

Information & Communication Technology for Language Learning

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Introduction

Collins English Dictionary defines ‘learning’ as any relatively permanent change in behavior that occurs as a direct result of experience. According to this definition, behavior change in learning occurs when the learner experiences the world. In a similar way, Birkenholz (1999)³⁷ defines learning as: ‘acquiring new, or modifying existing knowledge, behaviors, skills, values, or preferences and may involve synthesizing different types of information’.

This nature of learning applies to language learning as well because learning a language results in change in behavior and skills.

The basic role of teacher or teaching is to facilitate this process of learning. Those who had experienced the world through reading or experiment became teachers, who facilitate the process of language learning. When this teaching-learning process involves systematic

³⁷ Birkenholz, R. J. (1999). *Adult Learning*. Danville, IL: Interstate Publishers, Inc.

instruction at a school or university, it is termed 'education'.

Education, today, involves technology, and the term 'educational technology' is used to refer to this phenomenon, which is defined as: "the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources." Richey (2008)³⁸.

Creating, using and managing appropriate technological processes and resources are absolutely necessary in the teaching-learning process in order to cater to diverse learning styles of learners. In language teaching, technology is used primarily to facilitate the improvement of receptive skills, viz: listening and reading. From the past, recordings, audio players, and various visual aids have been used for facilitating the improvement of listening and reading skills.

With the emergence of the computer, and, then the World Wide Web, both the extent and scope of the use of technology in language teaching-learning have broadened greatly. This field of the use of computers and web for language learning is commonly referred to as Computer Assisted Language Learning (CALL).

Levy (1997)³⁹ defines CALL as "*the search for and the study of applications of the computer in language*

³⁸ Richey, R. C. (2008). Reflections on the 2008 AECT Definitions of the Field. *TechTrends*. 52(1) 24-25.

³⁹ Levy, M. (1997). *CALL: Concept and Conceptualization*. Oxford: Oxford University Press.

teaching and learning.” These applications of the computer in language teaching and learning have been updating in parallel to the changes happening in theories of language teaching. The type of CALL applications used during the time when language learning was considered a behavior is referred to as ‘behavioristic CALL’ by Warschauer (1996)⁴⁰.

In such CALL programs, a stimulus in the form of text was presented on screen to the learner, who, then, could respond by entering an answer using the keyboard. After 1970s, behaviorist theories of language learning were replaced by the communicative approach. Parallel to this change, CALL programs took the shape called ‘Communicative CALL’ (Warschauer, 1996), where they became more interactive, claiming to foster natural communication.

Following communicative approach, language learning has now taken the shape of an integrative, eclectic approach. Accordingly, CALL programs today are also termed ‘Integrative CALL’. The idea there is to integrate multimedia, world Wide Web (WWW) etc. into CALL applications.

Office Tools and Software for Language Learning

One of the basic uses of computer for language learning comes with the mere use of office tools, which are available in any type of computer even without the need to have internet facilities. The most common office

⁴⁰ Warschauer, M. (1996). Computer Assisted Language Learning: an Introduction. In: Fotos S. (Ed.) *Multimedia Language Teaching*, Tokyo: Logos International: 3-20.

tools that help in the language teaching-learning process are word processors and presentation programs.

Today, the very first computer application that any beginning user of a computer touches, the word processor, helps in numerous ways in the improvement of language, especially that of the English language. This mainly encompasses areas such as writing and vocabulary development.

Unlike when writing on a sheet of paper, writing on the word processor assists the learner in improving his/her spellings and even grammar. It is also possible to get the meanings of most of the unfamiliar words just by right-clicking, and checking for synonyms. It naturally helps the learner in improving his/her word power.

Additionally, the 'Review' functions of the word processor enable both the learner and the teacher to improve the process of writing by correcting and commenting, and later accepting the changes by the learner. According to Pennington (2004)⁴¹, writing on the computer screen has the following advantages as well:

- The physical ease of making key presses and typing text.

⁴¹ Pennington, M. C. (2004). *Electronic Media in Second Language Writing: An Overview of Tools and Research Findings*. In: S. Fotos and C.M. Browne (Eds.) *New Perspectives on CALL for Second Language Classrooms*. (pp 69-92). London: Lawrence Erlbaum Associates.

- The focusing of attention by the clear and restricted amount of text that is visible on the computer screen.
- The marking of the point where text is being produced by the blinking cursor, which also acts as a prompt to the writer to keep writing.
- The writer's awareness of the possibility of saving or changing text at any time."

Next to the word processor, presentation programs like the PowerPoint are also helpful for the language teacher and the learner to improve presentation skills, which is a very important skill in learning a language.

The ability of the presentation program to simply incorporate various media, such as visuals, audio, and video, provides the user with a stimulus which enables him/her to go on producing the target language without having to memorize things to talk. This, in turn, improves the fluency and confidence in the user in producing the target language.

The mostly commercialized application of the use of computers for language learning is the use of language learning software. There are numerous types of commercially available language learning software which are claimed to be suitable for self improvement. The idea there is either to complement the human teacher of language or to replace the teacher with the software.

Glendining (2007)⁴² recommends the following checklist for evaluating language learning software:

- A. Program Description
 - What are the objectives of the program?
 - What tasks are students asked to perform?
- B. Learner Fit
 - Is the difficulty level right for my students?
 - Are the tasks appropriate for my students?
- C. Authenticity
 - To what extent do the activities correspond to real world language activities outside the classroom?
 - Can the activities be justified on other grounds?
- D. Pedagogic considerations
 - How interactive is the program?
 - What help is provided?
 - What feedback is provided?
 - Does it create conditions which may contribute to Second Language Acquisition (SLA)?
- E. Practicality and utility
 - Can this program be used in your teaching situation?
 - What are its advantages and disadvantages?

⁴² Glendining, E. H. (2007). *CALL Program Evaluation: Handouts for CALL 2006/2007*, Institute for Applied Language Studies, University of Edinburgh, UK.

- Is it likely to be more effective than a similar exercise done in other media (e.g. audio/video tape, paper)?

Using the above checklist, the teacher can select the best CALL program for his/her target group of learners. One of the very important aspects coming under the practicality and utility of CALL software is the financial cost associated. Because CALL software is intellectual property, the cost associated is very high. Therefore, for a middle income country like ours, it would be prudent to select software for which payment has to be made only once, rather than software of which license has to be renewed annually.

Another option is to use authoring software, such as 'Hot Potatoes', by teachers to create CALL activities for their learners. 'Hot Potatoes' software helps teachers to create multiple-choice, jumbled-sentence, gap-fill, matching/ordering, short answer, and crossword exercises for their learners. It is freeware, but activities created using it should be published in the World Wide Web.

Web Enhanced Language Learning (WELL)

As the name implies, the basic objective of WELL is to enhance language learning skills through web resources. Use of any web resource helps in improving language skills of a language like English because many of the websites are presented in English language. Additionally, there is also a vast amount of websites which are specifically designed for the improvement of English and other languages.

Many of these websites can be accessed and used without paying any subscription, whereas for some of the websites for language learning, the learners have to subscribe to them. In order to evaluate language learning websites for choosing suitable websites for the learner, teachers can use a checklist such as the following suggested by Glendining (2007):

1. Accuracy
Is the information correct?
2. Authority
Is it clear who wrote the page?
What are their credentials and affiliations?
Is there an email address for contact?
3. Disclosure
Who owns the site?
Are there any sponsorship or advertising deals that could affect the selection of content?
4. Currency
Is the information up-to-date and is there an indication of when the page or site was created and when it was last updated?
5. Presentation
Are the pages attractively designed and easy to navigate?

In addition to the above checklist, it is also worth looking at the language skills improved in the website, type of audio/visual support provided, level of

language complexity, and the help and feedback provided.

Among the many a websites for language learning, reference sites are important for language learners as well as for general public equally. A very useful free site of this kind is ‘One Look Dictionary Search’, which searches the meanings, synonyms and usage examples of terms in around 60 online dictionaries under the categories: general, art, business, computing, medicine, miscellaneous, science, slang, sports, tech, and phrases.

The ‘general’ category of this site searches definitions in popular and reliable online dictionaries such as, Cambridge Advanced Learner’s Dictionary, Compact Oxford English Dictionary, Merriam-Webster’s Online Dictionary, McMillan Dictionary, Collins English Dictionary, and The Free Dictionary/Thesaurus by Farlex among others.

A special advantage of most of the online dictionaries and soft copies of dictionaries over the hard copies of dictionaries is the fact that the availability of sound files in the former provides the user with the ability to listen to the pronunciation of terms. Similarly to ‘One Look Dictionary Search’, ‘Encyclopedia.com’ searches information over 100 encyclopedias and dictionaries.

In addition to dictionaries for English definitions, ‘Madura Online Dictionary’ can be used for getting Sinhala translations of English terms. A similar venture is the English-Sinhala PopUp Dictionary, ‘EnSiTip’, which was created as a Firefox add-on, by the University of Colombo School of Computing (UCSC).

However, UCSC discontinued EnSiTip from mid 2010 because the dictionary associated with EnSiTip, which was compiled using public contributions, was not licensed.

A plethora of web resources are also available for improving listening, speaking, writing, and reading skills of learners, as well as for sharing teaching material and teaching experiences of teachers of language across the globe. Some examples of these and their uses are given in Table 01.

Table 1: Examples of Web Resources for Language Learning

Site	Comment
For all Skills	
www.uefap.com/links/linkfram.htm	A database of websites for using English for Academic Purposes. [Reading/writing/listening /speaking/grammar/vocabulary/specific subjects]
http://www.camsoftpartners.co.uk:80/websites.htm	A to Z list of links to CALL sites.
http://www.criticalreading.com	A site for reading and writing
www.lyrics.com	A collection of music lyrics.
http://www.bbc.co.uk/worldservice/learningenglish/language/	Provides useful and interesting material at sub-sections like vocabulary, listening etc.
http://vlc.polyu.edu.hk	Useful for both teachers and learners.
www.englishpage.com	Provides tutorials and

Kumara MDSS (2013a): *Information and Communication Technology for Language Learning*, In Performance Enhancement through Personality and Life Skills Development – Selected Topics, Ed. Jayasinghe U & Jayaweera A, Staff Development Centre- Wayamba University of Sri Lanka, 58-75.

activities. Equally important for both teachers and learners.

<http://www.eslbee.com/>

Advanced composition for non-native speakers of English.

<http://owl.english.purdue.edu/>

An online writing lab. Provides useful writing tips.

For Listening

<http://www.elllo.org/index.htm>

A good collection of listening activities. Over 1000 activities.

<http://www.esl-lab.com>

Good for listening practice.

<http://www.eltpodcast.com>

Useful listening materials.

<http://cla.univ-fcomte.fr/>

Useful videos, songs, audios, podcasts and all other aspects of EFL/ESL.

www.soundsofenglish.org/index.html

Useful listening exercises.

<http://www.voanews.com/>

Provides a special English wordbook.

Sites for Teachers

<http://www.teachingenglish.org.uk>

A useful website for teachers. Provides articles on methodology and developing skills etc.

www.english-forum.com

Links for both teachers and students.

<http://esl.about.com/>

Good links for teachers. Activities too.

<http://www.eslcafe.com/>

For both teachers/students

<http://www.eslwonderland.com/> Resources for teachers and learners.

Journals	
www.ict4lt.org/en/index.htm	A useful CALL journal/online course for teachers.
http://iteslj.org/	A useful online journal for teachers.
http://eltj.oupjournals.org	Oxford ELT journal. Useful articles, text messages, reviews [including websites] etc.

Links checked: 13/02/2013

Computer Mediated Communication (CMC)

The primary objective of language is communication. The term computer mediated communication (CMC) is used to refer to the use of computers (usually networked computers) for interpersonal communication. Common tools used in CMC are emailing, blogging, wikis, audio and video conferencing, online chat, multi-user object oriented domains (MOOs), and Virtual Learning Environments (VLEs). To refer to most of these tools, the term 'Web 02 Technologies' is also used.

One simple CMC device that language learners can be exposed to is emailing. Although emailing is categorized as an asynchronous (non-real time) communication medium, regular email users use it instantaneously making it almost real time when both the sender and the recipient are online.

Just as Gear (1999)⁴³ observes, unlike when writing for imagined situations in the classroom, when a learner is writing an email he or she knows that there is a real purpose in writing it, there is a real audience for receiving the message and responding to it, and the learner is a real communicator, who is a part of the communication process, that is producing the message.

Gear (1999) further observes the following advantages of e-mail projects, including: they (1) give learners opportunities to interact and negotiate meaning; (2) give learners authentic tasks to perform; (3) expose learners to varied and creative language and encourage learners to produce it; (4) give learners enough time and feedback; (5) guide learners to attend mindfully to the learning process; (6) help learners work in an atmosphere with an ideal level of stress and anxiety; (7) support learner autonomy.

Disseminating one's writing to a wider audience can be more effectively done using web-logs, called blogs. They are webpage journals with articles in reverse date order. They can be used as 'a space for individuals to write whatever they choose, with an option for readers to comment on what they have read' and can also be used in language classroom for developing interactive writing (Eastment, 2005⁴⁴).

⁴³ Gaer, S. (1999). Classroom Practice: An Introduction to E-mail and World Wide Web Projects. In: Egbert, J and Hanson-Smith, (Eds). CALL Environments: Research, Practice and Critical Issues, pp 65-78, Alexandria: TESOL.

⁴⁴ Eastment, D. (2005). Blogging, *ELT Journal*, 59(4): 358-261.

Using 'Blogger.com', the teacher can easily create a blog, and ask the learners to become members of the blog by inviting them using their email addresses. Thereafter, the teacher can invite the learners to express their thoughts by giving a prompt and asking the students to both express their views on the prompt and comment on each other's views. To practice blogging in class, an individual networked computer for each and every student in class is not always compulsory.

Once guided, the learners can attend to their writings and comment on them at their leisure, at anytime from anywhere. In an extreme case, the present writer has the experience of teaching CALL to a group of learners who didn't even have sufficient furniture in classrooms, let alone computers and internet. The courageous group of students managed with the two laptop computers and the internet dongle brought by the teacher and ultimately completed their first blogging project, '2012~HNDE~CALL~Anuradhapura'.

A further step ahead in blogs is wikis, which were originally known as 'wikiwikiwebs', meaning 'quick webs' in Hawaiian. Wikis are web-based spaces for collaborative authoring, which can be modified by any user.

The most common example is Wikipedia, which is an online encyclopedia, authored by people around the globe. Although creating individual wikis for classes is not as free as creating blogs, writing about a local topic, aiming at publishing in the Wikipedia is a possible activity for language learners.

Audio and video conferencing, web chat, and MOOs are real-time communication media that foster instant natural communication. Audio-video conferencing can be done using mobile phones, Skype or NetMeeting (Microsoft), which comes packaged with many personal computers. When both seeing (visual) and hearing (auditory) are there, meaning negotiation in communication becomes effective.

In web chat, neither video nor audio is used, but it is advantageous when communication involves speakers of various varieties of English because the problem of accent does not arise then. Chatting is now possible even with email hosts, Skype, and social networking sites such as Facebook. MOOs are virtual social environments where the users can chat with some virtual kinesthesia than chat rooms.

Another virtual learning environment, 'Second life', is a 3D virtual world that allows users to be imaginary avatars and communicate with other such characters. Learners can improve their language skills in these virtual environments while enjoying the gaming spirit in them.

MOODLE, Modular Object Oriented Dynamic Learning Environment, is a virtual learning environment, which can be used as a Course Management System (CMS), also known as Learning Management System (LMS). MOODLE is a global development project designed to support a social constructionist framework of education. It is provided freely as open source software.

Corpora and Concordancing for Authentic Language Use

Francis (1992⁴⁵) defines a corpus (plural ‘corpora’) as “a collection of texts assumed to be representative of a given language, dialect or other subset of a language, to be used for linguistic analysis” (quoting Francis, 1982).

The advantage of corpora over dictionaries is that corpora data are authentic, real language used by the users of the language or the subset of language, whereas dictionaries usually give made up examples. Additionally, unlike dictionaries, corpora can provide innumerable numbers of a term in its real contexts. Therefore, corpora are especially useful for language teachers and learners.

A growing number of computer-based corpora are presently available. The most common general corpora are 100 million word British National Corpus (BNC), and its American counterpart, American National Corpus (ANC), certain versions and samples of both of which can be obtained for free. Language variety based comparable corpora such as International Corpus of English (ICE) can also be obtained for linguistic research by contacting the relevant research teams.

South Asian Varieties of English (SAVE) corpora are a similar project dealing with newspaper English. Teachers and researchers can also compile corpora for

⁴⁵ Francis, W.N. (1992). Language corpora B.C. In: Trends in Linguistics, (Ed. Jan Svartvic) pp 17-34, Walter De Gruyter & Co, Germany.

studying language of their teaching situations. Such corpora are usually referred to as ‘specialized’ or ‘dedicated’ corpora.

All these corpora will be of little use if they can’t be accessed electronically. The corpus access software, which can re-arrange language data in corpora so that patterns of language are made obvious, is called a concordancer. Among the various concordancers available, ‘AntConc’ is a freely downloadable concordancing program.

‘Compleat Lexical Tutor’ is a free online concordancing program which has many uses. ‘WebCorp’ is a free online concordancer, which accesses the web as a corpus. ‘WordSmith Tools’ is downloadable software for which subscription has to be paid.

Computer Aided Assessment (CAA).

According to Atkinson & Davies (2005)⁴⁶, Computer Aided Assessment (CAA) refers to any instance in which some aspect of computer technology is deployed as part of the assessment process. The following can be listed as principle examples of CAA in language learning:

- Interactive tests completed on a computer
- Use of computers to produce coursework

⁴⁶Atkinson, T, Davies, G. (2005). ICT4LT module—Computer Aided Assessment (CAA) and Language Learning. Available Online at: http://www.ict4lt.org/en/en_mod4-1.htm (Accessed on 14th February 2013).

- On-screen marking of students' word-processed writing
- Using a spreadsheet or database to keep a record of students' marks
- Use of email to send coursework to students and (for students) to receive marks and feedback
- Use of web pages to set tasks for students and to provide tutor support.
- Use of plagiarism detection software.

Although most of the above examples can best be utilized in formative assessment, CAA is now applied in summative assessment as well. Internationally accredited English language tests such as 'International English Language Testing System' (IELTS), and 'Test of English as a Foreign Language' (TOEFL) use CAA for assessing some of their components. In terms of language skills to be tested, it is the receptive skills, reading and listening, that can be tested easily using CAA.

The Ministry of Higher Education of Sri Lanka uses CAA in assessing English and Information Technology levels of university undergraduates, which are key performance indicators of a funding project called Higher Education for the Twenty-first Century (HETC).

The two tests, University Test of English Language (UTEL), and University Competency Test of Information Technology (UCTIT) are now online with the overall administration by a consultant at the University of Colombo School of Computing (UCSC). The Wayamba University of Sri Lanka was the first to administer this online test successfully.