



LINGUISTICS DEPARTMENT - STANFORD UNIVERSITY

# An Invitation to CALL

## Foundations of Computer-Assisted Language Learning

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### An Invitation to CALL

#### Unit 3: Computer Mediated Communication

##### OVERVIEW

The past unit dealt largely with dedicated CALL courseware, or tutorial CALL; however, in many cases the tool uses may be more appropriate for a given teaching approach or teacher's experience, or may serve a given learning situation better. In one category of tool uses, computer-mediated communication, or **CMC**, computers are a means through which teachers communicate with learners, learners communicate with one another and learners may even communicate with native speakers. That communication takes place through variations in the following elements: timing (synchronous or asynchronous), number and patterning of participants (one to one, one to many, or many to many), and medium (text, voice, or video). In addition, the physical properties of the device may offer a significant variable, such as the difference between email on a computer and text messaging on a cell phone. In this unit we will briefly examine the options and then go over some of the rationale for various uses to support language learning.

##### TEXT-BASED CMC

Due to both the history of technology development and the ease of text use, most CMC has been done using the medium of text. We will look at the text uses both for their own value and as a vehicle for introducing concepts relevant to audio and video-based CMC.

**Asynchronous text.** The first use of CMC in language teaching almost certainly came through email exchanges from teachers to students and among students within classes.

Email is an example of *asynchronous* communication, in that the interaction is not in real time: You create and send an email, and the recipient typically gets it within seconds but may not read it or respond until much later. Under such circumstances, there are clear differences between email and conversation that go beyond the use of text as a medium.

Email can be used for a number of purposes. Teachers can receive homework from students and give responses to it. Students can communicate with one another to practice using the language, to discuss issues, to fulfill communicative tasks, or to collaborate on projects. For instance, a student could interview another through email, asking a set of questions, getting the answers, and then reporting the result in class the next day. Teachers can also assign information gap activities, where students are paired and each has some of the information both need to complete a task. Outside of the class, students can communicate with "keypals", the equivalent of traditional penpals: there are a number of sites that provide services for linking up such as [Interpals](http://www.interpals.net/) ([www.interpals.net/](http://www.interpals.net/)). [ePals](http://www.epals.com/) ([www.epals.com/](http://www.epals.com/)) serves as a clearinghouse for teachers looking for partners in other countries for keypal exchanges or collaborative projects. In the case of EFL, it may be easier to find classes of other English language learners in another city or even another country to communicate with.

Another form of asynchronous communication is discussion lists or listservs, where the email goes out to groups rather than individuals (one to many). There are two alternatives for this: email from anyone on the list can be delivered automatically to everyone on the list, or the messages can be maintained on the web so that list members can check in and browse the subject lines: many lists now do both. The latter are equivalent in many ways to web-based bulletin boards or discussion boards, which may be limited to members (like lists) or be open to anyone who finds them. A popular one for ESL learners probably [Dave's ESL Cafe](http://www.eslcafe.com/student) ([www.eslcafe.com/student](http://www.eslcafe.com/student)), but there are many others on the web. An advantage of these (besides limiting the clutter in people's email) is that discussions can be "threaded", where communications regarding new topics and subtopics are kept separate. Students can log into existing discussion lists or teachers with appropriate software can create their own for a class. There are also discussion lists specifically for teachers: a popular one is TESL-L: see [www.hunter.cuny.edu/~tesl-l/](http://www.hunter.cuny.edu/~tesl-l/) for more information. Email lists and discussion boards are critical for online learning and are integrated into course management systems like [WebCT/Blackboard](http://www.blackboard.com) ([www.blackboard.com](http://www.blackboard.com)), and [Moodle](http://www.moodle.org) ([www.moodle.org](http://www.moodle.org)) (see [Unit 8](#)).

An important consideration for these communicative assignments is to get them to fit into the course curriculum in some reasoned fashion. Ideally, like other class activities and homework, they should not just constitute entertainment or "busy work". As we will see in [Unit 7](#) (learner training), it is also important to take time to prepare students for these activities and to hold regular debriefings to clarify their objectives.

**Synchronous Text.** With synchronous text, the messages are exchanged in text form, but in real time. Some of the early research on CMC was built around a type of chat program, *InterChange*, that was part of the Daedalus Integrated Writing Environment system ([www.daedalus.com](http://www.daedalus.com)). Students could carry out synchronous discussion in a computer

classroom using this tool. While this may seem odd at first (if they are in the same room, why not have them discussing orally face to face?), a number of studies have shown that some students communicate more when they don't have to speak or be face to face with interlocutors, that communication overall is more evenly distributed among participants (e.g., Warschauer et al., 2000), and that they may even use a much wider range of discourse functions than they do in face-to-face settings with the same material (Kern, 1995).

Chat rooms themselves using IRC (internet relay chat) or other protocols are easily found on the web through portals like AOL, Yahoo and Excite. There are a number of specialized chat rooms for English language learners available. Perhaps the best-known is found at [Dave's ESL Cafe](#); another is at [EnglishBaby](#). It is even possible to get chat software and set it up in a language lab so that learners in the same room can practice. In this case, chat becomes a confidence builder. It is worth noting that Internet Relay Chat (IRC) and current instant messaging applications like AOL Instant Messenger are sometimes labeled "quasi-synchronous" in that the presentation of material is not completely instantaneous as it is in speaking on the phone (the message is not sent until the "Enter" key is hit; see Distiller & Thatcher at <http://web.wits.ac.za/NR/rdonlyres/0C015CB2-01AF-4BFB-9E9F-FD9BF77C0178/0/collab4.pdf> for a discussion). MUDs (multi-user domains) or MOOs (multi-user domains, object-oriented) are relatives of chat rooms where pairs or larger groups of individuals can get together to "converse" through text messages while making reference to a virtual environment in which the conversation is taking place.

## AUDIO/VIDEO CMC

Asynchronous audio. Like text, audio or video interaction can be either asynchronous or synchronous. One example of asynchronous voice interaction would be the voicemail services offered by a number of sites for free. Using this, students with voice-enabled computers can leave messages for one another or for the teacher. [Wimba](#) has taken this notion further and developing some more elaborate versions of asynchronous messaging with specific applications for language learning. There are several (currently) free sites on the web where you can have audio discussion boards, such as Vaestro (<http://www.vaestro.com/>) It is also possible to send audio messages in .wav or some other common format like mp3s as attachments to emails. An excellent free resource for doing such recordings is Audacity (<http://audacity.sourceforge.net/>) for both PCs and Macs.

Asynchronous video. This area has not been as well-developed, due partly to the bandwidth requirements for using video. While there are many sites for sharing video (most notably [www.youtube.com](http://www.youtube.com)), they are not really designed for exchanging video messages. However, the potential for language learning is strong, both because of the psycho-social motivation visual representations can provide and the ability to view facial expression, gesture and lip shape and synchronization to aid in both comprehension and pronunciation development. A few services exist that allow for setting up groups, which

would be more appropriate (and private) for teaching purposes. An example is [www.sharkle.com](http://www.sharkle.com).

Synchronous audio/video. Synchronous audio is possible using internet telephony (or just the telephone, for that matter) for one to one conversation. [Skype](#), a reliable service that is free when calling computer to computer and inexpensive when calling computer to telephone, has made this increasingly popular in education circles. Conference call versions of this allow for group interaction. There are some limitations in quality over regular telephone use, including delays and reduced voice quality due to the compression requirements. Using a desktop camera, video is also possible: in fact the latest version of Skype has a video option, as does Yahoo! Messenger. Sites like [Yugma](#) (<https://www.yugma.com/>) and [DimDim](#) ([www.dimdim.com/](http://www.dimdim.com/)) allow small groups to do online audio and video conferencing in real time as well as share documents and whiteboards. This technology is not yet fully developed for teaching purposes, and you can expect technical problems on occasion (especially if mixing PCs and Macs). However, a dedicated community of educators, notably from ESL, have formed a group called "[webheads](#)" (<http://webheadsinaction.org/>) and regularly meet online in this fashion for interaction.

## DISTANCE EDUCATION AND VIRTUAL WORLDS

Distance education is increasing in education generally and language learning is no exception. While tutorial CALL material can be presented online for independent study without teachers, there are also classes that are offered to groups of students online with a live teacher's guidance. These classes can be either synchronous or asynchronous, and CMC usually plays an important role. See a commercial version at [www.englishtown.com](http://www.englishtown.com) and an academic-based one at the [University of Washington](#) (<http://depts.washington.edu/uwelp/online>). TESOL now offers certification in online teaching through a series of online workshops: see [http://www.tesol.org/s\\_tesol/secess.asp?CID=664&DID=2635](http://www.tesol.org/s_tesol/secess.asp?CID=664&DID=2635) for information. There is a growing body of literature in this field that relates to CMC, including chapters in the edited volumes by Holmberg et al. (2005) and Goertler & Winke (2008).

A relatively recent area for CMC is the virtual world, like [www.secondlife.com](http://www.secondlife.com). In virtual worlds students have avatars that can move in a 3D environment and interact with other avatars. Although communication is most commonly done through text chat, Second Life has added voice chat, increasing the potential value for language learning. See <http://blog.secondlife.com/2007/08/02/the-second-life-voice-viewer-is-live/>. Another example of a virtual world that incorporates CMC can be found in the demo of Julie Sykes' Croquelandia: [www.youtube.com/watch?v=rEF4iKASwqE](http://www.youtube.com/watch?v=rEF4iKASwqE).

## INTEGRATING CMC INTO ESL CLASSES

It is important to recognize that synchronous CMC by definition is real time communication. Learners will be put on the spot to produce language quickly and one should expect less accuracy (including typos if in a text mode), but will arguably be

practicing something that overlaps a lot with face to face communication. Asynchronous CMC allows for more thought and planning, and thus it may be more reasonable to expect closer attention to organization and language forms.

One of the great advantages of CMC over tutorial CALL is that both teachers and students are often familiar with the medium (at least email, and many discussion boards are fairly intuitive), the resources are often already present or readily available, and the language content is not prewritten but is rather created by the activities themselves. These features make it much easier to integrate CMC into classes. This does not, however, imply that CMC activities are always useful or that students will buy into them and interact in ways we want them to. As with any other CALL activity, a CMC exercise or project should be introduced thoughtful, and learners should be given appropriate training not only in the technology but also in the linking their actions to the language learning objectives of the course.

For some of examples of CMC in action, see the following: Markus Kötter's article on [online tandems](http://ilt.msu.edu/vol7num2/kotter) (<http://ilt.msu.edu/vol7num2/kotter>) and Roseanne Greenfield's article on [collaborative email exchanges](http://ilt.msu.edu/vol7num1/greenfield) (<http://ilt.msu.edu/vol7num1/greenfield>).

**Suggested Activity.** Visit a discussion board or chat room at [www.eslcafe.com](http://www.eslcafe.com) or [www.englishbaby.com](http://www.englishbaby.com), or a similar site where language learners congregate. Try participating in a chat and/or making a posting to one of the discussion board topics. Examine the language the learners are producing and reflect on your experience, including an assessment of how you think chat or discussion at such sites could be integrated into a class you were teaching.

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