Using CALL in Language Teaching and Learning, in consideration of its Strengths and Limitations

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(Received: 25.5.2013; Accepted: 14.6.2013)

Abstract

This paper aims to discuss what Computer-Assisted Language Learning (CALL) is, to mention its three phases (Behaviorist, Communicative and Integrative CALL) shortly for pedagogical insights, and to highlight its strengths and limitations. Many research findings indicate that use of computer technologies has positive effects on language learning process in terms of its increasing students’ interest, motivation and self-esteem; providing space for individualization and independence from single-source of information, time and place; and also offering native language input, error analysis and feedback when necessary. Though, it is also associated with some limitations such as finances, lack of technology knowledge and self-discipline, recent programs’ inefficiency, besides health concern issues. As a matter of fact, it is highlighted that educators’ recognition of both the advantages and disadvantages of using computers in language classes is crucial to adopt and handle best-tailored educational practices and to maximize learning outcomes of language learning process.

Key words: Technology, Computers, CALL, Language Teaching, Language Learning

Introduction

Like any other aspects of life, emerging technologies have also affected learning process deeply—the interaction among the teacher and students, space as well learning activities and materials (Bahrani, 2011; Jung, 2005). Thus, such a technologically advanced era requires all the participants of educational practices to change and adapt in consideration of recent developments and applications of modern devices. For that reason, especially during the late 1990s, questions ‘Should the computer be used in language teaching?’ and ‘How can the computer be used best in language teaching?’ have implied that technology use is not optional any more (Chapelle, 2001, p.1). Besides, since a link between Communication Technologies (IT) and Foreign Language Learning (FLL) has already been established (Bahrani, 2011); in many classrooms, educators have utilized especially computers, defined by Hartoyo (2006) as a tool totally depending on the user and as a medium facilitating people in learning, to support and enrich (language) learning process.

Nevertheless the potentials of computers and the Internet for methodology and pedagogy have not been fully explored (Jung, 2005; Bahrani, 2011) and the average school still makes limited use of computers for some reasons (Bahrani, 2011), language teachers using CALL (Computer-Assisted Language Learning) have increased strikingly due to a range of language experiences (Kung, 2002). Therefore, this paper aims to discuss what CALL is, what it offers to language learning and teaching and for what it asks great caution.
What is CALL?

CALL is a program derived from CAL (Computer-Assisted Learning) and implemented to language; so that, ‘students learn language in any context with, through, and around computer technologies’ (Egbert, 2005, p.4), it ‘…(which) aid reinforcement and assessment of authentic language materials to be used and learned’ (Bahrani, 2011, p.272).

‘CALL is usually described as the computer-delivered combination of a large range of communication elements- text, sound, graphics, pictures, photographs, animation and moving video. Language Learning is concerned with the development of communication skills and has traditionally and creatively exploited all these communication elements in its classroom context.’ (Bahrani, 2011, p.273).

Nature of CALL

According to CALL, communication and language use are not one–way process (Bahrani, 2011, p.273); therefore, a typical CALL program asks learners to respond a stimulus, presented in any combination of text, images or videos. The learner is expected to respond by typing at the keyboard, clicking with the mouse or speaking into a microphone. While the learner needs to explore, discover, search, question and answer, the program helps the learners to understand if the response is right and wrong; and more, to learn the correct form by analyzing the errors and offering feedback (Bahrani, 2011).

Presenting different ideas of language development through computer learning environment, three phases of CALL are categorized as Behavioristic, Communicative and Integrative CALL (Warschauer, 1996).

Implemented in 1960s and ‘70s, the first phase is known as Behavioristic CALL. During that age, programs like PLATO -one of unforgettable projects leading the birth of CALL- were developed complying with the principles of Audio-Lingual method and operated on the principle of habit formation (stimulus + response). At this phase, language repetition, drills and individualized basis of practices were emphasized to reinforce correct behaviors (Warschauer, 1996).

The next phase took place in 1970s and 1980s, as Communicative CALL. Supporter of this new approach felt a need for initiating authentic-communicative aspects of language, instead of previous era’s extensive repetitive language drills and practices (Warschauer, 1996). Since language is a means of communication, this era of CALL ‘… avoids telling students they are wrong and is flexible to a variety of student responses’. Therefore, it ‘allows and encourages students to generate original utterances rather than just manipulate prefabricated language’ (Underwood, 1984, p.52). Moreover, unlike Behavioristic CALL phase, Communicative CALL materials were built on intrinsic motivation and fostered interactivity among all participants of learning; computer, students and the teacher (Stevens, 1989 cited in Warschauer, 1996). Nevertheless, the distinction between Behavioristic and Communicative CALL is about not only which software is used, but also how it is used (Warschauer, 1996).

The third phase is called Integrative CALL in which hypermedia and the Internet offers a lot to language learning by providing more authentic, skill-based, creative and individualized learning environments. These environments allow learners to explore, discover, ponder, search, question, answer, communicate and receive feedback (Bahrani, 2011) on their progress and/or proficiency at their tailored pace and objectives.

Why to make good use of CALL?

Many educators have emphasized current computer technologies’ advantages in language learning. The following are categorized as;
**a-Affective factors; Interest and Motivation**

Since current CALL programs provide lots of fun games and communicative activities besides repeated lessons, they can reduce learning stress and anxiety. While students engage in various audio-visual interactive activities; not only are their language skills strengthened, but also their language and learning attitude as well self-confidence are positively affected. All these also promote learning motivation (Taylor, 1980). Since with the aid of technology, a more comfortable learning atmosphere is created; learners feel encouraged to interact with others more (Jung, 2005). These activities also balance student participation by decreasing the dominance of some outspoken students (Jung, 2005) and by boosting every learner’s self-esteem (Robertson et al, 1987 cited in Lai & Kritsonis, 2006).

Furthermore, students show better engagement in learning activities supported by the Internet (Menchacha & Bekele, 2008 cited in Bekele, 2010). Likewise, Fedderholdt (2001) found that Japanese university students doing email exchange (E-pal) with Danish seniors revealed higher interest in writing and practicing Danish, as well as had great motivation for that.

**b-Learners’ differences leading to Individualization and Independence**

CALL emphasizes individual needs (Lee, 2000) by allowing learners to work on their own learning material to meet their learning objectives (Ravichandran, 2000); they can decide on which skills to develop and which course to study at their own pace, in accordance with their interests/needs, proficiency and learning styles at any time of the day. For those who master objectives quickly, additional programs can provide opportunity to proceed to higher objectives (Ravichandran, 2000). In other words, CALL enables students to be the creators of their knowledge by facilitating the synthesis of the pre-planned syllabus and learner syllabuses within a mutual decision-making process of both teacher and learners (Breen, 1986 cited in Ravichandran, 2000). Beyond all, in order to handle this process, students are to develop their thinking skills, recognize their needs and interests then they choose what to explore, since the information is not presented in a linear way (Lee, 200).

Moreover, learners are also offered independence from a single source of information (usually a teacher) (Lee, 2000) and from a possible incompatible teaching style (Ravichandran, 2000) when CALL programs are engaged. Via interdisciplinary and multicultural learning opportunities (Lai & Kritsonis, 2006), the instructions can be adapted accordingly to the unique learning style of individuals.

**c-Flexible Learning: free from Time and Place**

Flexibility in time and place of computer-using highlights the importance of flexible learning; learning anywhere, anytime, anyhow, and anything by connecting the Internet or using computer programs (Kilickaya, 2007). Learners are given a chance to study, review and practice the materials as much as they need through various sources and presentation types without time and place constraints. If they miss a class, they can keep up with the course through electronic resources.

**d-An Opportunity for Native Language Input**

The software and/or the Internet is helpful to learn native-like foreign language, as students are exposed to more appropriate input rather than their non-native teachers’ unconfident (pronunciation and) language use (Jung, 2005). They can access and be exposed to various authentic language materials 24 hours a day (Lai & Kritsonis, 2006). As stated in Bahrani’s (2011)
study, 12 out of 15 language teachers used computers for the improvement of especially speaking proficiency and listening comprehension.

**Error Analysis and Feedback**

By giving instant feedback, computers help students with their mistakes at the very first correct stage (Bahrani, 2011) without causing frustration (Kilickaya, 2007). This is an important principle in learning, because when the feedback on the performance is delayed, students’ receptivity and interest also declines. A delay in negative feedback may strengthen students’ misconception without their discovery of the error (Ravichandran, 2000). In consideration of habit formation of the behaviorist approach, such computer programs provide maximum benefit of repetition and drills, besides reinforcement (Decker, 1976).

In addition, computers can analyze specific mistakes and react in a different way from the usual teacher; it can lead each and every student to make self-correction and understand the principle behind the correct answer (Kilickaya, 2007). On the other hand, the teacher can make a good use of these programs to assess students’ learning progress. By getting the necessary information from the language learning programs, teachers can offer feedback tailored to students’ needs (Taylor & Gitsaki, 2003), pace and proficiency.

**Why to be cautious in use of CALL?**

Despite CALL’s widespread use, the application has its drawbacks to be noticed. Some are listed below;

1. **Finances leading to Inequality of Educational Experiences**

Gips, DiMattia and Gips (2004 cited in Lai & Kritsonis, 2006) highlighted educational inequality of learning experiences by referring to low budget schools and low-income students who cannot afford a computer. As long as computers become basic learning equipment, there occurs an unfair condition for them. CALL programs don’t benefit them if few school computers are only accessible in restricted hours and/or learners don’t have computers at home. Moreover, though they manage to get computers, expensive hardware, software and the need for updates are also another financial concern to cope with while applying CALL programs.

2. **Lack of Technology Training and Self-discipline**

To apply CALL, not only students but also teachers are to have basic technology knowledge. However, today, a number of teachers have insufficient training to assist students with computer-based learning programs, while some students may not have any computer literacy, either. Therefore, those who are unfamiliar with computer technology will not benefit from these programs well enough (Roblyer, 2003 in Lai & Kritsonis, 2006).

To add, multimedia is a creative integration of animation, sound, video and text designed in the format of educative games. However, some studies show that students can spend more time in front of computers to play games by concentrating on attractive fancy features, rather than its instructive contents (Jung, 2005). Eow, Zah, Rosnaini and Baki (2009) found Malaysian secondary students, spent $M: 8.47$ hours per week playing computer games. Thus, it can be risky if they cannot manage the time, their concentration and materials to serve for their learning needs and purposes.
c) Inefficiency of Current CALL Programs and Testing

Present software of CALL provides service with reading, listening, and writing skills. Also with limited functions, some speaking programs have been developed recently. However, they cannot function to understand students’ spoken output and evaluate it both for correctness and for ‘appropriateness’ (Warschauer, 2004 cited in Lai & Kritsonis, 2006). Diagnosing problems with pronunciation, syntax, or usage and intelligently deciding among options are some basic expected functions which current computer technology cannot offer (Lai & Kritsonis, 2006). In other words, with limited artificial intelligence, computers cannot deal with various, ever-chancing language learning situations, and learner’s unexpected learning problems which teachers immediately handle (Lai & Kritsonis, 2006).

Moreover, their inefficiency also affects standardized testing because these programs are incapable of measuring all interactive learning in EFL classrooms including the CALL classrooms, as their focus is mostly on reading and grammar (Jung, 2005).

d) Health Concerns

For some people, it is difficult to sit in front of a screen and read electronic texts for a while. Some even may develop exhausted and irritating eye-problems, which slow their reading skill down (Hartoyo, 2006).

Conclusion

In language teaching classrooms, just like in many other areas, modern technologies are no more alternatives but utilized in reinforcing language learning. Therefore, this paper aimed to stress the importance of using CALL in relation to its advantages and disadvantages properly.

Apart from providing motivation, self-esteem and autonomy for the learner, its being time-flexible, compatible, providing instant feedback and error analysis, CALL also helps as being a source of native language input, and letting students become more independent and the syllabus become more individualized. Though, its financial constraints, recent quality of programs and users’ lack of equipment, knowledge and self-discipline should be given some consideration as CALL’s limitations before its application.

In short, before CALL’s application, teachers’ understanding of what CALL is and how it works is very crucial to avoid misemployment of language programs, not to waste money on expensive software and devices, besides to guide students’ learning properly. It is also because ‘the effectiveness of CALL depends on teachers’ readiness to adopt new attitudes and approaches towards language teaching’ (Racvichandran, 2000, p.5) which is possible owing to its recognition. For optimum benefit, A teacher, willing to address the needs of today’s world and challenges of tomorrow, should re-evaluate his teaching and make best use of potential aids for both parties by making the classroom broader and allowing students to reach more resources.

References


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