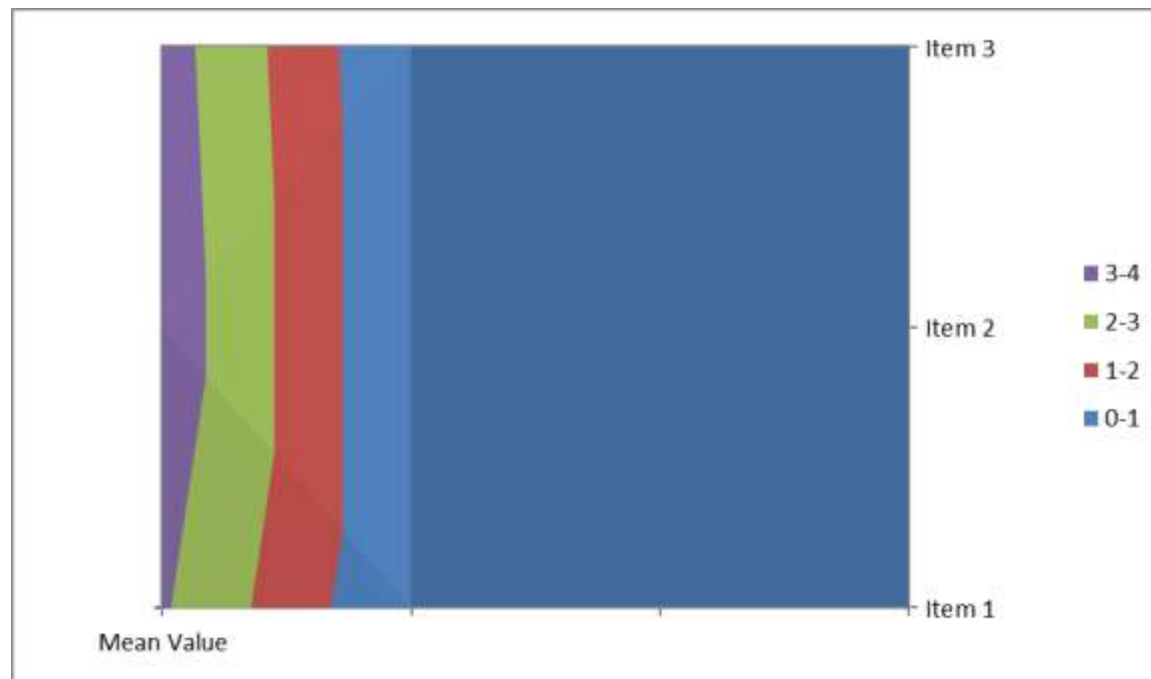
Research Question One: *What is the extent of utilization of Digital Language Communication laboratory in Polytechnics in Rivers State?*

Table 1: Utilization of Digital Language Communication laboratory

S/No	Items	Mean	Standard Deviation	Decision
1	The polytechnic do not have adequate classroom facility for digital language communication laboratory.	3.12	0.69	Agree
2	The polytechnic uses the digital language laboratory for class sessions in English language.	3.65	0.59	Agree
3	Digital language laboratory is not frequently exploited by students and lecturers for the purpose of teaching.	3.47	0.51	Agree
	Grand Mean	3.41	0.70	

Findings from research question 1, table 1 revealed that items 1, 2 and 3 all agreed to the fact that polytechnic do not have adequate classroom facility for digital language communication laboratory, Polytechnic uses the digital language laboratory for class sessions in English language and digital language laboratory is not frequently exploited by students and lecturers for the purpose of teaching

Figure 1: Utilization of Digital Language Communication laboratory



Findings from figure 2 showed that items 1, 2 and 3 had a mean value of 3.12, 3.65 and 3.47. This shows that language communication laboratory is not available for utilization in most polytechnics in Rivers State.

Research Question Two: *What is the level of academic gain obtained from utilization of digital language communication laboratory in polytechnics in Rivers State?*

Table 2: Academic gain obtained from utilization of digital language communication laboratory

S/No	Items	Mean	Standard Deviation	Decision
4	There is huge improvement experienced by students when learning English language using the digital communication laboratory.	3.29	0.77	Agree
5	There is good communication flow and interaction when learning using digital communication laboratory.	3.47	0.51	Agree
6	Students' interest and participation are sustained when learning using digital language communication laboratory.	3.65	0.59	Agree
Grand Mean		3.47	0.62	

Findings from research question 2, table 2 revealed that items 4, 5 and 6 all agreed to the fact that there is huge improvement experienced by students when learning English language using the digital communication laboratory, there is good communication flow and interaction when learning using digital communication laboratory and students' interest and participation are sustained when learning using digital language communication laboratory.

Hypothesis

There is no significant difference between the extents of utilization of Digital Language Communication laboratory and level of academic gain obtained from utilization of digital language communication laboratory in polytechnics in Rivers State.

Table 3: Z-test analysis of difference between the extents of utilization of Digital Language Communication laboratory and level of academic gain obtained from utilization of digital language communication laboratory

S/no	Items	N	Mean	SD	df	z-crit	z-cal	Decision
1	utilization of Digital Language Communication laboratory	15	3.41	0.70	29	2.048	0.3113	There is no significance.
2	Level of academic gain obtained from utilization of digital language communication laboratory	15	3.47	0.62				

$$Z\text{-calculated} = \frac{3.47 - 3.41}{\sqrt{(0.62^2 \div 15) + (0.70^2 \div 15)}}$$

$$Z\text{-cal} = 0.3113$$

Findings obtained from the hypothesis showed that z-critical value of 2.048 was higher than z-calculated value at 0.05 level of significance with 28 degree of freedom. This implies that the null hypothesis was accepted. This therefore states that there is no significant difference between the extents of utilization of Digital Language Communication laboratory and level of academic gain obtained from utilization of digital language communication laboratory in polytechnics in Rivers State.

DISCUSSION OF FINDINGS

Findings revealed that polytechnic do not have adequate classroom facility for digital language communication laboratory, Polytechnic uses the digital language laboratory for class sessions in English language and digital language laboratory is not frequently exploited by students and lecturers for the

purpose of teaching. This is in line with the view of Khampusaen, (2013) that opined that most institution lack quality infrastructure to meet up educational needs of the institutions.

Further findings shows that there is huge improvement experienced by students when learning English language using the digital communication laboratory, there is good communication flow and interaction when learning using digital communication laboratory and students' interest and participation are sustained when learning using digital language communication laboratory. According to Asri, (2010) digital communication laboratory is designed to enhance students' proficiency in English language learning.

Finally, the study showed that there is no significant difference between the extents of utilization of Digital Language Communication laboratory and level of academic gain obtained from utilization of digital language communication laboratory in polytechnics in Rivers State.

CONCLUSION

The findings obtained from the study showed that polytechnic do not have adequate classroom facility for digital language communication laboratory, Polytechnic uses the digital language laboratory for class sessions in English language and digital language laboratory is not frequently exploited by students and lecturers for the purpose of teaching. Further, findings shows that there is huge improvement experienced by students when learning English language using the digital communication laboratory, there is good communication flow and interaction when learning using digital communication laboratory and students' interest and participation are sustained when learning using digital language communication laboratory.

RECOMMENDATIONS

Finally, it was recommended that polytechnics should set appropriate funds for the building and establishment of special units on language laboratory so as to assist students meet up English language deficiency.

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