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Web Technologies for Language Learning: Enhancing the Course Management System

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1. Introduction

Technology and language education are not newly found partners, as evidenced by the proliferation of language labs in 70s and 80s of the previous century. The rise of the Web brings in new and 'exciting' technologies for use by the language teaching community and these include the platforms known as course management systems. Course Management Systems (CMSs) are systems that provide facilities for teachers and students to engage in teaching and learning activities online by helping to manage various functions like course content preparation and delivery, communication, assessment, administrative functions and collaboration (Ellis, 2001; Nichani, 2001). Other terms have also been used to describe CMSs: online learning environment, virtual learning environment and course-in-a-box (Collis & De Boer, 2004). The rapid adoption of CMSs by institutions around the world is truly dramatic. Warger (2003) reported that these systems have become essential to IHL's (institution of higher learning) drive for implementing instructional technology.

The available literature on the use of CMSs for language learning and instruction is largely promotional in nature, such as by Brandl (2005), Robb (2004), Siekmann (1998) and Godwin-Jones (2003). Research and reports that deal with CMSs in language learning environments include Masuyama and Shea (2003), Masuyama (2005), Zhang and Mu (2003) and Da (2003). The paucity of research related to the use of CMSs for language learning could very well lie in its so-called strength, a "one-size-fits-all" philosophy (Kuriloff, 2001) that casts the learning of all subjects in the same manner. Language learning is vastly different from the learning of any other subjects (Moffett & Wagner, 1983), yet CMSs are designed with uniformity of tools and features.

This gave rise to calls for CMSs to provide more flexibility to better allow language teaching and learning to take place. Kuriloff (2001) argues that CMSs "cater to the lowest denominator" as it treats the teaching of all disciplines in the same manner. Sanchez-Villalon and Ortega (2004) and Kuriloff (2001) describe the lack of functionalities for writing and composition in the current crop of CMSs. Corda and Jager (2004) claim that CMSs currently offer more assessment features rather than language practice features commonly associated with language learning.

The study presented in this chapter is part of a broader study to develop a design framework for a course management system (CMS) oriented for language instruction in

Malaysian institutions of higher learning. This study specifically aims to identify the technologies used for the purpose of language learning and teaching in a systematic manner. It will contribute to the larger study by providing a focus on the kinds of technologies that needs to be integrated within the course management system. This chapter is divided into the following sections: data selection and methodology, discussion and lastly conclusion.

2. Data Selection and Methodology

The initial problem faced by this study after choosing the appropriate methodology is data selection. If the subject (language learning and web technologies) is taken as the sole criteria for data selection, then the data will be large and unmanageable. Decision is made to use the Thomson Social Science Citation Index as the basis for data selection with the following justifications:

i. The Social Science Citation Index is the established and recognized index for leading journals and publications within the larger domain of social sciences. It provides a solid basis for initial selection of data sources.
ii. Although there is only one journal (Language Learning and Technology), the number belies the true amount of data as the journal itself specializes in the field of technology-assisted language learning. All articles within the journal have a high potential of being used as the data for the research question.
iii. In a qualitative study, the amount of data is not as important as the quality of data. This is especially true provided the criteria for selection are adequately justified.

The only journal within the index that deals with the subject is Language Learning and Technology. There are other journals outside the index that deal with the subject such as System, CALL-EJ, The Reading Matrix and CALL. However, there is no common justification for including them in the list of sources. An attempt to include one or any of the other would result in arbitrary criteria that would not be justifiable and indefensible for the purpose of research. The final list is made up of 40 articles from the journal Language Learning and Technology.

Once the basis for selection has been established, the next step is to refine the selection based on the question that is to be investigated. As the aim is to identify the web technologies used for web language learning and teaching, the first step is to determine whether the article examined is about web technologies or traditional computer-assisted language learning. This is a pretty straightforward process, with one exception. If an article that discusses traditional CALL applications suggests that the technology is portable to the web or internet then the article will be included in the data.

The next step is to identify the web technologies or applications used within the articles selected. In order to assist in this process, a matrix display is used to organize the data. The display is used then to assist in the discussion on the findings. Any qualitative research (or any other type of research) will inevitably deal with the question of validity and reliability. The more appropriate term is trustworthiness as defined by Lincoln and Gruba (1985) as this research is qualitative in nature. In order to ensure trustworthiness, a panel of experts reviewed the analysis and acts as interraters. The input from the expert panel is used to improve the analysis although there are no major or critical changes to the original analysis.

The following categories of technologies emerge from the data available: synchronous and asynchronous communications, production technologies, web resources and language testing.

3. Discussion

3.1 Synchronous and Asynchronous Communication

Synchronous communications are communications that have no or insignificant delay between initiation and response of the communication. Synchronous communication technologies allow for almost simultaneous or real-time communication between users. The most common form of synchronous communication is the text-based chat. There are 14 articles within the data that specifically mentioned the use of text chats, some in combination with audio chat. Data 001 (Basharina, 2007), for example, mentions the user preference for chat as opposed to the slower message boards:

"This tension reveals students' desire to approximate delayed bulletin board interaction to the immediate response (Thorne, 2003). Based on this, several students from all three cultures expressed their preference for chat over the asynchronous bulletin board interaction." (p.94)

Other forms of synchronous communication on the web include audio/video chat and desktop conferencing. Eight of the data mention the use of voice or video-based chat facilities. Data 011 (Strambi & Bouvet, 2003) mentions the use of voice chat in order to help prepare students for oral tests (p.94). Data 024 (Payne & Ross, 2005) describes an experiment using voice chat and concludes that the chat may provide a unique form of support to certain types of learners in L2 oral proficiency (p.50)

Asynchronous communication is communication where there is perceptible and expected delay between the messages. On the web, the most common forms of asynchronous communication are emails and web forums (sometimes also called threaded discussion forums or bulletin boards). Emails are popular due to their accessibility and ease-of-use (Heisler & Crabill, 2006). The web forums are perhaps one of the most popular of web technologies for communication (Lally, 1995).

Eleven of the forty articles that make up the data mentioned the use of various forms of emails, either on its own or in combination with other applications. The articles deal more with the aspects of language use within emails rather than email as a technology. For example, Data 032 (Chen, 2006) highlighted the issue of language pragmatism when communicating using emails. It puts forth the argument that since emails lack paralinguistic clues, communication could be challenging especially for unequal-status communication.

Ten of the data mention the use of another form of popular asynchronous communication tool: the web forums. Data 013 (Weasenforth, Biesenbach-Lucas & Meloni, 2002) argues that the use of threaded discussion forums open up new learning possibilities that may not be available in a face-to-face environment. However, it also cautions that such a use must be well integrated into the learning process to achieve any benefits for learners.

In a study on the use of discussion boards in teacher training, Data 015 (Arnold & Ducate, 2006) presents a view based on previous literature that the lack of social context cues might hinder communication. This is put together with a counter argument that such deficiency often leads to equal participation when compared to a normal classroom. It must be noted; however, that any text-based online communication will suffer from the same lack of social

or paralinguistic clues. Furthermore, the use of emoticons, while being far from a perfect representation of human emotions does help to provide visual clues for better communication in an online, text-based environment such as a web board or a chatroom.
The majority of the data collected deal with the subject of communication technologies in language education. And these technologies are available in virtually all course management systems. The question facing a designer is how to design these applications so that there is effective communication within the course management system with the particular view of enhancing language learning. Afendi and Mohamed Amin (2005) propose a set of guidelines based on Communicative Language Teaching (CLT). They named four aspects of communications that need to be addressed by a course management system: integrated communication design, conversational design, social communication design and multimedia communication design. Table 1 summarizes their ideas:

	CLT and Communication	Tools/Features Design
Integrated Communication Design	• Communication as the goal and the process. • Contextualization of communication	Distribution of communicative functions into other parts of the system (e.g., forum functions within online notes & forum functions within language practice exercises.
Conversational Design	• Dialogic view of learning and communication. • Inhibition might discourage language learners to communicate freely.	Multi-directional and private facility to 'converse' with teacher or fellow students. Could also be made public if agreeable to all parties.
Social Communication Design	• Social aspects of human communication. • Communicative competence covers the ability to use language in socially appropriate contexts.	Virtual cafes – virtual space for socializing. Controlled and moderated by students. Include content creation tools, polling, publishing and chat facilities.
Multimedia Communication Design	• Human communication is conveyed via a variety of media. • Communication skills are not limited only to oral proficiency.	Communication tools in a CMS should include text, audio and visual capabilities while maintaining the organization and permanence aspects normally available in text- only communication.

Table 1. Design considerations of communicative tools within a CMS based on CLT (Afendi & Mohamed Amin 2005)

A course management system designed for language learning should not merely have communication technologies; it should facilitate communication through these technologies. Computers in language learning have been traditionally used in drill-and practice activities, beginning with the heydays of the Audio Lingual Method (ALM) and behaviorism (Ahmad et al., 1985). At the time, what constitutes personal computing technology is still in its infancy i.e. computers and software are limited in their abilities; be it processing power, storage or communications.

Much has changed since the early days of personal computing. According to Warschauer (2004), computer-assisted language learning is going towards what he terms as 'integrative CALL'. The defining features of integrative CALL are multimedia technology and the Internet, used in combination. A course management system designed with such communications facilities and in an integrative manner as suggested by the study would be a solid platform for Warschaeur's 'integrative CALL'.

3.2 Production Technologies

Production applications or technologies refer to technologies that allow users to utilize and practice the two production language skills: speaking and writing. Speaking has been covered by the earlier discussion on communications; therefore, this section will focus more on the other productive skill which is writing.

The data mentions the use of blogs. Since it was first introduced in 1998, blogs have been gaining popularity on the web. Its usefulness in helping to develop writing skills has been mentioned by a few researches such as Campbell (2003) and Richardson (2004). In general, the use of technology for L2 writing has been shown to be beneficial (Hertel, 2003). There are a few ways in which the blog technology could be used within a course management system for language learning.

The first is the most common way where the blog functions as a publicly accessible personal journal. The second way is a step up by integrating the blog technology into the CMS. This is not the same as just having the blog 'parked' within a CMS. For example, if an instructor wants his students to read an article, then discuss it and later write an entry in their blogs regarding their experiences etc., the process should be handled by the CMS seamlessly. A learner should be able to see the article, the discussion part and his own blog in a seamless manner instead of having to navigate from one section to another to carry out the assigned tasks. More importantly, an instructor should be able to see the task as one integrated whole instead of separated pieces scattered throughout the system. This simplifies the tasks involved in management and evaluation of the assignment.

Blogs could also be designed for collaborative writing that involves peer-review and editing. Learners could contribute revisions, comments and help improve each other's writing in general. A blog system within a CMS should have more purpose than being a simple space for personal expression. As it is set within an academic setting, a mechanism should exist for teacher-student interaction within the blog itself. The purpose of this mechanism would be to allow the teacher to comment on the blog for corrective, evaluative or general feedback comments. Most blogs have a section for comments; however, this section is visible to all visitors. The academic interaction mechanism should be visible to the owner of the blog and the teacher only. There is currently no publicly available research or literature on something of this nature. Kruper (2003), for example, commented that the CMS vendor Blackboard does not seem to be interested in students' publishing. The Edutools' CMS comparison tool

does not even have blogs as one of the features to be compared (Edutools 2008 – www.edutools.info).
The recognition given by this study to production technologies as one of the key areas for emphasis in the applications of technology for online language learning is important. This is because production technologies such as the authoring of web pages and blogs represent a new kind of literacy instead of being merely an extension of current CMC tools (Warschauer 2004). A thoughtful approach must be taken when integrating technologies that assist with productive language skills. Any technology common to today's Web such as blogs should be integrated into a CMS for language learning with the view of helping to improve students' skills rather than just for the sake of having the latest 'in-thing'. Productive skills are an important half of language proficiency and that is an established fact. The focus should be on giving more opportunities for the development of these skills within a course management system designed for language instruction.

3.3 Web Resources

There are two factors that would encourage the use of web resources in a CMS designed for language learning. First is the fact that the web offers a multitude of authentic language materials in various forms. Second, a CMS is a web-based system; therefore, it should be naturally capable of making use of web resources either via embedding or linking. This section looks at the possible web resources to use and discuss some problems and limitations.
There are two broad classes of web resources available for inclusion or adaptation by a CMS: 'open' and 'propriety' web resources. Open web resources are freely available for use and because of that, are quite an attractive option. However, the quality might not be up to expectations and the range of resources might not be able to meet specific needs. Proprietary web resources, on the other hand, are available only for a fee. These may include online libraries and materials published by publishing houses. The quality may be higher or they may provide better materials for specific needs, for example, English lessons for business etc.; however, as mentioned earlier they are not free.
Data 014 (Horst et al. 2005) mentions the use of user-contributed resources in the forms of word banks and collaboratively populated vocabulary database. This should be considered as part of a subset of the open resources category. However, its potential should not be overlooked. This is because the recent popularity and success of social networking and user-contributed sites on the Web such as Facebook and YouTube. Tim O'Reilly (2005) frame this development as 'Web 2.0', which could be described (among the numerous definitions available, see Hoegg et al., 2006; and Hinchcliffe, 2006) as empowering the users to contribute and publish.
The methods for integrating them should be also given some consideration. While it is normal to use hyperlinks to link to other resources on the web, it might not be the best option and could be considered slightly outmoded for use within a course management system. Some resources offer APIs (application programming interfaces) that allow for seamless integration of the resources or services within the applications that invoke the APIs. One of the most well known examples is the Google Search API that allows web searches to be carried out against Google's indexes from any websites.
The adaption or integration of web resources for language learning would be naturally focused on those that are important for language learning such as online dictionaries,

concordances and practice materials. However, the question of whether or not to integrate with external, third party resources involve factors such as administrative and financial policies which is beyond the scope of this study. Figure 1 shows the overview of the design features for integrating web resources into a CMS designed for language learning.

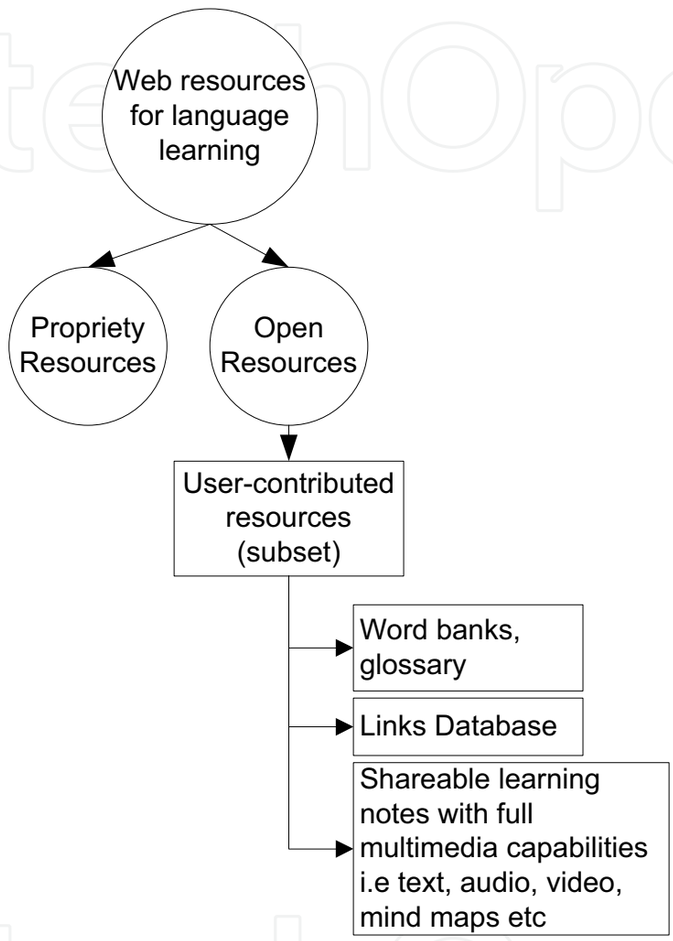


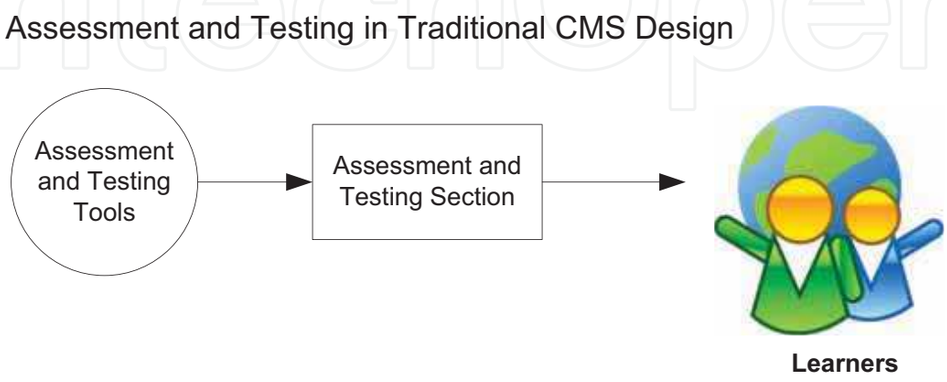
Fig. 1. Design features for web resources

3.4 Web-based Testing

Testing is integral to language instruction and is not used only for evaluation but also for practice of certain items especially grammar. Most course management systems include the facilities to conduct tests and quizzes in various formats like multiple choice, essays/short answers and fill-in-the-blanks. For example, a cursory comparison using Edutools on three popular CMSs (ANGEL 7.3, Blackboard and Desire2Learn) shows a reasonably well-developed set of assessment tools. The reason for the maturity of CMS design in this area is that testing and evaluation are features commonly in demand across disciplines.

The practice aspects of online language testing including diagnostic and self-assessment should be given extra consideration as they are quite important for language learning (Fulcher, 2000). A test or quiz in any format should include the ability to provide sufficient

and helpful feedback if the instructor thinks it is needed. The facilities for adding quizzes and tests should also be integrated throughout the whole system, for example, a listening comprehension activity may require an audio file plus the comprehension questions. This is a point that needs to be made as most CMSs cater to testing only for evaluation and therefore isolate it into a distinct section specifically for designing and taking tests. Figure 2 illustrates the idea of integration between assessment tools and the activities within a CMS geared for language learning in comparison to the 'traditional' CMS design:



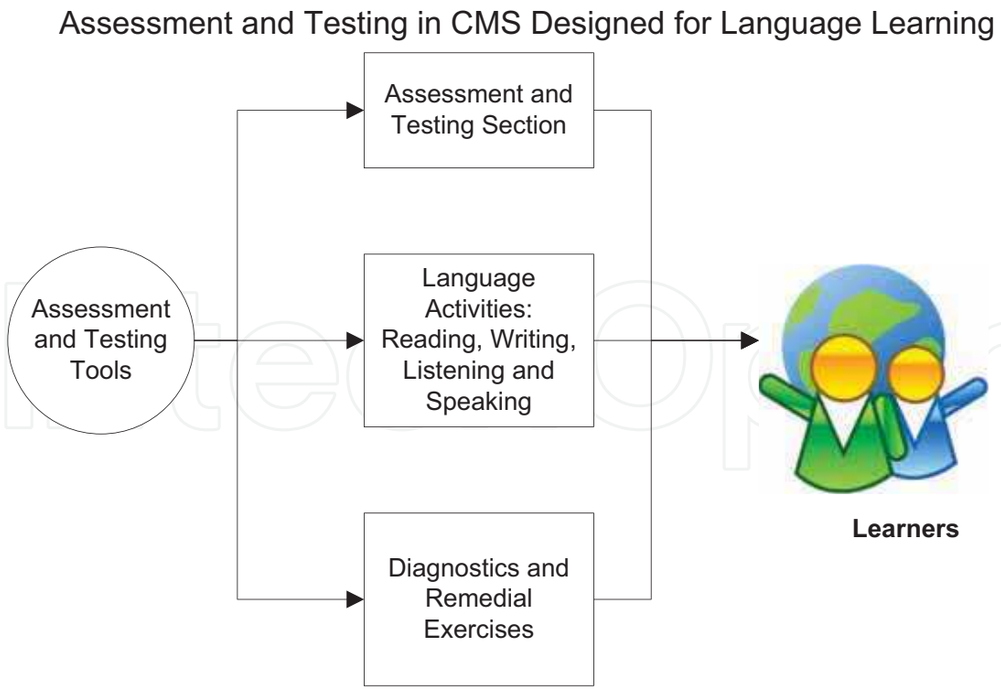


Fig. 2. Comparison of testing/assessment designs for language-oriented CMS and traditional CMS

The applications of testing technology as suggested here expand on the traditional role of the technology within a course management system. This is in line with the argument made by Corda and Jager (2004) that CMSs offers more features for assessment rather than the tools needed for language practice which will be more useful for language learning.

4. Conclusion

Thirty two out of forty articles that form the data are about the use of communication technologies for the purpose of online language learning. Based on the data available, it is clear that a CMS designed for the purpose of language learning, should also be focused on enabling and facilitating communication. Afendi and Mohamed Amin (2005) identified four design considerations: integrated communication design, conversational design, social communication design and multimedia communication design. The aim of these four design considerations is to enable and facilitate communication processes within a course management system. The next category of technology discussed is the use of production technologies. These technologies include blogs and web page publishing. They allow students to use their production skills such as writing and speaking within an online environment. Speaking is closely associated with communication technologies like chat and teleconferencing although by definition it is a production skill. A CMS oriented for language learning should therefore integrate technologies that enable students to make use of their production skills.

Technologies for web-based testing are also covered by the data, however, the number of article discussing online language testing is only one. Although the number is not significant, the article gives a well-rounded discussion on online language testing. A course management system cannot hope to integrate every piece of technology available; however, since testing is an integral part of language learning, it is a necessity within a CMS geared for language learning.

The last category of applications, web resources, is not something simple to integrate into the design of a CMS as it involves external resources and different decision-making processes. A course management system is already embedded into the web, therefore inclusion of databases or lists of hyperlinks to available resources should not be a problem. Integration and access to specialized, third-party resources however, is a decision that would require input from policy makers because it involves financial and administrative decisions. However, a CMS should be designed to allow easy access to available resources especially those related to language learning such as online dictionaries.

5. References

Afendi, H. & Mohamed Amin, E. 2005. Design Considerations for CMC Tools within a Course Management System Based on Communicative Language Teaching. CALL-EJ Online 7(1) June 2005. (Online) http://www.tell.is.ritsumei.ac.jp/callejonline/journal/7-1/Hamat-Embi.html (20 September 2008)

Ahmad, K., Corbett, G., Rogers, M., & Sussex, R. 1985. Computers, language learning and language teaching. Cambridge: Cambridge University Press.

Arnold, N. & Ducate, L. 2006. Future Foreign Language Teachers' Social And Cognitive Collaboration In An Online Environment. Language Learning & Technology 10(1):42-66.

Basharina, O.K. 2007. An Activity Theory Perspective on Student-reported Contradictions in International Telecollaboration. Language Learning & Technology 11(2):82-103

Brandl, K. 2005. Are You Ready To "Moodle"? Language Learning & Technology 9(2):16-23.

Campbell, A.P. 2003. Weblogs for Use with ESL Classes. The Internet TESL Journal IX(2). (Online) http://iteslj.org/Techniques/Campbell-Weblogs.html (15th December 2008)

Chen, C-F.E. 2006. The Development Of E-Mail Literacy: From Writing To Peers To Writing To Authority Figures. Language Learning & Technology 10(2):35-55.

Collis, B. & De Boer, W. 2004. Teachers as learners: Embedded tools for implementing a CMS. Tech Trends 48(6):7–12.

Corda, A. & Jager, S. 2004, "ELLIPS: Providing web based language learning for Higher Education in the Netherlands", Recall 16 (1): 225-236.

Da, J. 2003. The Use of Online Courseware in Foreign Language Instruction and Its Implication for Classroom Pedagogy. Mid-South Instructional Technology Conference Teaching, Learning, & Technology: The Challenge Continues. (Online) http://www.mtsu.edu/~itconf/proceed03/146.html (30 January 2006)

Ellis, R. K. 2001. LCMS roundup. Learning Circuits. (Online) http://www.learningcircuits.org/2001/aug2001/ttools.html (20 September 2008)

Fulcher, G. 2000. Computers in Language Testing. In Brett, P. and G. Motteram (Eds), A Special Interest in Computers, pp. 93-107. Manchester: IATEFL Publications.

Godwin-Jones, R. 2003. Emerging Technologies. Blogs and Wikis: Environments for On-line Collaboration. Language Learning and Technology 7(2):12-16.

Heisler, J.M. & Crabill, S.L. 2006. Who are "stinkybug" and "Packerfan4"? Email Pseudonyms and Participants' Perceptions of Demography, Productivity, and Personality. Journal of Computer-Mediated Communication , Vol. 12 (1), pp. 114–135.

Hertel, J. 2003. Using and e-mail exchange to promote cultural learning. Foreign Language Annals 36(3):386–396.

Hinchcliffe, D. 2006. The State of Web 2.0. Web Services Journal. (Online) http://web2.socialcomputingmagazine.com/the_state_of_web_20.htm (17th August 2008)

Hoegg, R., Martignoni, R., Meckel, M. & Stanoevska-Slabeva, K. 2006. Overview of business models for Web 2.0 communities. In Dresden, S. (ed.) Proceedings of GeNeMe 2006, pp. 23–37.

Horst, M., Cobb, T. & Nicolae, I. 2005. Expanding Academic Vocabulary With An Interactive On-Line Database. Language Learning & Technology 9(2):90-110.

Kruper, J. 2003. Blogs as Course Management Systems: Is their biggest advantage also their achille's heel? (Online) http://homepage.mac.com/john_kruper/iblog/B905739295/C1776019690/E1401376105/ (15th August 2008)

Kuriloff, P.C. 2001. One Size Will Not Fit All. The Technology Source, July/August 2001. (Online)http://ts.mivu.org/default.asp?show=article&id=899 . (13 March 2005).

Lally, L. 1995. Exploring the Adoption of Bulletin Board Services. The Information Society. Vol.11(2), pp. 145-155, 1995.

Lincoln, Y. S., & Guba, E. G. 1985. Naturalistic inquiry. Beverly Hills, CA:SAGE Publications, Inc.

Masuyama, K. & Shea, A. 2003. Successful Integration of Technology? A Case Study of a First Year Japanese Language Course. In P. Kommers & G. Richards (Eds.), Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications 2003. pp. 1336-1339. Chesapeake, VA: AACE.

Masuyama, K. 2005. Essence of Success in the Development and Implementation of Web-enhanced Foreign Language Courses. In P. Kommers & G. Richards (Eds.), Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications 2005. pp. 3252-3259. Chesapeake, VA: AACE.

Moffett, J. & Wagner, B.J. 1983. Student-Centered Language Arts And Reading, K-13. 3d ed. Boston, MA: Houghton-Mifflin.

Nichani, M. 2001. LCMS = LMS + CMS (RLOs). Elearningpost. (Online) http://www.elearningpost.com/features/archives/001022.asp (15 March 2005)

O'Reilly, T. 2005. What Is Web 2.0: Design Patterns and Business Models for the Next Generation of Software. (Online) http://www.oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html (17th August 2008)

Payne, J.S. & Ross, B.M. 2005. Synchronous CMC, Working Memory, And L2 Oral Proficiency Development. Language Learning & Technology 9(3):35-54.

Richardson, W. 2004. Blogging and RSS - The "What's it?" and "How to" of powerful new tools for web educators. Multimedia & Internet@Schools 11(1):10-13. (Online) http://www.infotoday.com/MMSchools/jan04/richardson.shtml (January 24th, 2006).

Robb, T. 2004. Moodle: A Virtual Learning Environment for the Rest of Us. TESL-EJ 8(2). (Online) http://writing.berkeley.edu/TESL-EJ/ej30/m2.html (19th January 2006)

Sanchez-Villalon, P.P. & Ortega, M. 2004. Writing on the Web: a Web Appliance in a Ubiquitous e-Learning Environment, The Reading Matrix: Proceedings of the First International Online Conference on Second and Foreign Language Teaching and Research, September 25-26, M. Singhal (Ed.). The Reading Matrix Inc. USA.

Siekmann, S. 1998. To Integrate Your Language Web Tools – Call WebCT. Paper presented at Natural Language Processing and Industrial Application – Special Accent on Language Learning. Moncton, New Brunswick, Canada, August 18-21, 1998.

Strambi, A. & Bouvet, E. 2003. Flexibility And Interaction At A Distance: A Mixed-Mode Environment For Language Learning. Language Learning & Technology 7(3):81-102.

Warger, T. 2003. "Calling all course management systems," University Business 6(7): 64–65.

Warschauer, M. 2004. Technological Change and the Future of CALL. In Fotos, S. (Ed) New Perspectives on CALL for Second Language Classrooms. pp. 15-27. Mahwah, NJ, USA: Lawrence Erlbaum Associates, Incorporated.

Weasenforth, D., Biesenbach-Lucas, S. & Meloni, C. 2002. Realizing Constructivist Objectives Through Collaborative Technologies: Threaded Discussions. Language Learning & Technology 6(3):58-86.

Zhang, D. & Mu, A. 2003. Use of Online Chat in a WebCT-Enhanced Elementary Chinese Language Class. In G. Richards (Ed.), Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2003. pp. 1265-1271. Chesapeake, VA: AACE.

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This book, edited by the Intech committee, combines several hotly debated topics in science, engineering, medicine, information technology, environment, economics and management, and provides a scholarly contribution to its further development. In view of the topical importance of, and the great emphasis placed by the emerging needs of the changing world, it was decided to have this special book publication comprise thirty six chapters which focus on multi-disciplinary and inter-disciplinary topics. The inter-disciplinary works were limited in their capacity so a more coherent and constructive alternative was needed. Our expectation is that this book will help fill this gap because it has crossed the disciplinary divide to incorporate contributions from scientists and other specialists. The Intech committee hopes that its book chapters, journal articles, and other activities will help increase knowledge across disciplines and around the world. To that end the committee invites readers to contribute ideas on how best this objective could be accomplished.

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