Effective Digital Laboratory for English Language Teaching

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ABSTRACT

Since the beginning of the 20th century, English language teachers have been using technological aids to enhance teaching and learning. One of them is the use of a digital language laboratory. It is a network of computers, plus appropriate software, which provides most of the functions of a conventional (analog) language laboratory together with integration of video, word-processing, and other computer applications. In this instance, text, images, audio and video can easily be integrated, and the teacher can remodel and alter materials to fit the needs of different language teaching programs. Along with the development of Information and Communication Technology (ICT), it has been a versatile tool for English Language Teaching (ELT) since it implies exposure to as wide a range as possible of cultural, linguistic and educational resources. The present paper addresses practical ideas for using such a digital laboratory in the ELT context. These are necessary in order to convey knowledge and aid the acquisition of the complex skills involved in the learning. The paper will help the teachers create, adapt or tailor multimedia resources for their learners.

KEYWORDS: digital laboratory, ICT, ELT contexts.

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. In *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.

Moreover, 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 (Asri Syaifudin, 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 known as teacher’s console. Whereas, each learner is provided with a computer known as learner’s work station or booth. Teacher’s console needs to be carefully designed and is considered very important because it helps teacher do the following: (1) monitoring the learners while they are doing self-learning, (2) 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); (3) pairing and grouping the learners to enhance collaborative activities; (4) managing and creating teaching material and assessment.
A digital language laboratory according to (Davies et.al, 2005) is “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 a 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.
Furthermore, Davies et.al. (2005:7) and Aleman (2014) point out some benefits a digital language laboratory offers to the language 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. Third, interactivity. It means the networked computers in the laboratory are equipped with such multimedia tools as headset, microphone, camera, and the internet to enable learners interact with teachers, classmates, fellow learners, and native speakers. Fourth, potential for teacher intervention in the form of oral comments. It means teachers can easily give remark on the students’ performance and work easily and even to control the students’ activities in the laboratory through their own console. Next, potential for independent learning through access to resources beyond the timetable on a self-access basis. 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. Furthermore, 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). Recently the language laboratory has been used to facilitate online and paperless assessments to measure the language learners’ competence such as IELTS and TOEFL. In addition, 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 equipment; (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 the with the teacher’s console, software, and the network and to adapt their teaching instructions with new social and cognitive/constructivist learning theories. Besides those four things, teachers should also make sure that technical problems do not exist; the network is connected with adequate internet connection, software used is applicable, and all learners’ computers or workstations are ready to use.

In line with previous explanation, therefore, the present paper addresses practical ideas for using such a digital language laboratory in the English Language
Teaching (ELT) context. These are necessary in order to convey knowledge and aid the acquisition of the complex skills involved in the learning. The paper will help the teachers create, adapt or tailor multimedia resources for their learners.

**PRACTICAL IDEAS FOR USING A DIGITAL LABORATORY IN THE ELT CONTEXT**

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. When used properly, labs can greatly increase the effectiveness of good teachers, whether or not they are native speakers of the target language”. In addition, Bernes (2006:4) suggests that:

Language lab sessions, therefore, should be seen as a helpful complement of language courses as long as creative and special tasks are developed for its use. In other words, the study of new content and communicative activities may be conducted during the regular class period; then, specific areas such as pronunciation (the segmental and supra-segmental features of language),
listening comprehension tasks, or further grammar practice must be reinforced in the lab with recorded material especially designed for language lab sessions. These activities may include pronunciation exercises, songs, cloze tests, and content.

Here are some practical ideas for using a digital laboratory suggested by Boukari (2010) in the ELT context:

1. Teaching Listening

He states that teaching listening involves training in some ‘enabling skills’ perception of sounds, stress, intonation patterns, accents, attitudes and so on, as well as ‘practice’ in various styles of listening comprehension. To support the practice of teaching, the language laboratory is equipped with earphones and headphones to deliver undistorted sound directly to the ears. Thus, this provides ideal conditions for intensive listening.

In designing an instructional material for beginners, teachers can focus on accurate perception of the sounds of the target language including sounds, rhythms, tunes and stress patterns of that language. It can be done by giving pronunciation exercises with the help of software or by using CDs in language lab to imitate and differentiate two different words (minimal pair perception exercises).

Hence for higher level, the instruction should focus more on interpretation, i.e. listening to interpret meaning from spoken language since unlike written language where there are convenient white spaces between words, spoken language is a continuous stream of sound to which the learners must carefully pay attention. In other words the focus is on the learners’ comprehension. There are some stages starting from general to specific comprehension through repeated listening and a specific activity at each stage.
To enhance the learners’ listening comprehension skills, teachers should bear in mind the following techniques:

a. Understanding the setting

The first listening is aimed at making the learners familiar to the voice. After the first listening, students should be able to understand such information as the setting of the recording — where the speakers are from, how many speakers there are, the ages, roles, professions, moods of the speakers, etc., and what they are talking about. This encourages students to think about the setting so that they can go on to speculate about the content of what the speakers will say.

b. Pre-teach difficult vocabulary

This can be done as pre-teaching activity, before the learners listen to the recordings. Teachers should also introduce the setting beforehand. This provides an opportunity to elicit or introduce and explain the sort of language heard in that setting. This language is listed on the board and students listen and mark what they actually heard.

c. Focused listening

Teachers should explain the listening task clearly before asking the activity. The learners need to know the reason why they should listen and to focus on what is expected to do. Another thing that should be considered is that listening activity should not take much time. A ten to fifteen minute listening is probably appropriate time since intense listening need intense concentration.

d. Comprehending

In designing this activity, a language teacher should consider the number of the learners in the class. If s/he has a large class, then s/he should consider their competence differences. One thing to do is dividing them into several groups and give
different questions for each to share and discuss by the end of the listening activity. With the help of a software developed by (Syaifudin, Rozy, and Asri, 2015), the distribution of the group can be done using the teacher’s console.

e. Analysis

This is given to more advanced learners because in order to do this activity needs their analytical abilities. The teachers may ask the way in which the speakers have expressed the ideas. How much have they revealed their mood, their opinions and so on? Analysis of the speed and style of speech, the use of hesitation, repetition, false starts, paraphrasing and so on can also be practiced.

f. Graded Listening tasks

Teachers should teach listening by building up comprehension from general understanding to identifying specific information. Moreover, they also grade the listening tasks from easy to more difficult by the form of questions they use. In terms of evaluation, the given task can be evaluated based on the kind of output by the learners in the form of writing or speaking which the learners can submit either the writing file (in form of documents) and recorded voice in their own workstation to be stored and evaluated by the teachers through their console (Syaifudin, Rozi, Asri, 2015).

2. Teaching Speaking

To improve the learners’ speaking skills, a digital language laboratory provides facilities to both teachers and learners to produce, record, and manipulate their own recordings. Teachers can create their own materials and edit them easily. Besides, they can also record learners’ voice while doing speaking assignment so they can evaluate as well as provide feedback easily and objectively. Learners, on the other hand, can do
self-evaluation on their speaking productions by recording their voices or utterances and check whether they are correctly pronounced or not.

Besides giving individual activity, teachers can also group the students on different workstations and put into random pairs or groups to participate in role plays and group discussions. Teachers can listen directly or intervene as when required to control, monitor and evaluate the process. It can also be recorded and saved for later evaluation.

3. Teaching Reading and Writing Skills

Boukari argues that “the key to learning a language is the frequent exposure and use of vocabulary and grammar”. Language learners should be exposed to a word or phrase 100s of times before integrating it into fluent conversation. To fulfill those requirements therefore he suggests these following exercises:

a. Grammar Exercises – Reading, Writing, Comprehension

These exercises are aimed at building the learners’ knowledge of how the words are combined to make sense. Furthermore, they may be in form of translating the reading material into the target language, and paraphrasing or substituting a phrase with a different phrase without changing its original meaning. This feature requires to type responses within the exercises, providing a practical and effective form of writing instruction. Moreover, reading comprehension exercises can be given in the form of stories, case lets, cases, descriptions and narrations. The teachers can upload those kinds of reading texts from their console to be accessed by the learners from their workstation and submit the assignment as well (Syaifuddin, Rozi, Asri, 2015). Prior to the activity, the learners can be encouraged by allowing them to follow the different methods of reading such as, skimming and scanning. They can be followed by activities in groups through exercises on word meanings, vocabulary, fill in the missing
information, writing summary/gist, note taking, thought provoking questions for group discussions, brainstorming sessions etc.

b. Writing exercises

Writing can be practiced through typing on gap fill exercises and model format for E-mail, letter, memo, reports and resume. They can also prepare the paper for presentations. These can be observed and edited by the instructor through the teacher’s console.

In order to support those exercises, it suggested that teachers also have what so called a written assistance. In this case, teachers should use an application which provides real time based chat and allow them to have a conversation with learners both individually and collectively (in a group), to guide the learners in doing the given assignments, as well as to provide feedbacks. Learners, then, are forced to read their teachers instructions or chat and reply or give comments by typing the words which means they also can practice both skills as well.

CONCLUSION

To conclude, the language laboratory can be utilized for many purposes. Media in ELT learning can be supported and delivered with digital technology. Hence, there is no language laboratory which can do an effective job without an effective teacher in the coordinated classroom. The language laboratory is a teaching aid or a teaching tool, not a teaching substitute. The laboratory must be incorporated into a foreign language teaching situation as a tool, integrated with course materials and good teaching. Laboratory work must be carefully integrated into the course work and the students given careful preparation for the lab experience. In addition, performance should be checked in some manner after the laboratory session on the materials used during the session. Without these techniques the language laboratory is ineffectual and, like
work-books, merely occupies the students while releasing the teacher from the chore of conducting class. A computer lab equipped with foreign language software, is alive and well. The computer now fulfills all the desiderata of language educators and gives life to language for many learners (Roby, 2004).

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