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## **Full Length Review Article**

### **CALL-TUTOR, TOOL AND MEDIUM**

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#### **ABSTRACT**

Now-a-days computer and technology play a prominent role in our daily life where we employ them if we understand that or not, every aspect of living are employing technology to improve a product, to ease a way to do thing or to merely do something novel. Technology affects every industry and work, and by that employing computer and technology in teaching didn't become an option but a must. To study how computers are used in language teaching is one of the important components of applied linguistics. In this regard, the present paper provides to offer a brief history of CALL, visionary goals and the roles of CALL as tutor, tool and medium.

#### **INTRODUCTION**

Computer and technology play a foremost role in our daily life. In every aspect of our living we employ technology to improve a product, to ease a way to do thing or to merely do something novel. Technology affects every industry and work, and by that employing computer and technology in teaching didn't become an option but a must. To study how computers are used in language teaching is one of the important components of applied linguistics. A flourish of interest in using computers for language teaching and learning has been seen in recent years. The use of computers in the language classroom was just a part of concern to a few number of specialists in recent past. With the advancement of multimedia computing and the internet, however, the role of computers in language instruction has now become a vital subject dealing a large number of language teachers all over the world. This sort of approach is generally known as Computer Assisted Language Learning (CALL). CALL, as an acronym, is widely used in all educational institutions of present day (Yueguo, Hall and Hall, 2006).

##### **History of CALL**

The concept of applying technology in language is very new for language seekers, teachers and scholars where as it is not so applying technical applications in education.

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We first used computer-assisted instruction in 1950s chiefly for other aims rather than teaching language. Collett (1980), learning from a colleague in physics, employed the mainframe of university for computer-assisted instruction in French programme. In 1976 Eckert, Boyle and Smith reported computer-based diagnostic French test. Later on started technology to be used for language learning purpose in UK by individual language teachers like Last and Devies (Chappelle, 2001). The well-known early CALL project was initiated by Atkinson and Suppes at Stanford University, USA. With the teamwork of IBM, this project was based on Atkinson's mathematical learning theory than language learning theories (Atkinson, 1972). The Computer Curriculum Corporation was designed by Atkinson and Suppes in 1967. So, in this aspect the significance of this project outlined. Since then it carried on to supply teaching in English as a Second Language (Saettler, 1990). In order to educate essential French grammar, the corporation of three universities in Canada started the Computer-Assisted Learning Exercises for French (CLEF) project (Paramskas, 1983). Later on the Time-Shared, Interactive Computer-Controlled Information Television (TICCIT) and the Programmed Logic for Automatic Teaching Operations (PLATO) projects were developed to educate various languages. The first technique was employed for English, French, German, Spanish, Italian, Arabic, Chinese, Hindi, Hebrew and Swedish (Bennion, Hendricks and Larson, 1983); and the PLATO was made use of only for English, French, German, Spanish and Italian in 1980.

Audio, graphics and supple reply analysis were sustained by the coursework designed on PLATO method; and a scholar like Hart, found it very successful (Hart, 1981). The milestone in CALL was the 1983 annual TESOL convention in Canada. It's so in two features:

- The CALL was the expression agreed upon.
- A suggestion was made to establish a professional organization titled "CALICO" (Computer-Assisted Language Instruction Consortium).

CALL developed, in those days, in education and market settings. These include:

- A course on CALL at Lancaster University,
- Euro CALL professional organization,
- Creation of preliminary resources, and
- Publication of a huge amount of books on CALL.

### Chapelle (2001) stated:

There are certain books which were produced based on work of the early 1980s for teacher education. Among these the following works contributed a lot for moulding the young buds into colourful blossoms:

Kenning and Kenning, 1983; Higgins and Johns, 1984; Last, 1984; Hope, Taylor and Pusack, 1984; Underwood, 1984; Wyatt, 1984; Davies, 1985; Ahmad, Corbett, Rogers and Sussex, 1985; Brumfit, Phillips and Skehan, 1986; Cameron, Dodd, and Rahtz, 1986; Candlin and Leech, 1986; Hainline, 1987; Fortescue and Jones, 1987; Phillips, 1987 (Chapelle, 2001).

## REVIEW OF LITERATURE

### Definitions of CALL

Hubbard, P (2009) offers the following characterization: 'Computer Assisted Language Learning (CALL) is both exciting and frustrating as a field of research and practice. It is exciting because it is complex, dynamic and quickly changing – and it is frustrating for the same reasons' (Hubbard, 2009). Levy defined CALL as, the language teaching and learning take place in search of and study of the computer applications (Levy, 1997). A report submitted by ICF says that CALL denotes the simple procedure in which the learner employs any sort of electronic device especially computer, to improve foreign language competence. Here the electronic device includes smart phones, tablets, MP3 players, and consoles.

Hence, CALL includes:

- applications or softwares, as language-learning tools, for instance, for phonetics, pronunciation, vocabulary, grammar and clause analysis which may contain a text-to-speech function or speech recognition, and often influence interactive and directed tasks;
- Email, text-based computer-mediated communication (synchronous and asynchronous), social media, or

voice/video conferencing etc. These assist the learners can communicate with foreign language speakers through online environments;

- Video clips, flash-animations, web-quests, pod-casts, web-casts, and news etc., as an authentic foreign language material;
- Fun-based learning or game-based learning;
- Opportunities like online proprietary virtual learning which present teacher-student and peer-to-peer communication (Hubbard and Levy, 2006).

### Visionary Goals

To assume about how computers might facilitate build schools improved is one approach that can be taken to setting general objectives for computers in schools. When it comes to visionary goals, there will raise many questions. These questions include:

- What is the idea of computers in schools?
- What responsibilities might computers play in moving our educational system in that approach?
- What makes up a high-quality education in an Information Age society?
- What would be the best of all promising educational worlds?

Visionary goals represent long term goals for computers in schools. This takes place when we wish to have such idea to implement these goals. One's vision will be one source of his/her professional drive and integrity. The visionary goals will be vary from person to person. However, the most common visionary goals, as per many scholars and philosophers, are listed below.

### Goal one

In order to best fit the needs of each student, education will be absolutely individualized. Each student to be both socialized and self-actualized for productive and satisfying citizenship in the Information Age is the overall goal. Schooling gives good experience to everyone who experiences it in a modest way. Hence, the estimated achievements as an outcome of schooling, might well consist of:

- Ecstasy in learning
- Broadmindedness
- Mindful goals and attitude
- Internalized problem-solving determination and dexterity
- Information-locating talent
- Interacting skills with people, nature, and machines
- Lifelong learning skills
- Considering of the notion that we dwell in a global village
- Ability to alter
- Access to people and technology

Achievements can be modeled and communicated by educators. It will be possible to reach this aim if the educational scheme and the staff are humanistic but not acquiscent. As a result, students be trained to take responsibility for mastering their material and developing their skills.

### Goal two

Cooperative problem finding and solving are to be included as an important part more often than fault finding and imposed decisions by educational interactions. Students, to accomplish their educational aims, frequently work mutually. Precise directions on how and when to perform competitively or cooperatively in problem contexts are received by students.

### Goal three

All students are allowed to access to computers, at school, home, play, and wherever else they might wish to have access.

### Goal four

Allowing students' access to computers wherever else they wish to have access gives good access to the collected published information and views of the human race. In allowing so, a person might want to study, gets CALL materials covering almost all possible course areas and topics. It includes computer designed programmes to assist solve the types of problems that computers can help solve. It also includes software applications (computer as tool), computer programming languages (computer as tutor) and communication facilitator (computer as medium). All these tasks are appropriate activities to the needs of students. A great deal of these visionary goals, by the way, could have been mentioned a century ago, especially if one replaces books or libraries for computers. However, the role of computers in language learning makes clear that computers make a crucial distinction in educational system. In order to achieve these goals, each educational leader will have individual ideas. But some concurrence among the leaders in a meticulous school community will be revealed by a brainstorming session (Moursund, 1989).

### Relevant Research

Bush (2008) conducted a study. This study concluded vividly that when the students need computers at the right time, the later ones aid L2 learning for the former ones for the students can make use of the computers. New technologies like exceeding the traditional lecture and group work and shifting them into learning environments with games and activities, prompt deep modifications in the educational system; these innovative learning environments prompt the learners to employ L2 in circumstances that re-create life situations closer to the real ones and such settings allow L2 learners to presume control of their own learning without depending on the teacher (West, 2013). Another research conducted by Lin (2010), recommended that a computer-assisted learning environment was given advantages to the students when they were learning L2. The present society is multicultural and multilingual global society. In this regard employing technology to learn a target language is very crucial (Godwin-Jones, 2013).

### CALL as Tutor, Tool and Medium

#### CALL as Tutor

It is obvious that the computer cannot completely substitute the teacher for the teacher shall maintain to execute major roles of information deliverer and learning environment

controller. Teachers have only so much time on their hands. Even the children can be left behind by the most student-oriented teachers. In order to close this gap in one way, the use of computer as a tutor, is worth considering. Computer has indeed succeeded in providing an individualized learning environment so difficult to a teacher handling the whole class. This is fact and it is admitted by the present educators. In this regard computer can be a tutor in effect relieving the teacher who has many activities in his/her personal role as a classroom tutor. As a result, computer is able to let individual learners to study at their own pace, inspire learning through a challenging practical learning setting, and support learners through information required during the learning procedure. Though the label has been useful to wider applications than just this one of using the computer as a tutor, this method has often been called Computer-Assisted Instruction (CAI), perhaps because the additional tasks it executes are alike to those that could be performed by ideally competent teaching assistants.

As a tutor, computer plays the following roles:

- Performs as a sort of tutor
- Offers a learning environment
- Delivers sophisticated instruction
- Strengthens learning through drill and practice
- Supplies feedback (Setyembre, 2011).

The experts must program the computer in programming in a particular subject to use the computer as a tutor. Then the computer tutors the students executing the programmes. The computer presents some subject material, the students react, the computer evaluates the answer, and from the evaluation results, the computer decides what to present next. The whole records on each student being tutored are kept by the computer tutor, at its best; it has at its disposal a wide range of subject detail it can present; and it has a wide and supple way to experiment and then lead the students through the material. Its presentation to accommodate a wide range of student differences can easily and swiftly be tailored by the computer tutor if it is appropriately well-designed with suitable software. There is abundant witness of using computer as tutor in the modern teaching process. For instance, the works of Bork and Suppes. These scholars demonstrate the tutor mode at its best. Their all included articles deal about this mode. How best to develop good tutor material for physics instruction tells about Bork's attentiveness, where as Suppes has enhanced material for a wide range of subjects. The computer was employed by these two scholars to amass, analyze, and perform upon student results. To maintain student involvement and enrich the nature of the tutoring, the so called sophisticated peripheral devices as audio or graphics were employed by these scholars (Taylor, 1980).

#### CALL as Tool

Most of the people frequently and creatively use computer as a tool in computing and education. Tool mode is probably considered as the major mode of computer use because of people's everyday familiarity with computing capabilities. Tool mode, especially in educational field, is used for writing, presenting, and researching.

### **Writing: Text Editing and Word Processing Tools**

The first software tool computer users rely upon for creating text is typically a word processor. The word processor is often bundled with an office suite. Microsoft Word and WordPerfect are considered as powerful applications in Word processors. These include spellcheckers, table formatters, thesauruses and prebuilt templates for letters, resumes and other common documents. Students can then use it to assist them in a variety of activities in learning process. For example, they might use it as a text editor and copyist in language learning. Their use can pay off handsomely in saving time and preserving intellectual energy. For instance, the computer word processing software can relegate the tiresome recopying of abridged manuscripts of texts; statistical computer software can do the fitting of a curve to experimental data.

### **Presenting: Presentation Tools**

The process of presenting the content of a topic to an audience is called presentation. Computer can be used as a tool for presentation. A presentation tool is a computer software package used to display information, usually in the means of a slide show. It characteristically contains three major tasks such as an editor that permits text to be inserted and formatted, a method for inserting and manipulating graphic images and a slide-show system to display the content. Although there are many substitute presentations like OpenOffice.org Impress and Apple's Keynote, the most regularly well-known presentation program is Microsoft PowerPoint. The presentation, in general, pursues a hierarchical tree discovered linearly which has the benefit to follow a printed text often given to participants. The another well-known tool for presentation which can be used to easily link other presentations of whatever kind and by mixing the facility of enlarging without loss of accuracy due to vector graphics inherent to PostScript and PDF is Adobe Acrobat (Steinmetz and Nahrstedt, 1995).

### **Researching: Computers in Research**

The vast variety of jobs with tremendous speed and competence is one of the basic characteristics of computer. Computers are employed in almost every walk of life. They have become a subject of study at schools. Electronic computers have now become a crucial part of every profession: so do research. Throughout the research process, the computers are very crucial. When the research is a huge sample, the task of computer becomes more vital. Computers can store data for instant use or can store in auxiliary memories like compact discs, universal serial buses (pen drives) or memory cards, so that the same can be retrieved later. In assisting the researcher, computers perform different phases of research process. These phases include:

- Conceptual phase
- Design and planning phase
- Empirical phase
- Analytic phase and
- Dissemination phase

#### **Conceptual Phase**

Formulation of research problem, review of literature, theoretical frame work and formulation of hypothesis are the

major tasks the conceptual phase deals with. Computers assist the researchers in looking for the review of literature and references stored in the world wide web electronic databases. Therefore, it can be used for storing appropriate published articles to be retrieved whenever required. This has the merit over looking for the literatures in the form of books, journals and other news letters of the libraries which consume considerable amount of time and effort.

#### **Design and Planning Phase**

Research design, population, research variables, sample size calculation, reviewing research plan and pilot study are the major items that include in design and planning phase. Computers assist the researchers in calculating the required sample size for a proposed study with the help of several softwares like NCSS-PASS- GESS. For the sample size calculation, the standard deviation of the data from the pilot study is required.

#### **Empirical Phase**

Collecting and preparing the data for analysis are the sorts of tasks that include in the empirical phase. Computers store the data acquired from the subjects in word files or excel spreadsheets. This has the good point of making essential corrections or editing the whole layout of the tables if required, which is not possible or time taking if writing in papers. So, computers assist in data entry, data editing, data management including follow up actions and so on. Computers also permit for greater suppleness in recording the data while they are collected as well as greater simplicity during the analysis of these data. The preparation and inputting data is the most labour intensive and time consuming aspect of the work in research studies. The computer records the data on a questionnaire or suitable record form for its acceptance. To do so, the researcher in combination with the statistician and the programmer, will convert the data into Microsoft word file or Excel spreadsheet. With the help of statistical softwares these spreadsheets can directly be opened for analysis.

#### **Analytic phase**

Statistical analysis of the data and interpretation of results are the key points in analytic phase. SPSS, NCSS—PASS, STATA and SYSAT are some of the widely used softwares to perform the mathematical part of the research process like calculating the sample size for a proposed study, hypothesis testing and calculating the power of the study. To carry out the most intricate statistical analyses, it is essential to be familiar with anyone of these softwares. Besides for statistical analysis, computers are useful for monitoring the accuracy and completeness of the data as they are collected.

#### **Dissemination phase**

This phase deals with the publication of the research study. Computer helps in typing the research article in word format and converting into portable data format (PDF). Finally the converted PDF stored document can be published in the World Wide Web. All these procedures are done by the computer (Mahajan, 2002).

## CALL as Medium

Computer as a medium, is the increase of computer-mediated communication (CMC), which is extensively practised and has become possibly the most researched domain in the field of CALL at the end of the 20<sup>th</sup> century (Eastment, 1996). The computer, with the arrival of the Internet, both in society and in the classroom has been changed completely from an instrument for information processing and display to an instrument for information processing and communication. Learners of a language, for the first time, can now communicate economically and at a fast speed with other learners of speakers of the target language across the globe (Warschauer and Healey, 1998). There are chiefly three modes of communication by using computer as a medium. These include:

- Synchronous Communication
- Asynchronous Communication
- And World Wide Web Communication

### Synchronous Communication

By using special software programs for local area networks like Daedalus Interchange by Daedalus Inc. or Common Space by Sixth Floor Media, or via the Internet, using a variety of chat media like MOOs (Multi-user domains Object Oriented), Internet Relay Chat, or Web chat programs Synchronous communication can be achieved. Computer assisted discussion over local area networks has been prominent in ESL, foreign language, and English composition classes. Each student sits at an individual computer during synchronous computer-assisted discussion. With the support of Daedalus Interchange programs, the screen is divided into two divisions. On the bottom half of the screen the students create their messages. After hitting the send button by the students, the message appears almost immediately on the top half of all the other computers in the class. The messages are recorded in sequential order, with simple scrolling for examining again earlier messages. These activities can be carried out among the complete class or among mini specialized discussions.

The use of computer-assisted discussion for language teaching has focused on some research questions like

- Participation,
- Language use, and
- Writing improvement

Many research studies have proved that these activities are dramatically more balanced than face-to face discussion, with far less domination either by the teacher or by particularly vocal students (Chun, 1994; Kelm, 1992; Kern, 1995; Sullivan and Pratt, 1996; Warschauer, 1996a). It is obvious that the language employed in face-to face discussion to be less lexically and syntactically complex than in computer-assisted discussion. It happens so because CMC's written nature allows more planning than oral communication and adopts more written syntactical features (Warschauer and Healey, 1998). In this regard, for grammatical analysis or lessons, printed transcripts of computer-mediated discussions can also be employed later (Kelm, 1992; 1995).

This system requires to make sure to include minimum one study that claims the whole semester participation in computer-assisted discussion is more useful to the development of student writing than partaking in oral discussion (Sullivan and Pratt, 1996).

### Asynchronous Communication

Though there is immense concern in synchronous CMC, there is another mode called asynchronous CMC for communicating through e-mail and other tools include bulletin boards, newsgroups (USENET), and web-based conferencing systems. We can say that the most powerful tool in this mode is the e-mail which allows teachers and students to communicate with one another. The other asynchronous modes involve students to sign in to sites to read messages. In doing so, it facilitates more simple contact to particular parts of long, complex discussions among many groups. To give students opportunities for authentic writing assignments, for carrying out collaborative projects like comparisons of literature and film, for authentic communication with native speakers or with other learners of the language (Soh and Soon, 1991), compilations of folklore (Gaer, 1995), business simulations (Feldman, 1995), and survey based research (Kendall, 1995), the asynchronous communication modes have been used by many college and university teachers. Asynchronous and synchronous CMC are mixed due to the increasing number of settings. Chat sessions and email exchanges are included in the joint project like Belz (2001). Chat and discussion board applications and integrated email systems are included in Blackboard and WebCT learning management systems. In order to select the task that seems to fit best, the students will opt either synchronous or asynchronous CMC where they have enough experience with a range of communicative options (Thorne, 2003).

### The World Wide Web Communication

The World Wide Web is used in the second language classroom as the most recent medium of computer-mediated communication. There are many diverse and revolutionary media which play very prominent role in human history. These include part library, part publishing house, part telephone, part interactive television, the Web represents etc. There is enough witness to transform it to business, and entertainment. We can presume that there will be profound impact on education in coming days.

The World Wide Web provides profuse services for language teaching. These services include

- a medium of student publishing,
- accessing authentic reading materials (Lixl-Purcell, 1995),
- providing linguistic exercises (Li, 1995), and
- stimulating communicative exercises like student discussion of trips or vacations (Rosen, 1995; Bowers, 1995).

### Conclusion

CALL is a dynamic field in language teaching. The role of CALL has changed significantly in the past 50 years.

Previously it was mainly employed for drills and exercises. Now the developments in technology and pedagogy allow us to better incorporate computer technology into the language learning process. Students can be engrossed into rich environments for language practice Multimedia programs (Yang, 2010). The quality of student thinking and learning processes can be highly influenced by CALL as a tutor, tool and medium (Allen, and Mackenzie, 2015). It is surmised that the article in CALL as tutor, tool and medium will carry on to capture significant insights about where we have come from to aid a foundation for understanding where to go next.

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