Computer-Assisted Language Learning (CALL)

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As computers have become widespread in schools, homes and business, a need for language learning has become urgent and the necessity of computer literacy has become very obvious, language teachers have started to use new technologies as a new pedagogical tool in foreign language teaching. Introduction of new pedagogical tools does not reject, but includes programs and methods of the previous phase, representing inevitable innovation that gains acceptance slowly and unevenly.

Multimedia computing, the Internet, and the World Wide Web have provided an incredible boost to Computer Assisted Language Learning (CALL) applications, offering a wide variety of educational, programs, resources, software, journals, organizations, software tutorials including all types of exercises for grammar drills, vocabulary, listening and pronunciation exercises, games, etc.

After giving a general picture of CALL development, this article focuses on exploitation of the language resources and learning materials that are accessible on CD-ROMs and on the Internet, presents two CALL projects, and reports experiences in partner universities.
In terms of theoretical approach, practice, computer and communication technology, CALL represents a challenge for the teacher and for students as a new medium of exploration.

In an age where the target language is constantly in our minds and where computers are inevitable means of communication, interactions among computer technology, language learning, and multimedia are considerable.

I. CALL DEVELOPMENT

While the first CALL (Computer-Assisted Language Learning) programs were mostly used for manipulating texts and sentences, in the 90s the emergence of CD-ROMs storing complete encyclopedias or language courses with text, graphics, animations, audio and video elements entered the classrooms.

CALL has been used since the 1960s and 1970s, but it still lacks a clear research methods. CALL development can be divided into tree phases (Moras, 2001):

a) *Behaviorist:* CALL was implemented in the 1960's and 70's when the audio-lingual method was widely used. This provided students with drills and practice. In this phase, the *computer is used as a tutor*, presenting drill exercises without feed-back component, i.e. not including interactive components.

b) *The Communicative* approach focuses more on using forms than on the forms themselves. These programs provide skill practice in a non-drill format (e.g. language games, reading, and text reconstruction). In this phase the *computer is still used as a tutor*, but it gives students choices, control and interaction. Other CALL models use the *computer as stimulus* (e.g. to stimulate writing, discussions) or *as a tool* (e.g. programs that do not offer language material, but are used for creating or understanding the language, such as word processors, spelling and grammar checkers.

c) The current *integrative* CALL approach is based on multimedia computers and the Internet that combine text, graphics, sound, animation and video. The mentioned hypermedia resources can be accessed from a PC, using CD-ROMS or the Internet. Integrative CALL and its research methods are still under development.

II. CALL AND INTERNET

Since students see a computer as a trendy and useful tool, which enables them to be close to the world, the Internet and WWW are very motivating, offering a wide range of authentic material and promoting development of new learning strategies. Students can also create their own web sites or projects, according to their individual needs, inside and outside the classroom; using e-mails, chat-rooms, articles, class-conferencing, etc. All these allow the learner to participate in the target language culture. Besides these positive effects, negative ones such as technical and financial problems, lack of training, inappropriate material, and the huge quantity of information requiring skills and judgment on the Internet should be also mentioned.

The crucial problem is how teachers use these resources. According to S. Moras (2001), the use of computers does not constitute a method, but "rather, it is a medium in which variety of methods, approaches and pedagogical philosophies may be implemented".

In the Guidelines for Teachers, M. Warschauer and P. W. Whittaker (1997) suggest that in order to make effective use of new technologies, teachers must take a step back and focus on some basic pedagogical requirements. They propose five guidelines designed to help teachers in implementing computer-networked activities in language acquisition:

(1) Consider your goals
Since reasons for using the Internet range from motivation or distraction to improvements in computer skills, the teacher should have self-defined goals in order to use it successfully in the classroom. Some of the reasons could also be that the Internet creates perfect conditions for writing because it provides authentic materials, or raises students' motivation. Besides computer literacy is essential for future work and success.

If one of the teacher's goals is to teach computer skills, than they can choose Internet applications that will be useful outside the classroom. If the goal is mainly linguistic, the teacher will probably choose suitable exercises for grammar practice or vocabulary acquisition (using maps, quizzes, articles about certain topics, e-journals, advertisements, shows, poems, songs, etc.). On the other hand if the goal is to teach writing, then they can ask students to write essays, announcements, CVs, applications, etc.

(2) Think Integration
Internet gives opportunities to communicate by e-mail and to have pen pals, but that is not enough. The teacher should be deeply involved in activities and integrate them into the learning process, by including e-books, e-journals, joint work on seminars and by supplying other students with information. In this case, the teacher will probably do it by consulting students. The possibility to integrate online connections in the class would probably be motivating, trendy and enjoyable.

(3) Don't Underestimate the Complexity
It is possible that a number of students lack basic computer skills, which may be very time-consuming for training. But the teacher should also be aware of possible difficulties, such as depending on laboratory schedules, malfunctioning hardware or software, missing partner students, delays, differences in background, language and experience. Therefore, to begin with, the teacher should not depend too much on Internet activities, but include them for specific purposes and integrate them into classroom goals.

(4) Provide Necessary Support
The teacher should prevent students from being overwhelmed by difficulties, by creating handouts, by including technology training lessons into classroom activities, assure log-on systems and work inside and outside the classroom, assigning tasks in pairs or in groups specially in problem-solving tasks, advising when and where to ask for assistance, learn search criteria, etc.

(5) Involve Students in Decisions
Network-based teaching is part of the learner-centered approach. Network-based teaching supposes decentralized type of teaching, so the teacher should learn to become a "coach". Their role is to coordinate, to support, to help, to bring students' attention to gain awareness of the language learning process.

III. CALL PROJECTS

Communicative approaches to language teaching and learning recognize the importance of linking language learning, practice and use of computer technologies. The classroom should be a place where students engage in the learning process, sparked by activities that motivate them. Well chosen goals and good teaching organization make students feel that their training will result quite quickly in the ability to use language, computers and in communication activities.

Two examples of such research projects were conducted at the Faculty of Arts, University of Melbourne, Australia:

(i) PrOCALL (Project-Oriented Computer-Assisted Language Learning Project)
(ii) "Integrating Multimedia Tools into Project-driven Foreign Language Learning"

The projects involved seven language programs and were based on existing topic-based curricula used in the department. The contacts were planned in the following steps: 1) introduction of a topic through the reading of authentic materials, 2) discussion with a native speaker, 3) computer-based communication about the topic (e-mail, video conferencing), 4) construction of the class Web page in group sessions. The computer-based components (step 3 and 4) would be taught through essays written for the teacher and group discussions in the classroom among students (role-plays).

In that way the use of communication and multimedia technology enables students to interact with native speakers of their own age and immerses them in the target language culture. Creation of the Web site was based on a real-life goal with a final product which would be of value to learners as well as outside parties.

Through qualitative research methods, the aim of the study was to investigate current approaches and attitudes regarding computer-aided language learning in a university setting. Outcomes of such projects would feed into the development of new curricula with integrated computer activities in the course curriculum, at intermediate level.

IV. EXPERIENCES

A. Faculty of Philosophy in Zagreb, Croatia

Our experiences with CALL at the Faculty of Philosophy in Zagreb, Croatia include two departments: three years of experience in postgraduate studies called "Glotodidactics" designed generally for students who have studied languages in the course "Teaching with computers" and to a considerably smaller extent in the course of "Machine Translation" at the Department of Information Sciences. Postgraduate students responded very positively, since all of them have studied at least one language (English, German, French) and 4th (final) year undergraduates in "Machine Translation" were very interested in the subject because they studied mainly informatics and foreign language, linguistics or phonetics, etc. while they spoke at least one foreign language.

At the beginning of tuition, for students not studying informatics, we explained the idea of the Internet, search options and evaluation criteria in order to become aware of linguistic and technological opportunities.

We also presented some of the multimedia CD-ROMs for language learning (such as *Learn to Speak French/ English* – the complete interactive course for intermediate level, combining different thematic areas with dynamic and static pictures and sounds. Students responded exclusively positively regarding educational, behavioral and functional aims. Besides lessons, they were offered grammar exercises, vocabulary drills, tests, grammar rules, sound recordings, recordings of native speakers with optional feed-back. Students commonly used these packages individually or in pairs, outside the classroom. By working on such multimedia packages, the students can go over the lessons, review through games, articles, establish new logical connections between the learned material and real life situations and thus justify the teacher's investment in time and effort.

In addition, there are multimedia packages for early language acquisition (up to 10 years) that facilitate story writing, game playing, and listening to songs. One of such packages is *Atout Clic maternelle 4-5*, from Hachette Multimedia Education, designed for native French children, age 4-5, with a very friendly interface; it is dynamic, interesting, and very well organized. This multimedia package aims to teach children how to read, write, count and discover the world. The next step we have seen is *Maternelle 3,* for *5-6 year olds*, preparing them for school by reading and counting activities.

There are also several packages, programs and tools that communicate between *Croatian and a foreign language(s)* that students have worked on*:*

➢ *NeuroTran CD-ROM* package, from Translation Experts Ltd. for machine translation between Croatian and English and vice versa which allow adding new words and phrases.
➢ *Foreign Language for Travelers* http://travlang.com/languages/ where one can learn some Croatian or one of the numerous foreign languages. The focus is on simple expressions in areas such as shopping, traveling, time and space orientation etc.)
➢ Personal web pages designed to learn some basic expressions, such as learning Croatian for French learners (http://skeravec.chez.tiscali.fr)
➢ *Tell me more Kids*, from Auralog for Croatian native speakers wishing to learn English/ French/ German, on CD-ROM, a multimedia package produced for children and adults, on several levels.
➢ Dictionaries such as *Word Translator* from Translation Experts Ltd. between Croatian and major foreign languages, Xanadu Online (http://www.xanadu.hr) for English-Croatian

and German-Croatian with pronunciation on CDs, EuroVoc multilingual thesaurus http://www.hidra.hr/eurovoc/eurovoc.htm with Croatian included, etc.

➢ Besides using ready-made multimedia CDs, we have used learning materials, course description analysis, exams, games, etc. downloaded from the Internet. In addition to the main portals (www.yahoo.com, www.google.com, www.excite.com, ...) with Education as a subcategory, there are also direct links to specialized pages for foreign language learning, like the Education Resources Website (http://www.edufind.com/), Language on the Web (http://www.languages-on-the-web-com), On-line Dictionaries (http://www.yourdictionary.com), Foreign Language Resources on the Web (http://www.itp.berkeley.edu/~thorne/HumanResources.html'), Language Course Directories, and many others.

➢ There are multimedia packages intended for early learning (up to ten year old ones) that offer story telling, listening to songs, and playing games which are more appropriate forms of learning for that age group. CD-ROMs and Web pages http://www.enchantedlearning.com/Dictionary.html, http://www.pdictionary.com) with picture dictionaries can also be found and used by these learners. Multimedia packages for older learners differ in their content and presentation, but nevertheless, offer dynamic, interesting multimedia environments, with different topics, many types of exercises and drills, tests, explanations of grammatical rules and usage at several levels, and last but not the least, feedback to the user about their progress.

B. University of Exeter, UK & University of Graz, Austria

Another Tempus-related project currently under way is to develop English academic lectures into resources for both *undergraduate and teacher training materials*. These resources are being produced as a cooperation between staff at SOBE (School of Business and Economics), University of Exeter, and Norbert Berger at the University of Graz. They are available on http://bspr09.kfunigraz.ac.at .

Both minilectures and live lectures were video-taped and digitised for streaming delivery from a RealNetworks™ server. The multimedia files are supplemented by interactivities programmed both with *Hot Potatoes*™ and server-side scripting tools to allow students to prepare before, during and after class.

➢ A previous project was called *Talking Academics* and is hosted on WebCT™ Servers in Exeter and Graz. In-sessional and presessional international students aiming to study in the UK use the materials to support their language preparations. Last summer over 210 international students got access in an independent learning module. One major feature was that lectures they attended during the day could be reviewed in the evening on the internet with extra practice materials reminding students of classroom work done.

➢ A sample course were the specific business lectures were trialled in Graz, Austria, was *Academic and Business English*. The course objective was to develop academic writing, reading, listening and note-taking skills and reference students' skills to IELTS levels appropriate for studies at UK or US universities. Students' reactions have been positive and encouraging: feedback on the website mentions surprise and motivation, some teething problems with getting used to navigation, as well as good progress due to online tutor support (via CRM software such as LivePerson) 24/7 availability. Only one student reported access problems as they had no internet connection at home.

The materials are also going to be used for teacher training: Participants will analyse and compare both language and academic cultures and styles of these lectures. The Tempus project in cooperation with International Project Centre, Exeter will include a two-week course on site in England to further academic lecturing and presentation skills of participants from Croatian universities.

➢ Besides student writing and recordings of their classroom activities such as presentations and simulations also provide a valuable corpus for linguistic analysis. Concordancing and error analysis, e.g. using tailored functions of *Markin*™ *software* help provide useful clues to teachers on progress students make and the particular language areas that need to be addressed in teaching. Reports are also published through BAELAP (www.baleap.org.uk) in their reports online.

➢ Other web-based resources Norbert Berger produced in cooperation with industry leaders in business English publications York Associates in the UK include The Telecoms Pack, E-Minimaxes (Presenting, Meetings, Negotiations, Telephoning, Socialising, Business Writing and Business Across Cultures), and Communicating Styles. (http://www.york-associates.co.uk as well as http://www.ngberger.com) These materials can be used as self-study packs, but also provide teachers with guidelines for blended learning

solutions. The packages are currently being used by Henkel AG in their global training operations, as well as by Fachhochschule Campus Wien.

➢ Dictionaries on the Internet include *WordWeb* thesaurus and dictionary (http://wordweb.info/free), which is a free, cut-down version of WordWebPro and can be used off-line. It includes definitions and synonyms, related words, pronunciation, anagrams etc. There are also dictionaries, thesauri and glossaries like www.yourdictionary.com, http://babylon.com, Merriam-Webster Online Dictionary http://www.m-w.com/netdict.htm, Xrefer Search Engine http://www.xrefer.com/ searching among specialized dictionaries of Oxford University Press, Word Net English lexical database http://www.cogsci.princeton.edu/~wn/, Harper-Collins online dictionary http://wordreference.com/ for French, German, English, Spanish Meyer's Lexikon http://www.iicm.edu/meyers/ for German, etc.

The Internet as a huge resource of all types of information represents a challenging opportunity where one has to learn how to choose critically, how to systemize and exploit. In this decentralized way of learning, the teacher is the one who helps, explains and coordinates where students can repeat exercises at their own will, move through the program according to their interests, broaden the lesson by using links and additional texts, evaluate, check the test results or exit the program at every moment.

Therefore, one of the criteria of such lessons is the ability to personalize them. In this way, learning becomes two-way communication instead of the traditional one-way that CALL allowed.

V. CONCLUSION

There are three basic elements in successful Internet activities: integration in the course, teacher's and students' computer competence, and active teacher involvement in explaining, helping and giving directions.

Despite an increased use of computers in teaching, fundamental changes yet have to occur within educational perspectives, here language teaching. Social dimensions and authentic activities still favour an emphasis on individual computer use. Computer-assisted language learning should be integrated step by step from the beginner's to the advanced level, and then included as computer activities in the curriculum according to well-defined goals.

Although the software is still limited, it should integrate wisdom of educators and programmers, so each teacher should find their own way of integrating online activities into the classroom, respecting the goals, student needs, materials and available technology.

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