

Language Education, Computer-Assisted

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A Definition of CALL

Computers are widely used in the teaching and learning of Modern Foreign Languages (MFL) and English for Speakers of Other Languages (ESOL) in secondary and higher education. The use of computers in teaching and learning languages encompasses many different applications. The applications tend to fall into two distinct types: (a) those that involve the use of generic software tools such as word processors, presentation software, e-mail packages, and Web browsers, and (b) those designed specifically to promote language learning. The latter type falls into the category of Computer Assisted Language Learning (CALL), which is the main focus of this article.

CALL is a term that came into favor in the early 1980s. Levy (1997: 1) provides the following succinct definition of CALL:

Computer Assisted Language Learning (CALL) may be defined as “the search for and study of applications of the computer in language teaching and learning.”

This definition is a very broad one. A more precise way of describing CALL is to say that it is an approach to language teaching and learning in which computer technology is used as an aid to the presentation, reinforcement, and assessment of material to be learned, usually including a substantial interactive element.

A Brief History of CALL

CALL's origins can be traced back to early experiments in the 1960s. Up until the late 1970s, CALL projects were confined mainly to universities, where computer programs were developed on mainframe computers. The PLATO project, initiated at the University of Illinois in 1960, is an important landmark in the early development of CALL (Marty, 1981).

Early CALL (see ‘Early CALL’ below) favored an approach that drew heavily on practices associated with programmed learning. This aim was reflected in the term Computer Assisted Language Instruction (CALI), which originated in the United States. The term CALI is still used, but it is often associated with a behavioristic approach to language learning that is currently out of favor.

The advent of microcomputers in the late 1970s brought computing within the range of a wider audience, resulting in a boom in the development of CALL programs and a flurry of publications in

the early 1980s (Davies and Higgins, 1982, 1985; Kenning and Kenning, 1984; Last, 1984; Ahmad *et al.*, 1985). Most of the CALL programs that were produced in the early 1980s consisted of a series of drills, multiple-choice exercises, and Cloze exercises, focusing on grammar and vocabulary. These kinds of programs were out of tune with orthodox language teaching methodology, which by this time had embraced the communicative approach. There was initially a lack of imagination on the part of CALL developers, a situation that was rectified to a considerable extent by the publication of an influential seminal work by Higgins and Johns (1984), which contains numerous examples of nondrill-based approaches to CALL.

Throughout the 1980s, CALL widened its scope. An alternative term to CALL emerged in the early 1990s, namely Technology Enhanced Language Learning (TELL), which was felt to provide a more accurate description of the activities that fall broadly within the range of CALL.

A major landmark in the history of CALL was the advent of the World Wide Web, which has become the central focus of an increasing number of CALL practitioners and is discussed in more detail in the section ‘Web-based CALL’ below.

For further information on the history of CALL, see the History of CALL website.

CALL Typology

Various attempts have been made to produce a definitive CALL typology. Davies and Higgins (1982, 1985) distinguish between (a) programs that focus on traditional exercise types such as multiple-choice, gap-filling, free-format, reordering, and Cloze; and (b) programs such as simulations and adventures, action mazes, text manipulation, and exploratory programs. Jones and Fortescue (1987) categorize CALL programs according to those focusing on (a) grammar or vocabulary; (b) the four essential language skills of reading, writing, listening, speaking; with (c) separate categories for adventures, exploratory programs, and authoring programs.

Hardisty and Windeatt (1989) distinguish four broad categories of CALL:

1. School: traditional exercise types
2. Office: generic programs such as word processors and communications software
3. Library: concordancing programs
4. Home: games such as simulations and adventures

Warschauer (1996) looks at CALL in terms of its historical development:

1. Behavioristic CALL: The computer as tutor, serving mainly as a vehicle for delivering instructional materials to the learner.
2. Communicative CALL: With the advent of the microcomputer in the late 1970s, CALL continues to be used for skill practice, but in a non-drill format, with a greater degree of student choice, control, and interaction. This phase also includes (a) using the computer as a stimulus for discussion, writing, or critical thinking; and (b) using the computer as a tool or workhorse – examples include word processors, spelling, and grammar checkers, and concordancing programs.
3. Integrative CALL: This phase is marked by two important technological developments:
 - Multimedia personal computers (MPCs), which enabled reading, writing, speaking, and listening to be combined in a single activity, with the learner exercising a high degree of control over the path through the learning materials.
 - The Internet, which offered new opportunities for computer-mediated communication (CMC) between learners and teachers, and a wide range of activities centered on the World Wide Web.

We shall distinguish the following categories:

- Early CALL
- Communicative CALL
- Multimedia CALL
- Web-based CALL
- CALL authoring programs
- Intelligent CALL (ICALL)
- Computer Aided Assessment (CAA)
- Whole-class teaching and CALL

Early CALL

Early CALL programs – many of which fell into Warschauer's behavioristic category (Warschauer, 1996) – simply presented a series of stimuli to which the learner had to respond. In CALL programs developed for mainframe computers and early microcomputers in the 1960s and 1970s, the stimulus was usually in the form of text displayed in monochrome on a computer screen, and the only way in which the learner could respond was by entering an answer at the keyboard, either by entering a letter or number as a response in a multiple-choice exercise or by typing the answer in full as a response in a free-format exercise. Such programs consisted mainly of a sequence of repetitive drills.

The advent of the microcomputer in the late 1970s gave rise to more imaginative programs, in which text was presented in more interesting ways. Color was used to highlight grammatical features, for example,

gender in French and case endings in German. Movement was used to illustrate points of syntax such as position of adjectives in French and subordinate clause word order in German. Discrete error analysis and feedback were a feature of CALL in this period, and the more sophisticated programs attempted to analyze the learner's response, pinpoint errors, and branch to help and remedial activities. A typical example of this approach is the CLEF package for learners of French, which was developed in the late 1970s and early 1980s by a consortium of Canadian universities, and is still widely used in an updated version (Figure 1).

The approach to error analysis adopted by the authors of CLEF – who were predominantly language teachers – was to anticipate common errors and build in appropriately tailored feedback. An alternative approach is the use of Artificial Intelligence (AI) techniques to parse the learner's response, which is a feature of Intelligent CALL (ICALL) – see the section 'Intelligent CALL' (ICALL) below.

Communicative Call

Within the language-teaching profession, there has always been a degree of controversy about the teacher-centered, drill-based approach to CALL. The survey conducted by Levy among CALL developers in the early 1990s indicated that the communicative approach was "the current preferred philosophy of language teaching and learning," but there was also evidence of a high degree of eclecticism, with the majority of teachers adopting two or more different approaches, including the use of drills and teaching formal grammar (Levy, 1997: 122ff.).

Prior to Levy's survey, it was evident as early as the mid-1980s that there was a discernible move away from a drill-based approach to CALL and towards a learner-centered, task-based, or explorative approach. Higgins and Johns (1984: 8–9) were among the first CALL practitioners to illustrate how the computer might adopt different roles other than that of a provider of drills, for example, the computer as an informant, with the learner asking the questions and the computer providing the answers. Jones C. (1986) questioned the role of the computer as a rival to the teacher and stressed the importance of integrating the computer into normal classroom activities, urging the teacher to apply the same methodological expertise and imagination to computer programs as they would to any other classroom aid. Jones G. (1986) and Piper (1986) illustrated how the computer might be used as a stimulus for conversation. In other words, there was a clear break with the top-down programmed learning approach to CALL that characterized its early days.

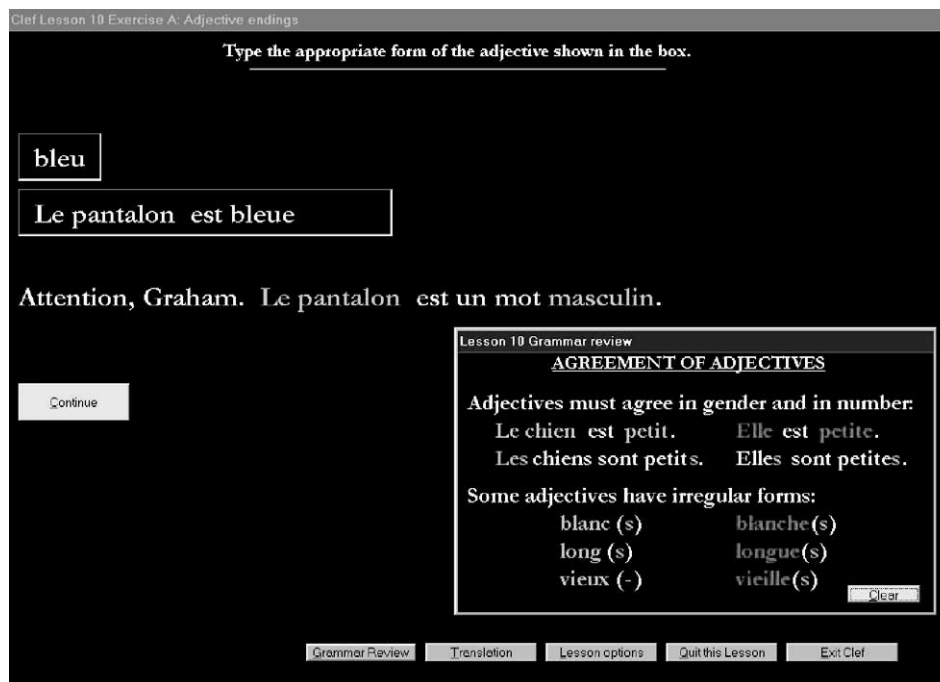


Figure 1 CLEF Screenshot. The screenshot is taken from the CLEF French grammar CD-ROM (University of Guelph/Camssoft). It shows a fill-in-the-blank exercise on the agreement of adjectives in French, where the learner has entered the incorrect answer 'bleue' (blue), the feminine form of the adjective, instead of the masculine form that is required to agree with the masculine noun 'pantalon' (trousers/pants). The discrete feedback, 'Attention, Graham. Le pantalon est un mot masculin,' points the learner in the right direction rather than giving the correct answer immediately, indicating that the learner needs to make the adjective agree with a masculine noun. The box in the lower right hand corner of the screen is a reminder of the rule about agreement and the forms that adjectives can take. This reminder can be called up by the learner at any time in the course of working on the exercises. Screenshot courtesy University of Guelph/Camssoft.

The explorative approach to CALL is also characterized by the use of concordance programs (concordancers) in the languages classroom. Concordance programs, which were originally used as literary or linguistic research tools, found a new life as tools for the language teacher and student, embodying an approach described by Johns (1991) as Data-Driven Learning (DDL). DDL was the only new approach to CALL that was described in Levy's survey as "a direct result of the attributes of the computer" (1997: 123). See also Tribble and Jones (1990), Johns and King (1991), and Rézeau (2001).

Multimedia CALL

As indicated above in the section Early CALL, computers were initially very limited in terms of the kind of stimulus that they could present to the learner. Most early computers could only offer plain text or simple line drawings. The multimedia personal computer (MPC) was a breakthrough insofar as the stimulus could now consist of any combination of text, still images, sound, and motion video. Ways in which the learner could respond to the stimulus reflected these new developments. Instead of just typing at the keyboard, the learner could point-and-click and

drag-and-drop with the mouse, or speak into a microphone. Feedback also reflected the new developments in multimedia.

The earliest manifestations of multimedia CALL were made technologically possible by linking a computer with a 12-inch videodisc player. This enabled text, high-quality photographic images, and sound and video recordings to be presented in a variety of imaginative combinations. The result was the development of interactive videodiscs such as *Montevidisco* (Schneider and Bennion, 1984), *Expodisc* (Davies, 1991) and *A la rencontre de Philippe* (Fuerstenberg, 1993), all of which were designed as simulations in which the learner played a key role.

The techniques learned in the 1980s by the developers of interactive videodiscs were adapted for the integrated MPC, which incorporated a CD-ROM drive and was in widespread use by the early 1990s. The MPC is now the standard form of personal computer. CD-ROMs were used in the 1980s initially to store large quantities of text and later to store sound, still images, and motion video. By the mid-1990s, a wide range of multimedia CD-ROMs for language learners was available. Most CALL programs under development today fall into the category of multimedia CALL.



Figure 2 *World talk* Screenshot. The screenshot is taken from EuroTalk's *World talk* CD-ROM for beginners in French. It is essentially a timed multiple-choice exercise in which three alternative answers to the question below the photograph are presented, taking the form of a TV game show in which the learner has to select the correct answer before his/her opponent 'Matthieu' makes his selection. As well as appearing as text on the computer screen, the question and possible answers are read out by a native-speaker quizmaster, so that the learner can hear the French pronounced as well as reading it from the screen. 'Matthieu' is a video recording and can be seen here reaching for the selection button. Screenshot courtesy of EuroTalk, with permission.

A typical multimedia CALL program includes the presentation of sound and video, usually offering the learner the opportunity to record and playback his/her own voice. An example of a multimedia CALL of this type is EuroTalk's *World talk* program (Figure 2).

The quality of video recordings offered by CD-ROM technology has been slow to catch up with that offered by the earlier interactive videodiscs. The Digital Video Disc or Digital Versatile Disc (DVD), which is now becoming established as a storage medium for multimedia CALL programs, offers much higher quality video recordings, for example EuroTalk's *Movie talk* DVD-ROM series, which is based on authentic TV broadcasts and offers the learner to opportunity to participate in role-plays enhanced by video (Figure 3).

Surprisingly, few imaginative simulations have been developed for the MPC. The series of CD-ROMs entitled *Who is Oscar Lake?* is a notable exception. In this series, the learner is identified as the chief suspect in a diamond robbery in a foreign country and has to argue his/her innocence and determine who the real suspect is. Other multimedia programs make use of Automatic Speech Recognition

(ASR) software to diagnose learners' errors, for example Auralog's *Tell me more pro* series (Figure 4).

One of the advantages of multimedia CALL is that it has helped language centers in schools and universities to offer courses that normally would not run due to staff shortages or poor take-up by students. The Critical Language Series, produced by the University of Arizona, offers a number of courses on CD-ROM in languages that are not normally taught as part of the educational curriculum (Figure 5). Similarly, EuroTalk's *Talk now* and *World talk* series offer a wide variety of languages.

Web-based CALL

In 1992, the World Wide Web was launched, reaching the general public in 1993. The Web offers enormous potential and is playing an increasingly important role in language teaching and learning. But, the Web still has some way to go before it catches up with the interactivity and speed of access offered by CD-ROMs or DVD-ROMs, especially when accessing sound and video files. There is no doubt, however, that the Web is a remarkable source of information and has opened up a new range of tasks for learners of foreign languages, e.g., Web quests,



Figure 3 *Movie talk* Screenshot. The screenshot is taken from the Spanish version of EuroTalk's *Movie talk* DVD-ROM for intermediate/advanced learners of Spanish. The DVD-ROM includes a complete episode, *Querido maestro*, from a Spanish TV detective series. The video recording is exploited in different ways, offering sophisticated exercises in which the learner participates in role-plays as well as simple vocabulary exercises like the one illustrated here, in which still images from the recording are presented and the learner has to match the word in the box with one of the six images. As in *World talk* (above), that the learner can hear the French pronounced by a native speaker as well as reading it from the screen. Screenshot courtesy of EuroTalk, with permission.

Web concordancing, and collaborative writing (Felix, 2001).

With the advent of broadband, however, many of the problems associated with the Web are being overcome, but an educational institution needs an extremely fast connection to enable multiple users to enjoy the media-rich language learning materials that are currently available. For this reason, Felix (2001: 190) advises adopting hybrid approaches to CALL, integrating CD-ROMs and the Web and running audio conferencing and video conferencing in conjunction with Web activities.

Web-based multimedia is a growing area of development area but has not yet supplanted CD-ROM or DVD technology. Many websites containing CALL materials offer more in terms of presentation rather than interaction, for example, it is not easy to record and playback one's own voice in a Web environment – a feature of CD-ROM-based multimedia CALL since the late 1980s. Nevertheless, some attractively designed multimedia websites have been produced, for example the BBC Languages website, which offers a comprehensive range of introductory and intermediate courses (Figure 6).

For further examples of what can be done in a Web environment, see LeLoup and Ponterio (2003).

CALL Authoring Programs

Generic authoring packages such as Macromedia's *Director* have been used to create a number of multimedia CALL programs. In the hands of an experienced user, they enable the speedy development of CALL materials, but they are probably too complex for most language teachers and are best suited to the template approach to authoring, as described by Gimeno and Davies (2001). Authoring programs designed specifically for CALL, however, offer a do-it-yourself approach that is within the capabilities of the average language teacher who has no knowledge of computer programming. Typical examples are authoring packages that automatically generate a set of preset activities for the learner, for example, Camsoft's *Fun with texts* and Wida Software's *The authoring suite* (Figure 7). Web authoring packages of a similar type – also offering a range of pre-set activities – are also in widespread use, for example, Hot Potatoes. For further information on CALL authoring programs, see Bangs (2001) and Bickerton *et al.* (2001).

Intelligent CALL (ICALL)

The extent to which the computer is capable of analyzing learners' errors has been a matter of



Figure 4 *Tell me more pro* Screenshot. The screenshot is taken from Auralog's *Tell me more* CD-ROM, a package that incorporates speech-recognition software. It shows a pronunciation exercise in which the learner attempts to repeat the sentence presented in the box at the top of the screen. A native speaker pronounces the sentence and a voice-print of the native speaker model is displayed in the upper of the two voice-print boxes immediately below. The learner's attempt to repeat the sentence is played back and at the same time the learner's voice-print is displayed in the lower box. The learner can attempt the sentence as many times as he/she likes until a close match is achieved. The learner's performance is also displayed in a score box at the lower right hand part of the screen. Screenshot courtesy of Auralog, with permission.

controversy since CALL began. The controversy hinges on those who favor the use of Artificial Intelligence (AI) techniques to develop Intelligent CALL (ICALL) programs, such as Underwood (1989) and Matthews (1992), and its detractors such as Last (1989). The issue of error analysis looms large in this controversy, focusing on the possibilities and limitations of computers programs in diagnosing learners' errors and appropriate feedback (Heift and Schulze, 2003).

Practitioners who come into CALL via the disciplines of computational linguistics, for example, Natural Language Processing (NLP) and Human Language Technologies (HLT), tend to be more optimistic about the potential of these disciplines than those who come into CALL via language teaching. It is clear, however, that recent advances in these areas, such as the development of parsers and speech technology software, are beginning to make a significant impact on CALL (Schulze, 2001; Schulze and Gupta, 2001).

Computer Aided Assessment and Language Learning

Computer Aided Assessment (CAA) covers a range of assessment procedures and is a rapidly developing

subset of CALL. CAA refers to any instance in which some aspect of computer technology is used as part of the assessment process. CAA may include tests that take a similar form to CALL exercises, for example, tests in multiple-choice and gap-filling format, but it may also extend to using computers for onscreen marking of students' word-processed writing and using a spreadsheet or database to keep a record of students' grades.

CAA has its limitations, however. While it is particularly useful in testing knowledge of basic grammar and vocabulary and, to a limited extent, reading skills and listening skills, it has not yet had a significant impact on the assessment of speaking skills.

One of the most ambitious CAA projects undertaken in recent years is DIALANG. DIALANG is a major European Union project aimed at providing effective diagnosis of language competence in 14 EU languages. It uses online tests, including placement and self-assessment tests, as key tools in this process. DIALANG is for use by the general public and can be downloaded from the DIALANG website. Tests are available in Listening, Writing, Reading, Structures, and Vocabulary for 14 different languages:



Figure 5 *Critical language series* Screenshot. The screenshot is taken from the opening screen of the Mandarin Chinese CD-ROM that forms part of the *Critical language series* produced by the University of Arizona. It shows the titles of the first 10 lessons of the program. All the programs in the series follow the same pattern, making use of audio and video for presentation, followed by five types of exercises: multiple choice, fill-in-the-blank, audio flashcard, pronunciation, and listening dictation. Learners can record and play back their own voices and compare their pronunciation with that of the native speaker. Screenshot courtesy of University of Arizona, with permission.

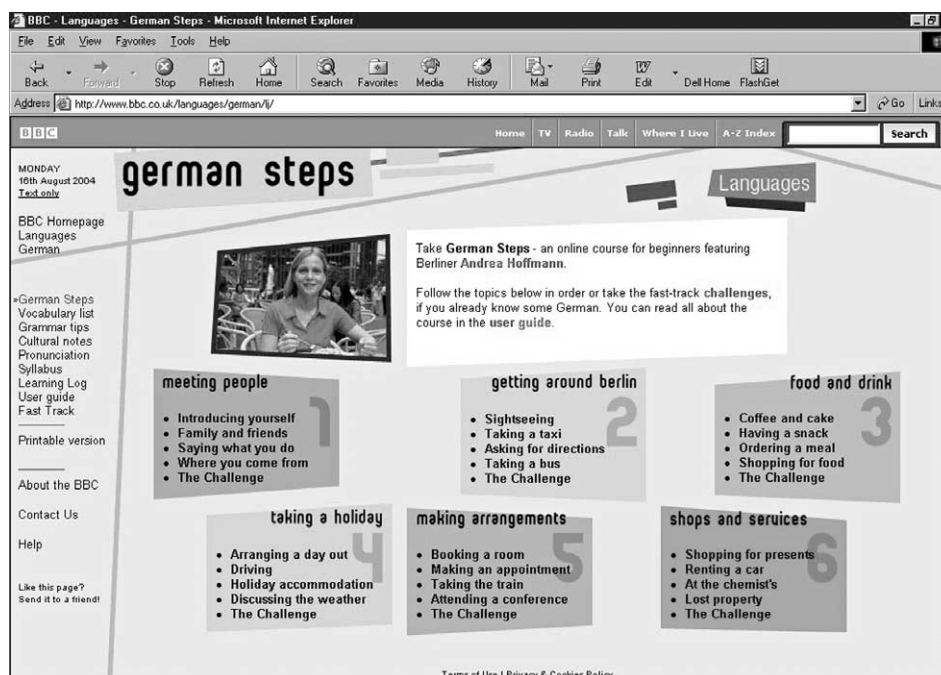


Figure 6 BBC *German steps* Screenshot. The screenshot is taken from the opening screen of the introductory *German steps* course, one of a series produced by the BBC. The screen shows the contents of the course, which consists of materials centered on typical situations that an adult learner might be confronted with on a visit to a German-speaking country. The other programs in the series follow a similar pattern. Screenshot courtesy of BBC, with permission.

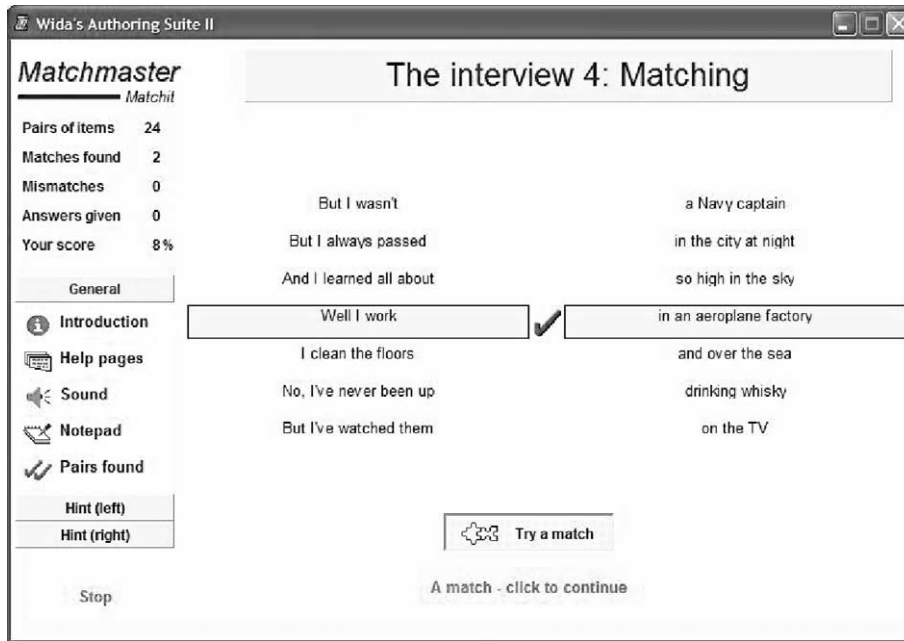


Figure 7 The *authoring suite* Screenshot. The screenshot is taken from Wida Software's *Matchmaster* program, which forms part of a larger package known as *The authoring suite*. This is a matching exercise for learners of English as a Foreign Language, in which the task is to match the beginnings and ends of sentences. *The authoring suite* enables teachers with no programming knowledge to create their own materials. Screenshot courtesy of Wida Software, with permission.

Danish, Dutch, English, Finnish, French, German, Greek, Icelandic, Irish, Italian, Norwegian, Portuguese, Spanish, and Swedish. A key feature of the DIALANG project is that its tests are closely linked to the six levels of the Council of Europe's Common European Framework of Reference for Languages.

Whole-Class Teaching and CALL

When the first computers were introduced into schools, it was usual for a teacher to bring a single computer and a large TV monitor into the classroom and teach the whole class, using the TV monitor as the focus of attention. The teacher or a student would operate the keyboard, and the class would be asked to respond to what appeared on screen. The teacher might use the computer, for example, as a stimulus for eliciting oral responses from the class. This approach worked very well with a variety of programs.

Whole-class teaching went out of favor as computers became cheaper, but it is now undergoing a revival thanks to the advent of the interactive whiteboard, a touch-sensitive projection screen that allows the teacher to control a computer by touching the whiteboard rather than using a keyboard or mouse, although these can still be used. Interactive whiteboards in combination with loudspeakers offer a wide range of activities in the languages classroom,

and CALL software designed both for use in computer labs and with interactive whiteboards for whole-class teaching is now widely available, for example mdlsoft's *TaskMagic* package (Figure 8).

The Future of CALL

So, where is CALL heading? Undoubtedly, there will be an expansion of online learning, but it is more likely to supplement conventional modes of learning rather than replacing them. Language learners in particular cannot acquire certain skills, for example, conversational skills, without face-to-face contact with an experienced teacher, but new software tools facilitate synchronous and asynchronous oral computer-mediated communication and are already being used in distance-learning CALL environments.

An area of research and development currently known as Human Language Technologies (HLT) is likely to make an increasing impact on CALL. Schulze and Gupta (2001) describe the main areas of HLT that have already had an influence on CALL and which are likely to have an influence in the not-too-distant future. These areas include Natural Language Processing, Machine Translation, corpus linguistics, and speech technology. All these were once regarded as fringe areas of CALL, but they are now attracting increasing attention.

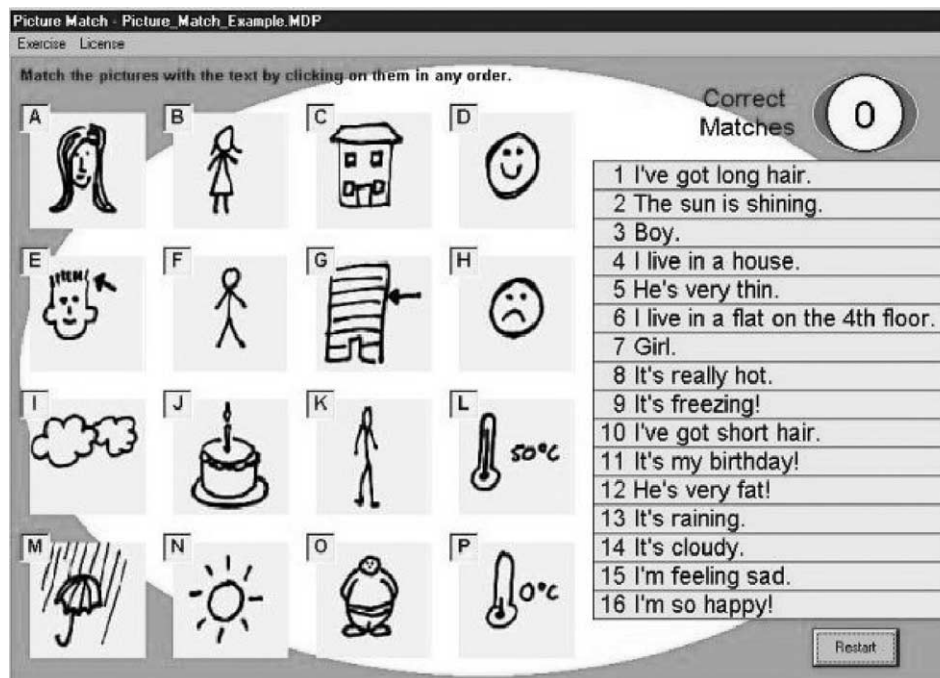


Figure 8 *TaskMagic* Screenshot. The screenshot is taken from mdlsoft's *TaskMagic* package. The aim of this exercise is to match the text in the box on the right of the screen with the pictures. *TaskMagic* is an authoring program that enables teachers with no programming knowledge to create their own materials, and it also lends itself to the creation of materials that are particularly appropriate for whole-class teaching using a computer and a projector or a computer and an interactive whiteboard. Screenshot courtesy of mdlsoft, with permission.

Professional CALL Associations

The rapid growth in the use of computers in language learning and teaching in the 1980s led to the foundation of the two leading professional associations for CALL: CALICO (USA) in 1982 and EUROCALL (Europe) in 1986, both of which continue to thrive. The longer-established professional association, IALLT (founded 1965), focused initially on language laboratories, but later widened its scope to embrace language learning technology in general. An increasing number of professional associations devoted to CALL are emerging worldwide. The established associations are grouped together under WorldCALL, which is in the process of setting itself up as an umbrella association of associations. WorldCALL held its first conference at the University of Melbourne, Australia, in 1998, and the second WorldCALL conference took place in Banff, Canada, 2003.

See also: Behaviorism: Varieties; Communicative Competence; Computational Linguistics: History; Corpus Linguistics; Human Language Technology; Interlanguage; Language Education: Teacher Preparation; Language in Computer-Mediated Communication; Machine Translation: Overview; Natural Language Processing: Overview; Parsing and Grammar Description, Corpus-Based; Teaching Technologies: Second Language.

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Relevant Websites

- <http://www.auralog.com/english.html> – Auralog, producers of CALL Software, France.
- <http://www.bbc.co.uk/languages> – BBC Languages, a series of Web pages for learners of foreign languages.
- <http://www.camssoftpartners.co.uk/clef.htm> – CLEF, a software package for learners of French, produced by the University of Guelph and published in the UK by Camssoft.
- <http://clp.arizona.edu/cls> – Critical Language Series, a CD-ROM series produced by the University of Arizona.
- <http://www.dialang.org> – DIALANG, a diagnostic language testing project, initiated with funding from the European Union.
- <http://www.eurotalk.co.uk> – EuroTalk, producers of CALL software, London, UK.
- <http://www.history-of-call.org> – History of CALL, a website containing a wealth of information on the history of CALL.
- <http://web.uvic.ca/hrd/halfbaked/> – Hot Potatoes, a Web-authoring package produced by Half Baked Software Inc, University of Victoria, Canada.
- <http://www.ict4lt.org> – ICT4LT (ICT for Language Teachers), a large collection of ICT training resources for language teachers.
- <http://llt.msu.edu> – Language Learning Technology Journal (LLTJ), an on-line refereed journal.
- <http://www.languagepub.com> – Language Publications Interactive (LPI), producers of *Who is Oscar Lake?* a language simulation on CD-ROM.
- <http://www.mdlsoft.co.uk> – mdlsoft, producers of the *TaskMagic* package.
- <http://www.wida.co.uk> – Wida Software, producers of *The authoring suite*.
- <http://www.tell.is.ritsumei.ac.jp/cocllejonline/>, Kusatsu, Shiga, Japan: Ritsumeikan University, available only on-line (the

CALL-EJ journal (Japan) merged with the *On-CALL* journal (Australia) and became *CALL-EJ Online* in May 1999). <http://www.taylorandfrancisgroup.com> – *CALL Journal*, London: Taylor & Francis, available on-line from Volume 11.

<http://llt.msu.edu> – *Language Learning Technology*, East Lansing: Michigan State University, available only on-line.

<http://www.upv.es/worldcall/> – WorldCALL, an umbrella organization of professional associations for CALL.

<http://www.eurocall-languages.org> – EUROCALL: a European professional association for CALL; Cambridge University Press publishes the journal *ReCALL* on the association's behalf.

<http://www.calico.org> – CALICO: a North American professional association for CALL and publisher of the *CALICO Journal*.

<http://www.iallt.org> – IALLT: a North American professional association and publisher of the *IALLT Journal of Language Learning Technologies*.

Language Education: Correctness and Purism

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Definitions: Correctness and Purism

The common assumption that school constitutes one sociolinguistic domain – a domain usually dominated by the standard variety of a language – is too simplistic. School consists of various communicative situations, e.g., playtimes, conversations between teacher and pupil outside the classroom, teacher–teacher communication. On the other hand, language education in the sense of the explicit teaching of language takes place almost exclusively in the classroom. In this context, the point of reference for determining whether linguistic usage is ‘correct’ or not is usually, but not always, a standard variety. In societies where there is a standardized prestige variety this nearly always has a privileged position in the classroom, i.e., it is the variety which is not only used as the medium of teaching, but is also an object of teaching: in Britain or the United States, for instance, in classes devoted to English, it is the norms of Standard English which are transmitted to pupils, and the texts discussed in these classes are mainly in Standard English. Deviations (real or perceived) from this pattern tend to be seized upon by certain sectors of society and presented in a negative light, for example in the media (cf. Cameron, 1995: 101).

Purism is rooted in the notion that languages or linguistic varieties are entities which are clearly demarcated from each other and consist of closed sets of linguistic items, so that elements that do not ‘belong’ to that variety and which might ‘contaminate’ it or make it ‘impure’ are easily identified and can be avoided. Purism is often, but not always, directed at words or linguistic features of foreign origin (cf. Trask, 1999: 254). It can, however, also be directed against elements which are not foreign, but are

nevertheless seen as undesirable; for example, purists may try to remove regional dialectal features from a standard variety or may try to discourage the use of innovations, such as *aggravate* with the meaning ‘annoy’ (appealing to etymology, they would argue that *aggravate* should only be used in the sense of ‘to make worse’). Another target of their activities may be words or constructions from specialist registers when used outside those registers, e.g. in German technical registers, mass nouns such as *Druck* (‘pressure’) can form plurals, whereas this has traditionally not been the case in non-technical language. A tendency for this construction to spread to general registers has often been the subject of negative comments, e.g., in newspaper glosses. Purism is often associated with the codification, cultivation, and planning of standard languages, but this doesn't mean that purism is never directed at non-standard varieties. In German-speaking Switzerland, for example, where the local dialects enjoy a high level of prestige, but where attitudes towards Swiss Standard German are rather ambivalent, purists have been known to attack standard features borrowed into the local dialects.

Purism is a strategy employed to achieve a variety of ends. Sometimes foreign words are rejected because it is claimed that they are not comprehensible to all and could exclude sections of the population from certain discourses; at other times they are rejected solely because of their foreignness, which may be seen as detrimental to the ‘character’ of a particular nation as reflected in its language (cf. Townson, 1992: 80–110).

As was said above, purism is very much linked to the cultivation of a standard variety. One of the things that lends prestige to a standard variety is the belief that it can fulfill any function demanded of it by its speakers. If it is perceived as being able to fulfill certain functions only by ‘borrowing’ elements from other varieties, then this detracts from its status.