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# **Trends in Digital Media 2007**

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### Abstract

The world of CALL is changing rapidly, but there are three major trends that can be perceived as significant to language teaching and learning and likely to remain so over the next several years. This paper will discuss these trends--convergence, searchability, and collaboration--and offer examples of interesting websites that illustrate them.

## Introduction

Several trends in CALL seem to be particularly relevant to where the field of ESL/EFL teaching will be heading in the next several years. I will consider here three trends that seem of greatest interest.

- 1. *Convergence* is the coming together of several disparate media. Convergence is largely a result of technological innovation, especially in the increasing small and powerful types of computer chips that now inhabit many common personal items, such automobiles and mobile phones. Convergence allows the blending of media in sometimes surprising ways. The effect on language teaching and learning can be enormous, both because of motivational aspects and because of the potential to meet a wide variety of learner needs. For example, those learners with disabilities may need voice with picture with motion. Thus, the convergence of media and tools in new combinations allows for many new possibilities in education.
- 2. Innovations in *searchability* also seem of the utmost importance. New combinations of media imply that data must be retrieved in many more and different ways. Some types of searchability are only in their infancy, but are worth becoming acquainted with, because teachers and students will need to know where and how to find the media they need and how to store media they create so that others can find and use them.
- 3. *Collaboration*, again across a wide spectrum of possibilities, is also made possible by the convergence of various media. Since language is a social phenomenon, the classroom will be vastly enriched by the opportunities that collaborative media (often referred to as Web 2.0, but also entailing

non-Web-based phenomena) offer to meet and communicate with native speakers and other learners. This article will look at a few of the media devices and Internet tools that exemplify these trends, and suggest some ways in which they will increasingly influence language education.

### Convergence

By now, many people have used a mobile phone to take a video, upload it to a computer and/or post it to the Internet. This section points to just a few of the ways that various media are converging--with potential to influence how we teach and learn. Mobile phones are being used in a variety of new ways: tagging an object to place or retrieve a message, locating the price of a product by reading a bar code, and even watching live television broadcasts. Several innovations over the past few years have made mobility a very hot trend, particularly the extensive coverage of global positioning satellites and cellular networks as well as the nanotechnologies to make handheld devices ever smaller and increasingly more powerful. Verizon Wireless [http://verizon.com] in the USA has entered the mobile television market with eight channels of live television beamed to subscribers' phones. Twitter [http://twitter.com] is a free service that sends short instant messages on the theme "What are you doing right now?" via its Website to networks of "friends." This can be done via mobile phone. Instantaneous communication gives a strong impetus to using and learning a language. Various other technologies allow the user to *place shift*, for example, to send a television program remotely to an Internet-connected computer, mobile phone, or handheld device, such as a PDA. One such set-top device is Slingbox [http://www.slingmedia.com] (see Figure 1). Other similar devices are made by Apple Computers [http://www.apple.com], among other companies. New televisions will probably come already equipped with this feature. Teachers may eventually be able to use any television program to generate content instantly, grammar exercises, speaking/listening practice, and so on, through common tools like the television and the computer.



**Figure 1.** Slingboxes connect to a television set or cable box/satellite and then transmit the television signal to the Internet. Other computers or mobile devices that have been granted access can then retrieve the television programming wirelessly. Photo by permission from SlingMedia:

Hanson-Smith

## http://us.slingmedia.com/page/statichome/

If you have traveled recently and stayed in hotels, you may have found a television channel promoting local attractions. The use of digital video has allowed immediate and totally localized commercials to be professionally produced by such companies as Turnhere [http://www.turnhere.com] at a fraction of the usual cost of television commercials. Local places and events of interest can be quickly "videotaped" digitally and turned into attractive products with desktop editing tools. The technologies that make global-local (*glocal*) effects possible will obviously have importance for education (see the section below on collaboration): A student video project on local sites of interest or historical research enhanced by photos and interviews could eventually have a very wide authentic audience.

Podcasting (*iPod* + *broadcasting*) is another aspect of convergence that is rapidly taking hold in blended courses at universities and colleges (see for example, an interview with Eiko Kato of Osaka Jogakuin College (McCarty, 2006)). Podcast courses allow students (and the general public in some instances) to downoad faculty lectures and media as syndicated files to play on an iPod or computer. Students can respond orally and in text, again via podcast or mobile phone or computer. Many of the larger universities-for example, Stanford, York University in Canada, and the British Open University--have already heavily invested in this technology, and numerous language institutions are following suit (see "Stanford" on iTunes U [http://itunes.stanford.edu/rss/]). The advantages, of course, are that students may listen at their convenience, hear a lecture or examine a whiteboard drawing as often as they desire, and connect back with great immediacy to their professor when office hours might be inconvenient. Teachers will have to understand, if not master, the technologies used, which are, like television on the iPod, intuitive and easy for beginners. Ming Nie (2006) offers an excellent summary and overview of the many ways podcasts are being or could be used for education; the Apple Education [http://www.apple.com/education/] site has useful help sheets and FAQs. Video-capable iPods (released in October 2006) and the recently released iPhone [http://www.apple.com/iphone/ipod/], a combination of 3-1/2" TV screen, podcatcher, and mobile phone, will, of course, additionally enhance the present wave of podcast educational materials.

Another exciting use of converging technologies is the videocasting of faculty lectures or videoconferencing such as displayed at Opp-Beckman's site, Thai-UO (2005; see Figure 2). Opp-Beckman presents a series of lectures from the University of Oregon's American English Institute, videocast on the Web to two different sites in Thailand. The resulting video was then saved and could be recycled as a reusable learning object (RLO), along with considerable additional apparatus, such as lecture notes, PowerPoint (Microsoft, 2007) slides, discussion questions, suggestions for students projects, and links to online resources and to examples of students' projects resulting from the conferences. A growing databank of RLOs on various websites extends quality teaching beyond the single classroom to a global audience.



**Figure 2.** Leslie Opp-Beckman (*top right*), as seen video conferencing on the Web from the University of Oregon to two locations in Thailand (*left and bottom right*). The video recording of the event becomes a reusable learning object. http://thaiuo.uoregon.edu/session\_01.html. (© 2005 American English Institute and CET Interactive Media.)

Voice over Internet protocols (VOIPs) that allow telephone calls over the net are now becoming an increasingly familiar type of convergence. Skype [http://www.skype.com], an Internet telephony company, allows up to nine users to conference-call on its free service, and video conferencing is also possible. Free phone calls anywhere in the world allow students to interact in new and unforeseen ways. For instance, Rita Zeinstejer had her students in Argentina Skype their counterparts studying Spanish language and culture in the U.S.A. They also wrote about their conversations and self-evaluated their participation in a blog, CAE B's podcast [http://caeb2006.podomatic.com], with both audio and text comments and photos. Here is a sample from Denise:

How to describe the experience we had last week is quite complex.

The project we are doing is an amazing idea in order to learn the language in another way. To my mind, that's very important to know to how to communicate correctly in English with other people, especially if they are from abroad. This opportunity [talking via Skype] that we had was a perfect occasion to do it!

We were able to do something that, I think, not many students would ever do. Luckily, I and my classmates could do it! We talked with Spanish students from the USA. We exchanged opinions about many different and interesting topics. In my personal case, I talked with Lucia, Maya and Daniel who were really talkative and knowledgeable. They were interested in very controversial and well-known topics, such as kidnappings, the policies of Hugo Chavez and what people all around the world think of him. Luckily, I knew something about these topics and I could help them a bit in their final projects.

That's not all; we also talked about our daily routines and customs. We were able to spot how different we are as regards social customs! But these won't prevent us to keep in touch and help each other when there's a need; and why not . . . making some new friends . . . ha!

It's highly important to realize that this opportunity is unique and that we must take profit from it!

To sum up, I reckon this was a spectacular experience. I was able to take advantage from it and to learn that the most important part of learning a language is to know how to communicate with it!

Thanks Rita for giving us this exceptional and superb chance!

-- Denise, May 02, 2006 (http://caeb2006.podomatic.com/entry/2006-05-02T18\_28\_37-07\_00)

This enthusiasm for the experience of voice pals is echoed throughout the podcast and blog. Increasingly, we will see combinations of phone and Internet, as for example, at the mobile site simulation put up as an experiment by Steve McCarty at *Language Learning Japan* 

[http://winksite.com/site/site\_profile.cfm?susid=17798], where the user may leave a phone or text message directly on the Web using the mobile address http://winksite.com/waoe/mall.

### Searchability

Looking for something? With all the exciting new media in a wide variety of formats being generated, how does one find anything on the Web? Producer-created *tagging* seems to be the current standard, and unless computers become much smarter, how the creator labels and organizes content will be of increasing significance in the coming decade, particularly as users are increasingly able to tag content also. To understand how important searchability is, let us look at the several ways content can be tagged.

We are all familiar with the alphabetic list of topics. VideoPedia [http://www.videopedia.com] (which seems to have no content as of December 2007) organizes its list in a series of menus on the left side of its home page. Users and video-producers are expected to add content by selecting the page that seems most closely related to their video. This is a primitive type of tagging. Vidipedia [http://www.vidipedia.org] also has a list of user-organized topics (see Figure 3), but within these, users may tag their content so that it links to pages with "articles" about the video's content. Of more value, of course, would be a way to tag the content so the video itself was findable, which is exactly what Google Video [http://video.google.com] has done. Thus a search term like *electric car* in Vidipedia will lead to a text article, while in Google Video it will find videos that show such cars--if, and only if, the producer has tagged the video accordingly. One feature of Google Video is that the user can search by title and by words in the text description of a video, so one has several possible ways to locate a video on a given topic. However, the search is limited to videos loaded onto Google Video or YouTube [http://www.youtube.com].

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**Figure 3.** Vidipedia's front page has an alphabetized list of topics (upper left), and also allows for tagging that links to related articles. http://www.vidipedia.org/Main\_Page. (GNU FDL).

### Another strategy for tagging is illustrated by CBBC

[http://www.bbc.co.uk/cbbc/], the BBC's site for children's content. Workers tag the site content internally, so that a search for *animals*, for example, will lead to articles and videos about pets and wildlife, yet keep the searcher safely within the children's area of the site. In contrast to CBBC or Google Video [http://video.google.com], which limit users to particular sites, Blinkx [http://www.blinkx.com] allows the user to search over seven million videos (and podcasts) stored at dozens of archives around the Internet. The magnitude of the search brings home the significance of tagging, that is, how producers themselves define their content. For example, with the search terms *culture* and Thailand I found 74 videos. One of these had approximately 35 tags, including less than 10 seconds, non US location, real time, and cinematography. Also among the search results was a podcast from Stanford University with no apparent relationship to the two search terms; yet with a little investigation, I found the term *culture* in the sidebar list of topics at the Web site where the podcast was housed. This kind of breadth and depth of search can be daunting, and emphasizes the necessity of good producer tagging.

Tags are especially important for non-text files, for example, video, photos, graphics, audio, and music. Some sites use visual referencing to indicate the number of related tags. For example, at the jamendo search engine [http://www.jamendo.com], the relative size of the tag indicates the relative

number of matches within their database, as seen in Figure 4.

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# **Figure 4.** jamendo demonstrates the number of matches to their database by the size of the producer-defined tag.

A chief way to use tagging is to find other objects (and people, as we will see below) with like interests. Once found, a photo blog, vlog, or podcast can then be followed via RSS (really simple syndication), with one of the many applications such as Bloglines [http://www.bloglines.com] or Google Reader [http://www.google.com/intl/en/googlereader/tour.html] and Furl [http://www.furl.net] that find and retrieve new information from user-designated sites. (Bloglines and Google Reader are aggregators that send the new information to a Website visited by the user; Furl sends new information to the user's e-mail address.) One recently organized EFL composition project, Writingmatrix [http://writingmatrix.wikispaces.com], is using precisely this combination of tagging and RSS to stimulate student blogging (Dieu & Stevens, 2007).

In the future, face recognition software and speech-to-text capabilities will enable search engines to find video and audio content, rather than just depending on tags, but these are still far from perfect. Until this more sophisticated type of software becomes readily available, tags enable organization of the myriad sites on the Web and increasingly are enabling collaborations to take place. For example, users can organize their bookmarks online at del.icio.us [http://del.icio.us/] in folders or headings (in effect, a form of tagging) for their "favorites" and share them with "friends" who have similar interests. Teachers can take advantage of their students' desire to socialize by guiding their use of such sites in language learning activities, authentic content sharing, and communicative activities.

# Collaboration

In the "old days," the Web was a read-only environment where only a few specialists were able to write the code and control the servers that fed information to the Internet. Today, the Internet is a place where even novice users can easily create, upload, mashup, and share information through a wide variety of media (see Thompson, 2007). One type of mashup is exemplified in CAE B's podcast (mentioned above), which combines Skyping with text, photos, and audio blogging in a blended (online and on land) learning environment. The podcast enhances the composition process for students by using visual and aural media, and it demands those kinds of tools students are increasingly bringing to the educational table: digital cameras, audio recorders, computers, Internet access, and mobile phones. One question to consider is how ready are "Education 1.0 teachers" for the new collaborative Internet, or Web 2.0? (Thompson 2007, p. 1.)

Collaborations are taking place through a very wide variety of tools, and new additions are popping up almost daily. For example, Kyte [http://www.kyte.tv] allows the user to set up a personal television channel to instantly share mobile phone-created videos with family and friends. The bonus, not found on YouTube [http://www.youtube.com], for example, is that the producer can broadcast live from a mobile phone, meanwhile text chatting with multiple viewers. As with other video-hosting sites, the product has collaborative features: it can be embedded in a Website, wiki, or blog, and has an interactive polling feature. Kyte also has an option that allows the user to e-mail photos as a slideshow. Increasingly, we are seeing educators take advantage of these new, media-driven ways of collaborating.

The ESL Slideshow Exchange Project [http://www.deepmoat.com/moodle/] was created by Sergio Mazarelli to offer a site where Web or software media-based slideshows might form the basis for discussion in EFL/ESL classroom collaborations. The project offers help pages for getting started in creating slideshows with familiar desktop tools, such as Windows Movie Maker (Microsoft 2004), iMovie (Apple 2006), and PowerPoint (Microsoft 2007). An open-ended collaboration, where teachers and students choose the media to be used, may be arranged at Dekita.org's [http://dekita.org] EFL/ESL Exchange, which was set up specifically to help form classroom-to-classroom interactions. The Dekita.org blog owners, Barbara Dieu, Aaron Campbell, and Rudolf Amman, provide current samples from interesting exchanges to whet the appetite. Interestingly, both the ESL Slideshow and the Dekita exchange projects originated during TESOL CALL Interest Section's Electronic Village Online (see CALL-IS: EVO n.d.) sessions in prior years (for fuller description and examples, see Hanson-Smith & Bauer-Ramazani, 2004 and the announcement page for EVO 2008), demonstrating yet another way that the Web has brought together people from all over the world.

While a number of sites offer keypal connections and a variety of ways for classrooms to collaborate, there are also some teacher collectives, or communities of practice that encourage technology-using teachers to join forces. (For an extended discussion of communities of practice, as opposed to casual classroom "communities," see Hanson-Smith, 2006.) Often technology-using teachers are isolated in their own teaching situation, but online communities offer a means to self-access professional development as well as a way to form long-lasting global friendships. Groups like EVO Video 2007 [http://groups.yahoo.com/group/evovide007/], an online community for video-using teachers (see their wiki pages, EVO Video 07 Wiki [http://evovideo07.wikispaces.com] for student work, lesson plans, etc.), provide a way for teachers to experiment with peer guidance in the new media, and perhaps more importantly, to connect with kindred spirits. Learning with Computers [http://groups.yahoo.com/group/learningwithcomputers/] is a community that begins a new free, voluntary, online "course" every 8-12 weeks, guiding teachers through a wide variety of Web tools, sharing experiments and classroom practices (see also their wiki, Learning with Computers: FrontPage [http://learningwithcomputers.pbwiki.com] for resources). The mother--or grandmother--of these communities is the Webheads in Action [http://groups.yahoo.com/group/evonline2002\_webheads/], whose formation by Vance Stevens in 2001-2002 (again, as part of the Electronic Village Online) sparked a chain of new groups and provided a means for significant and sustained collaborations. The Webheads meet online weekly to experiment with new Web tools and media, and now present their own biennial online "convergence," the WiAOC [http://wiaoc.org], where members (and a stellar group of invited guest speakers) present their work to a global population via text chat, voice, and video conferencing. (Some results of the latest WiAOC are seen in this issue of TESL-EJ.) While other, more passive kinds of collaborations, such as MERLOT's [http://www.merlot.org/merlot/] collection of RLOs or the Sloan-C Wiki [http://www.sloan-c-wiki.org], offer ways for teachers to share best practices in online teaching and learning, the personal touch that interactive digital media can provide is superior and should always be considered an important adjunct to any asynchronous archive.

Although the focus of this article is on education, we should not forget the many ways in which the Web is allowing collaboration and interaction for personal--and political--reasons. The "glocal" effect is evident not only in the many blogs where anyone can rant and gain an intense following worldwide, but in organizations like Kiva [http://www.kiva.org], which with a simple click at their website allows the user to loan all or a portion of needed funds to a micro-business person in a far-off country. The lender receives e-mails from the recipient charting progress. If the small business is successful, the loan is repaid, all with little or no overhead through the connectivity of the Internet. This type of organization seems to give credence to the idea that the Web is changing how we interact as people.

In closing, I can think of no better way to summarize these important trends than to suggest a viewing of the very short video: "Web 2.0... The Machine is US/ing US." Web 2.0 is not the future; it is now.

Source: http://youtube.com/watch?v=NLlGopyXT\_g

## Note

The wiki supporting this article is to be found at Trends in Digital Media 2007 [http://vid-acsession.wikispaces.com/home/]. The recording of this presentation is located at Learning Times [http://home.learningtimes.net/learningtimes?go=1563011] (registration and login required).

## **About the Author**

**Dr. Elizabeth Hanson-Smith**, professor emeritus at CSU, Sacramento, was lead designer for the *Oxford Picture Dictionary Interactive* [http://www.esl.net/oxford\_picture\_dictionary\_cdrom.html] and pedagogical consultant for Live Action English Interactive [http://www.cpli.net/]. She wrote *Constructing the Paragraph* [http://cla.univ-fcomte.fr/english/paragraph/], a free, online tutorial for composition. With Mike Marzio, she co-moderates Real English Online [http://groups.yahoo.com/group/Real\_English\_Online/] for video-using students, and EVO Video 07 [http://groups.yahoo.com/group/evovide007/], a group supporting language teachers using video. Author of many articles on CALL pedagogy, Hanson-Smith's books include *Learning Languages through Technology* (co-editor Sarah Rilling, 2006), and *CALL Environments, 2nd ed.* (co-editor Joy Egbert, 2007), both available from TESOL Publications [http://tesol.org].

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