

A COMPARISON OF CALL WEBSITE FEATURES, CMS FEATURES AND USER EXPECTATIONS

Authors LAGHOS, ANDREW & ZAPHIRIS, PANAYIOTIS

ABSTRACT

This paper is a report on the findings of a study conducted concerning the features currently offered by web-based Computer Aided Language Learning (CALL) courses and commercial and open-source Course Management Systems (CMS). In this study, our main research question was whether current online CALL systems are meeting the users' requirements in terms of the features and functionality that they provide. Our focus has been on the official languages of the EU, as well as the new languages that will be added by the ten new countries in May 2004. Considering that one of the principal pillars of EU doctrines is the free flow of people among all countries of the EU, one would expect to see a multitude of 'foreign language' speakers settling in countries where their mother language is different. It is also the EU policy to encourage and support maintaining national languages and culture as a most valuable characteristic of the emerging EU.

Although there are a number of websites that claim to provide distance learning of foreign languages very few have performed proper evaluations (both in terms of pedagogical achievements but also usability) of their courses/websites. We have carried out an investigation to find out which features are provided by current online CALL systems and CMS, and compared them with the user requirements solicitation results, to see to what extent user expectations are met by these systems. Our findings indicate that current CALL systems make limited use of several important features like the use of chatrooms and spell-checkers and thesaurus that can enhance and speed-up the learning process.

Our methodology consisted of four key activities:

Activity 1: Identification of existing features in online CALL courses

First, we visited and explored many CALL websites noting the features that they currently provide.

Activity 2: User Requirements Solicitation

This part of the project dealt with user requirements solicitation. This was carried out by preparing an online questionnaire where people could post their views and suggestions, and concurrently give us feedback about the importance of including specific features in CALL websites and CMS.

Activity 3: Comparison of currently available features versus user expectations and needs

In this part of the study we compared the features currently available on CALL systems with user expectations revealed through our on-line questionnaire.

Activity 4: Identification of existing features in online CMS

Finally, our research explored the features provided by the most commonly used CMS systems and compared them with user requirements! The objective here is to identify the limitations and strengths of these systems and make recommendations for future designs and updates in line with user expectations.

PRESENTATION

Computer Assisted Language Learning (CALL) can be defined as "a research field which explores the use of computational methods and techniques as well as new media for language learning and teaching" Gamper & Knapp (2002). In simpler terms, it can be thought of as the use of computers to help learn languages.

Online education and training has been gaining wide acceptance at a fast pace: academic institutions are reaching students outside the traditional classroom; textbook publishers are making online educational material and study aids a key part of their offerings; and, businesses are seeking to cut costs and gain productivity by offering technical and management training online. This paper looks into the more focused area of the use of the Internet as a medium for language learning.

In a previous paper (Laghos & Zaphiris, 2004) we used the findings from a research project to compare CALL website features with user expectations. A brief summary of these findings is provided here. The main objective of this paper, however, is to extend the reach of our research to explore the degree to which Course Management Systems (CMS) features support user expectations. Although there are a number of websites that claim to provide distance learning of foreign languages very few have performed proper evaluations (both in terms of pedagogical achievements but also usability) of their courses/websites.

More specifically, we will explore the question as to whether current CMS are meeting the users' requirements in terms of the features and functionality that they provide. Following the presentation of the findings of the study we make a set of recommendations for further work.

THE STUDY

The purpose of this paper was to see whether or not current CALL websites and CMS provide the features and functionality that users consider important in learning a language.

For the CALL websites, we focused on the ones that offer courses on languages of the EU. Considering that one of the principal pillars of EU doctrines is the free flow of people among all countries of the EU, one would expect to see a multitude of 'foreign language' speakers settling in countries where their mother language is different. It is also the EU policy to encourage and support maintaining national languages and culture as a most valuable characteristic of the emerging EU. Preference was given to CALL websites that are supported by national governments with minimal advertising, promotions or inducements.

With regards to the CMS, we focused on the market leaders with the aim of finding out

whether the features of these systems meet user expectations with specific regard to Foreign Language Learning.

Our methodology consisted of four key activities:

Activity 1: Identification of existing features in online CALL courses

Activity 2: User Requirements Solicitation

Activity 3: Comparison of currently available features versus user expectations and needs

Activity 4: Identification of existing features in online CMS

Activity 1: Identification of existing features in online CALL courses

There are currently nineteen official languages of the European Union – Danish, Dutch, English, Finnish, French, German, Greek, Italian, Portuguese, Spanish, Swedish, Estonian, Latvian, Lithuanian, Polish, Czech, Slovak, Hungarian and Slovene. The aim was to find and evaluate two free online CALL websites for each of the languages. Many resources were found for the languages that are used and spoken more widely across the globe like Spanish, English and German. However, languages that are not so popular around the world had only limited websites teaching the language. No free resources were found for Slovak and Slovene, so these languages had to be omitted from the report. Additionally, only one free reliable resource was found for each of Estonian and Hungarian. For the languages where there were many websites preference was given to those websites that were supported by national governments. Websites that were very basic or incomplete were not included, so this way we could have a more accurate reflection of the major websites offering EU language teaching. We ended up with a total of thirty-two websites to study.

We visited and explored the 32 websites noting the features that they currently provide. Although we had initially prepared a list of features that we thought were relevant, during the exploration of the websites we came across several new features that we had not thought of. The following features were identified: Links to external resources, Audio, Dictionary-Translator, Discussion Board, Quiz-Tests, Games, Chatrooms, FAQ-Help, Website News, Horoscopes, Penfriend finders, Video, Spell-Checker and Thesaurus. Once the features were documented, we prepared a graph showing the relationship between each of the features and how many of the websites offered them (Figure 1).

As shown in Figure 1, most of these websites make use of external links. These links refer users to other websites providing historical and cultural information of the languages and their countries, as well as other tools and activities that could enrich the learning experience.

The second most popular feature was the use of audio. Twenty-two of the thirty-two online language courses offered some sort of audio support to the users. Pronunciation of the letters of the alphabet was the most common use and this is in line with CALL pedagogical theories that suggest repetition and pronunciation modules in their teaching. This extended onto audio clips of words and phrases and in several of the sites included large clips of conversations where the users could listen, and at the same time read the transcripts of these audio files. However none of these websites supported audio

recognition whereby the users could speak into their microphone and have their pronunciations and their accent tested giving them feedback about their progress.

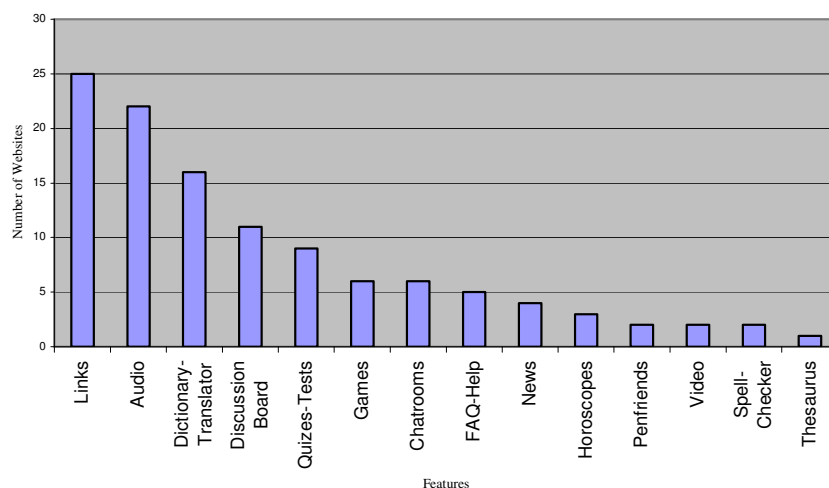


Figure 1: Mapping of the number of CALL websites that currently provide each of the features.

Sixteen websites offered a dictionary and translator at various levels of complexity. Discussion boards were utilized by eleven of these CALL courses. These provided an asynchronous mode of communication between the users. Main topics included technical difficulties, language difficulties and general discussion about various aspects of the languages and the people.

Nine of the websites offered some sort of testing where the users could check their progress and receive feedback on how well they were doing. A further six websites included simple interactive games like crossword puzzles and hangman with the purpose of user self-testing again, but by the means of a more attractive and fun approach. Three websites included the feature of horoscopes. Another feature that was offered by two websites was that of a pen-friend finder.

More technically advanced features such as synchronous communication (chatrooms and FAQ/Help features) and multimedia (video) received limited use, six and two websites, respectively.

Activity 2: User Requirements Solicitation

Activity 2 dealt with user requirements solicitation. An online questionnaire, containing closed and open ended questions, was prepared and sent to students of an MSc HCI module and a mailing list of CALL professionals and users. A total of 40 responses to the questionnaire from various countries were received. Users were asked to rate each of the currently available features (collected in Activity 1) on a Likert scale from 1 (least important to them) to 5 (most important to them). The results are shown in Table 1 and Figure 2.

A quick glance at the findings shows that the respondents rated almost all the features as being 'important' to 'very important'. Apart from horoscopes, which were rated as the least important with a score of 1.52 out of 5, all the other features scored over 2.50. The feature of audio clips in the online courses was the most popular one receiving an average user rating of 4.58 out of 5. This feature was followed closely by the spell-checker, the dictionary-translator, the FAQ/help and the quizzes-tests, which all scored over 4. With an average user rating between 3 and 4, we find the video feature, along with the links to external resources, the discussion board, thesaurus and the chatrooms. Penfriend finders, website news and games received a lower score.

Table 1: User Responses to the importance of the current features available in the online language courses

Feature	Least Important					Very Important 5	Mean Score
	1	2	3	4	5		
Links	0	3	16	10	11	3.73	
Audio	0	1	4	6	29	4.58	
Dictionary-Translator	1	2	9	7	21	4.13	
Discussion Board	2	3	14	7	14	3.70	
Quizzes-Tests	0	0	11	15	13	4.05	
Games	7	10	12	4	6	2.79	
Chatrooms	6	7	14	5	8	3.05	
FAQ-Help	1	1	9	11	18	4.10	
News	8	5	18	5	4	2.80	
Horoscopes	24	8	5	2	0	1.62	
Penfriends	10	7	10	6	7	2.83	
Video	3	2	7	9	19	3.98	
Spell-Checker	2	4	4	6	24	4.15	
Thesaurus	1	4	11	18	6	3.60	

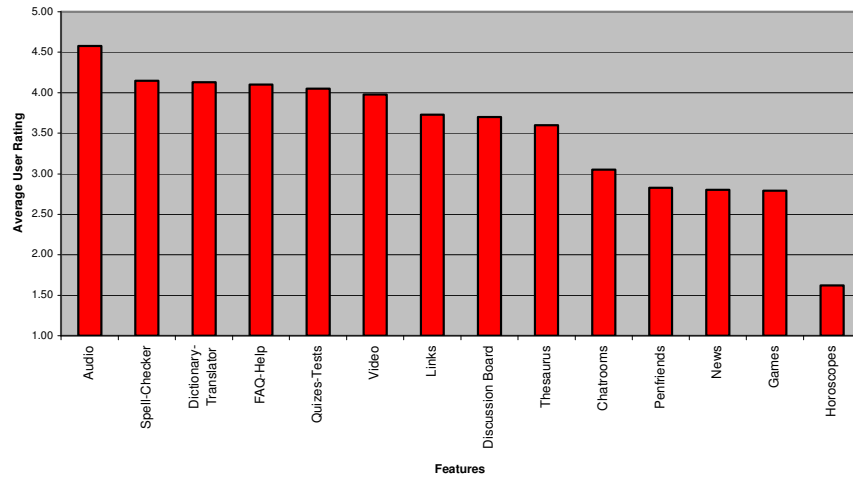


Figure 2: Importance of currently available features with regards to user ratings from the questionnaire.

The respondents rate website "Content" as the most important criterion when accessing websites, followed by the upload/download "Speed" of the website, and only one person found the "Appearance/Look" of the websites to be the most important. (Figure 3).



Figure 3: The users' responses to the single most important criterion for them in accessing websites.

Additional features desired by the respondents were:
 Integrated email features, and
 Personal journals/notes

Activity 3: Comparison of currently available features versus user expectations and needs

The results of the questionnaire were compared to the results of the initial study of the features currently available in the 32 online CALL courses. The use of audio in these websites is the most successful example, since the respondents who answered the questionnaire have rated audio as the most important feature in online foreign language courses. Other strengths of the websites were in the use of external links to other sources and the facility of a dictionary/translator.

There were also many weaknesses identified with the current state of these CALL websites. The most revealing example is that of a spell-checker on the websites. Although from the respondents answers spell-checkers were the second most important feature that they would have wanted, only two out of the thirty-two websites actually had a spell-checker in their online language course.

The respondents also consider discussion boards as important even though fewer than half of the websites offered this feature to their users. In their 2002 study on 'student involvement in designing an online foreign language course' Zaphiris and Zacharia have identified discussion boards to be the most constructive tool for the students learning experience and the main source of feedback for the maintainers of the project.

Activity 4: Identification of existing features in online CMS

In this stage we wanted to find the features that online CMS offer and see if their systems are suitable to administer foreign language learning courses. Our aim was to analyze the features provided by the current CMS market leaders. We were able to carry out this investigation using CMS that provided demos, or we could acquire licenses. Other resources we used included comparisons of CMS and their features that are available on the World Wide Web. We ended up with 5 CMS systems:

- WebCT (<http://www.webct.com/>)
- LearningSpace (<http://www.lotus.com/home.nsf/welcome/learnspace>)
- Blackboard (<http://www.blackboard.com/>)
- TopClass (<http://www.wbtsystems.com>)
- FirstClass (<http://www.firstclass.com>)

We checked the availability of CMS features against the list of features that represents user preferences. The results are shown in Figure 2.

The results show some strengths but also some weaknesses of using CMS for language teaching and learning. An example of the strengths lies in the use of external links. All 5 of the CMS provided this option. The same applies for the use of discussion boards. 4 of the 5 CMS studied have a Help or FAQ section, integrated email and support for groupwork.

The weaknesses lie in the areas more specific to language learning. None of the CMS provided an embedded dictionary or translator, the same way that none of them provided a spell-checker and thesaurus, which are all vital for language learning.

All 5 CMS support audio and video. However, these functionalities are only available as multimedia uploads and there is no template provided. This means that a substantial

amount of programming code is necessary from the webmaster or instructor to make these multimedia elements available and accessible to the users. Another drawback is that even though it is possible to incorporate audio and video elements into the courses, only 1 out of the 5 CMS supports audio conferencing and videoconferencing.

Table 2: Language Learning related features provided by CMS

Feature	WebCT	LearningSpace	Blackboard	TopClass	FirstClass
External Links	Y	Y	Y	Y	Y
Audio Support	Y	Y	Y	Y	Y
Audio Conferencing	N	Y	N	n	n
Video Support	Y	Y	Y	Y	Y
Video Conferencing	N	Y	N	n	n
Syllabus Template	N	N	N	n	n
Dictionary-Translator	N	N	N	n	n
Discussion Board	Y	Y	Y	Y	Y
Quizzes-Tests	Y	Y	Y	Y	n
Games	N	N	N	n	n
Chatrooms	Y	Y	Y	n	n
FAQ-Help	Y	Y	Y	Y	n
News / Announcements	Y	N	Y	Y	n
Penfriends	N	N	N	n	n
Glossary	Y	Y	Y	n	n
Spell-Checker	N	N	N	n	n
Thesaurus	N	N	N	n	n
Integrated email	Y	Y	Y	Y	n
Personal journals/notes	N	Y	N	n	Y
Calendar	Y	Y	Y	n	n
Multiple Language Support	Y	N	N	Y	n
Groupwork	Y	Y	Y	n	Y
TOTAL	13/22	14/22	12/22	9/22	6/22

In terms of number of features we have:

- LearningSpace - 14/22
- WebCT - 13/22
- BlackBoard - 12/22
- TopClass - 9/22
- FirstClass - 6/22

LearningSpace and WebCT cater for most of the features the users need. LearningSpace even supports audio and videoconferencing which can be very useful for language learners. On the downside, however, LearningSpace does not have multiple language support and thus limits its interface design and also the language courses that can be offered through this system. There is extra work for the programmers and instructors as there are no templates that can be re-used specifically for language courses.

DISCUSSION & CONCLUSION

This paper dealt with the evaluation of features supported by CALL websites and CMS. Our findings indicate that there is a gap between user expectations and requirements in relation to what is actually offered by these websites and systems. Results show that major weaknesses lie in the facilities currently provided by these websites. Feedback from the questionnaire helped to identify where these drawbacks lie, and enable us to make suggestions for future re-designs. For instance, the questionnaire respondents found spell-checkers to be very important, but very few of the websites evaluated actually offered this facility to the users.

This study shows one more interesting outcome. Contrary to popular belief where one of the main advantages of e-learning is the self-paced progress of the courses, from the responses of the questionnaire a considerable 35% of the people would rather have a pre-set schedule to follow, rather than completely attend the online courses on their own pace (which was 65% of the replies). Since this is a substantial percentage, our recommendation would be to keep the courses as self-pace ones, but to provide a recommended schedule or calendar which the users may choose to follow if they like.

Finally, our suggestion is that one of the focuses in the future of CALL should be the creation of a fully integrated package specifically for CALL which includes all the features and functionality that the user would need to learn a language efficiently. It should take full advantage of the potential of the internet and incorporate new technologies as they get developed to continually further enhance the language learning process (continue the evaluation/implementation cycle).

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BIODATA

Andrew Laghos is a PhD student in the Centre for HCI Design at City University and is studying towards a degree in Computer Aided Language Learning. He has an MSc in Interactive Multimedia, a BSc in Computer Science (with emphasis in Information Management) and a certificate in Website Development. His research interests include e-Learning, website design, HCI, music (both computerized and live) and communication via the web.

Panayiotis Zaphiris is a Lecturer at the Centre for Human-Computer Interaction Design. Before joining City University, he was a researcher at the Institute of Gerontology at Wayne State University from where he also got his Ph.D. in Industrial Engineering specializing in Human Computer Interaction (HCI). His research interests lie in Human-Computer Interaction with an emphasis on issues related to the elderly and people with disabilities. He is also interested in internet related research (web usability, mathematical modelling of browsing behaviour in hierarchical online information systems, online communities, e-learning, Computer Aided Language Learning (CALL) and social network analysis of online human-to-human interactions).

CONTACT

Andrew Laghos

Centre for HCI Design
City University
Northampton Square
London
UK

E-mail: dr847@soi.city.ac.uk

Website: <http://www-hcid.soi.city.ac.uk/pAndrewlaghos.html>