Chapter Twelve

Literacy in Computer Assisted Language Learning (CALL)

1. Introduction

the emergence of CALL dates back to the 1950s and 1960s. Instructors can exploit new technology facilities such as authentic materials, multimedia, and communication through networking to improve language pedagogy. The Internet can be used to design more student-centered materials. technologies such as e-creation tools provide great opportunities for both teachers and learners to participate actively in creating educational products. The use of technology promotes discovery learning, the autonomy of learners, facilitates the implementation of differentiated instruction and learner-centeredness of pedagogy.

CALL is due to widespread use of computers. teachers should be prepared for technology-driven educational systems. today computer literacy forms an essential part of undergraduate curriculum.

Milman and Kortecamp (2006) claim that a large number of pre-service teachers are not computer literate. Kessler (2006) asserts that one of the teachers' obstacles in using technology for language teaching is the focus of training programs on digital literacy or software specific orientation.

teachers should not think of computers as magicians or teachers' substitutes. instead, they must treat them like other teaching tools. Norman (1993) states, "technology should serve us". He believes in a learner - centered approach toward technology use which means adopting multimedia and technologies in a way that enhances human learning and aids human cognition.

Language teachers might have affirmative attitudes towards CALL but be not competent when it comes to the application of CALL for class purposes. Using CALL has been regarded as a revolution affecting all areas of human life throughout the language learning history.

Throughout the 20th century, calls to expand the concept of literacy have arisen. Literacy has come under different terms in the literature: “Digital literacy” (Gilster, 1997), “electronic literacy” (Warshauer, 1999), “techno-literacy” (Erben, 1999), “new literacies” (Lankshear & Knobel, 2003), “media literacy” (Semali & Pailliotet, 1999), and “multiple literacies” (Pierce, 2002).

2. A Sociocultural Concept of Literacy

The intricacy attached to the term teachers' literacy with respect to CALL can be elucidated by ecological and sociocultural. ecology is a contextualized or situated form of research, according to van Lier. relying on the ecological perspective, one can envisage teachers who would act in a world convoluted by many agents.

SCT gives crucial significance to functioning in context or situations of cultural, institutional, and historical considerations. Teachers play the role of mediators in the interactions shaped in the complex environment of CALL.

3. Warshauer's Taxonomy of Literacy in CALL

differentiates four electronic literacies: computer literacy, Information Literacy, Multimedia Literacy, computer-mediated communication literacy.

a) Computer Literacy

According to Son, Robb, & Charismiadji, Computer literacy is the ability to use computer adequately for creating, communicating and collaborating in a literate community. A person who is computer literate should be able to use computers to perform a few tasks.

Computer literacy can be defined from two vantage points: For an individual, it simply means being able to use the computer as a means to an end. And attaining competence in using computers to perform personal or vocational tasks is the most rudimentary form of computer literacy.

Computer literacy is not corroborated through a tidy checklist that enumerates how many and which functions an individual can complete using the tool.

b) Information Literacy

Information literacy is the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning.

As Bawden argue information literacy refers to recognizing a need for information, identifying, locating, evaluating, and using that information effectively for dealing with a problem.

c) Media Literacy

Media literacy encompasses the practices that allow people to access, critically evaluate, and create media. Media literacy is not restricted to one medium.

Media literacy education is intended to promote awareness of media influence and create an active stance towards both consuming and creating media.

d) Multimedia Literacy

media literacy has now turned into multimedia literacy. All the elements combine in a single communicative act, and their joint roles need to be considered. Mayer (2001) defines multimedia literacy as the ability to understand the information which is presented using a combination of different forms of media such as audio, images, and videos.

According to Ware (2008), multimedia literacy motivates students much more than mere print-based literacy. It can afford language learners alternative visual and verbal ways to create texts.

e) CMC Literacy

According to Baron, which can simply be defined as a domain of information exchange via the computer. this domain includes all those electronic messaging tools and systems, which can be divided into two major categories: asynchronous communication tools and synchronous CMC. CMC systems can also be characterized in terms of structures of interaction: One-to-one interaction, one-to-many interaction, and many-to-many interaction.

Communication which is mediated by the computer and the Internet may be described with a number of terms, including virtual communication, online communication, electronic communication, cyber communication, or even cyber conversation. All these are technically referred to as CMC.

4. Multimedia in the Teaching/Learning Process

multimedia learning involves utilizing components of multimedia to produce an integrated educational environment. Mayer says, multimedia learning refers to the cognitive effects or mental images which are formed as consequences of being exposed to a multimedia show. He believes that multimedia offers teachers and students new ways to enhance the teaching/learning process.

Multimedia is important in education because it holds great promise in improving the quality of education. it provides teachers and students with the tools to access multiple images and sounds. Teachers can “break free” from the constraints of textbooks and the chalkboard.

5. Multimedia Principles

basic principles for designing multimedia learning environments, according to Soleimani and Mirsayafi, are: Multiple Representation Principle, Contiguity Principle, Split-attention Principle, Individual Differences Principle and Coherence Principle.

multimedia effects, contiguity effects, and split-attention effects depend on individual differences in the learner.

a) Multiple Representation Principle

using two modes of representation rather than one would have better results to present an explanation. The multimedia effect is consistent with a cognitive theory of multimedia learning because students given multimedia explanations are able to build two different mental representations verbal model and a visual model and build connections between them.

b) Contiguity Principle

Based on contiguity principle students understand an explanation better when related words and pictures are presented at the same time than in separated time.

c) Split-attention Principle

when giving a multimedia explanation, it is best to present words as auditory narration rather than as visual on-screen text. In other words, the third principle is that words should be presented auditory rather than visually.

d) Individual Differences Principle

This principle is more important for low knowledge than high-knowledge learners, and for high-spatial rather than low-spatial learners.

e) Coherence Principle

students learn better from a coherent summary which highlights the relevant words and pictures than from a longer version of the summary. Thus it is recommended to use few rather than many extraneous words and pictures when giving a multimedia explanation.

6. Conclusion

Technology provides numeral opportunities for language learning such as interacting with native speakers and accessing authentic materials for language learning and these language learning potentials necessitates enhancing language instruction in the classroom.

teachers should be technologically knowledgeable enough to implement appropriate technological tools for instruction. It helps teachers to guide language learners on how to use technological resources for learning. teachers themselves should be competent enough for applying technology in instruction and guiding learners.

Within the framework of multi literacies pedagogy, educators expand the opportunities for students to express themselves, their intelligence, imagination and linguistic and artistic talents. So students see themselves as intelligent, imaginative and talented. It is essential that the concept of literacy be expanded to include visual, audio, interactive and combined media, and that we continually ask ourselves what it means to be truly literate and, by extension, educated in the 21st century.