

CALL Implementation Strategies : A Case Study

(コンピューター支援言語学習による学習方略:実践研究)

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Keywords: Computer assisted language learning, Communicative teaching, Moodle, Task based learning, Comprehensible input

This paper will begin by discussing changes in CALL (Computer Assisted Language Learning) over the past decade, identifying three modes: computers as teachers; computers used for communication between teachers and students; and communication among students. Next, we will investigate how key components of the Moodle LMS (Learning Management System), such as quizzes, forums and wikis can contribute to language acquisition by facilitating comprehensible input through task-based, communicative learning. We will also show how these approaches entail an avoidance of the product approach to language instruction which tends to facilitate language knowledge rather than acquisition. A practical discussion of these issues in our context will follow, also addressing the issue of assessment.

1. A change for CALL

An early model for CALL entails students interacting with computers (see figure 1) for which commercial software packages are purchased and installed. Largely missing from this model are teachers, for many of whom CALL could be seen as a threat which seeks to replace people with machines. This first generation of CALL includes quizzes and activities, typified by multiple-choice questions. The computer presents a question to the student and then in some way indicates whether the student got the correct answer.

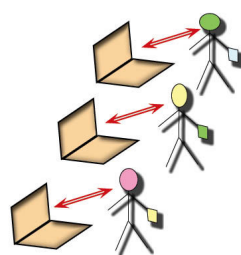


Figure 1. CALL Models – 1st Generation

Another early embodiment of CALL is a language class in a computer room. Computer

rooms are typically laid out in the same way as conventional classrooms, with rows of desks facing the teacher. This is not ideal for classroom teaching as the computers become barriers between the teacher and students. There is always a conflict between students working on their own computers and teachers addressing whole classes. We have found that speaking from the back of the classrooms is most effective in communicating to students, who must turn away from their screens. Computer rooms laid out in islands not only use space more efficiently and are more comfortable for students to work in, but may also make it easier for the teacher to address the whole class. “Blending” refers to the combination of classroom teaching and online teaching, rather than wholly class-based or entirely on-line approaches. Moving away from traditional computer rooms, Kanda University has adopted “Blended Learning Spaces” (MacKenzie et al., 2009) in which several laptop computers can be brought out and placed on movable desks when they are needed and cleared away when they are not.

In the second generation of CALL, the computer is used to communicate between the teacher and the students. The teacher uses the technology to send information to students, such as content or instructions for assignments. The students submit work to the teacher online.

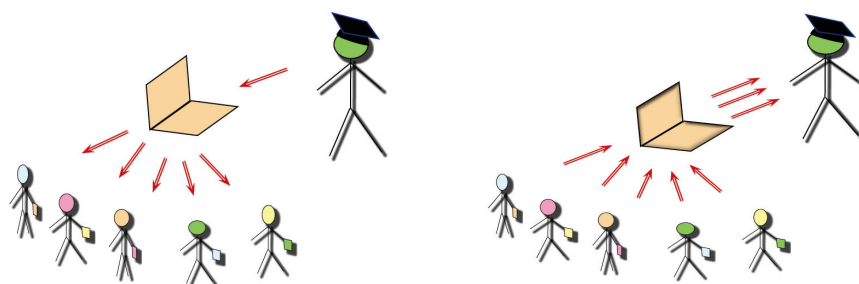


Figure 2. CALL Models – 2nd Generation

In their early days, computers were often used for number crunching and then word processing. In recent years, since the spread of the internet, they are increasingly used for communication and entertainment. This is evidenced by the dominant use of email in personal and business communication and the rise of social networking sites such as Facebook, Mixi and Twitter. Since communication is now one of the primary uses of computers, there is clearly a great potential for the use of computers in communicative teaching. A third generation model for CALL involves communication between students, at first instigated by the teacher through computers, although both the teacher and the medium become invisible and the result is that students are communicating with each other.

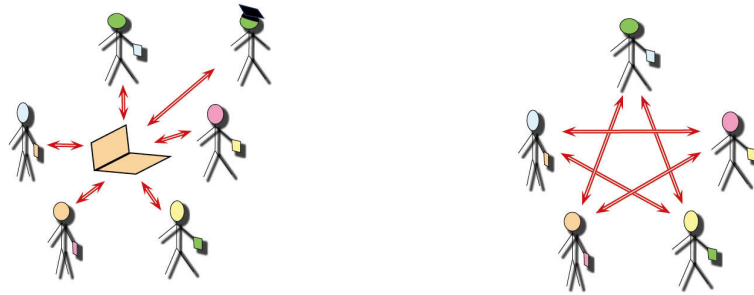


Figure 3. CALL Models – 3rd Generation

Along with this change in the nature of the technology and the use of computers, the demographics of teaching professionals are changing. Computers began to be used by individuals in the 1980s becoming widespread in the 1990s. In the last decade of the 20th century, most teachers had never used a computer. In the next decade, most teachers will have used a computer throughout their working lives. This represents a rapid change in the demands for greater computer literacy. Currently, in some classroom contexts, computers represent a threat to the traditional dominance of teachers, as students are likely to be more literate and comfortable with the technology than their teachers. It has been suggested that those who grew up after the advent of the internet have a fundamentally different attitude towards computers. For older generations, known as digital immigrants, computers remain as boxes that we look into. For digital natives, born into an internet world, computers are windows on something much bigger that is not characterised by these distinctions between the real and virtual worlds.

The recent notion of Web 2.0 suggests that computers and the internet are no longer controlled by a small elite who decide what technology is used and what media are seen, in the same way as television. Rather, users can add their own material and create their own software. Along with this change from big industry to empowered users, the computer has changed from being a teacher into being a medium for communication. An example of this can be seen in this university's move from Blackboard, a commercial application, to Moodle, which is free, open source software that can be adapted by users. In this paper, the university's Moodle LMS system is referred to as "eALPS" although in fact eALPS originally referred to the Blackboard system and the Moodle system is eALPS 2.0.

2. Communicative tasks

For the past several years, communicative competence has been a stated goal of Japan's language education system, most recently appearing in the Ministry of Education, Culture, Sports, Science and Technology's (MEXT) guidelines for elementary education. Kikuchi and Sakai state MEXT's 2003 goal of the study of foreign languages as being that of developing "students' practical communication abilities such as understanding information and the speaker's or writer's intention, and expressing their own ideas, deepening the understanding of

language and culture, and fostering a positive attitude toward communication through foreign languages” although they note that “the reality seems to be that most lessons still focus on explicit grammar instruction and preparation for university entrance exams” (2009, p. 198). Communicative competence is also a policy objective of the university, and improvement in communication ability is a stated objective in the syllabus for most language classes. Noting the irony that our exams seem to be discouraging schools from communicative teaching, we also assume that a communicative approach to learning will be effective in improving communicative competence and communicative teaching has a place in university language education. This is widely supported beyond language education, for example by Brett & Nagra: “Learning theorists posit the important role of social interaction in contributing to learning. The use of collaborative methodologies such as group work also illustrates the importance, and perceived beneficial role of, learning with others” (2005).

Pica et al. (1993) describe five communicative tasks that can be effective for language learning. Information gap activities involve two people who have different pieces of information which the other person wants. Jigsaw activities are more complex information gap activities where different people have different pieces of information that must be put together. The other tasks that Pica et al. identified were problem solving, decision making and opinion exchange.

Our communicative approach to language teaching at the university level involves projects where students work alone or in groups on creating substantial pieces of work such as essays or presentations. Throughout the projects there are several opportunities for communication. Table 1 shows generic tasks that students may go through in the process of completing a project. The other columns show which of Pica et al’s tasks they may correspond to, and which Moodle functions may be appropriate. This implementation largely avoids the use of computers as teachers from the first generation model of CALL and attempts to limit the teacher domination in the second generation.

Process	Communication Task	Moodle activities•
Choose topic	Problem solving / Opinion exchange/ Decision making	Forum/ Quiz
Research	information gap/ Jigsaw	Forum/ Wiki
Plan	Problem solving/ Decision making	Forum/ Submit file
Write	Jigsaw	Submit file
Edit	Problem solving/ Opinion exchange	Forum/ Wiki
Evaluate	Opinion exchange	Forum/ Quiz
Rewrite	Problem solving	Submit file

Table 1. Process steps, communication tasks and Moodle activities.

Long, (cited in Ellis, 2001; p273) posits that input can become comprehensible through interactional modifications that occur in negotiating meaning. Computers can thus contribute to language acquisition by facilitating comprehensible input through task-based, communicative learning. Opportunities for this type of learning are presented by key components of the Moodle system, such as quizzes, forums and wikis.

3. Quizzes

Moodle offers a wide range of activities which can be installed as plug-ins or customized by programmers. Quizzes and file submission can usually be seen as traditional, first- and second-generation CALL activities. Forums and Chats allow third-generation interaction. Wikis and Databases also allow individual and group creativity to be seen by other students in an interactive way.

Quizzes are traditionally used to test language knowledge, although quizzes in moodle may serve a range of functions. For example a quiz may consist of a single question: “Did you log in to eALPS?” Every student who takes the quiz answers “yes”. If used for assessment, this can be considered formative rather than summative assessment and the student is credited for effort rather than ability. For administrative purposes, this kind of question can remove the need to utilize classroom time for checking attendance. Quizzes may also be used to provide language input, teach content, or elicit information from students. And they may provide practice in scaffolded language production.

Figure 4 shows an example of a traditional online test item. This may effectively assess the student’s language knowledge. However, it is unlikely to facilitate language acquisition. In order to answer the question, students are likely to read the sentence in their heads four times, replacing the blank with each answer in turn. Where one answer is grammatically correct and the other three are incorrect, this will lead to students being exposed to three times more bad English than good English, which is bad news if any kind of input hypothesis is correct.

In this example, students may discern the correct answer purely from observing the form and applying grammatical rules. Krashen’s comprehensible input hypothesis (2003) suggests acquisition takes place where content is understood; if students are ignoring the content no acquisition will take place.

<p>Male lions are also guilty of what (4) _____ not very kingly behaviour.</p> <p>A. would we probably call</p> <p>B. we would probably call</p> <p>C. we would probably call it</p> <p>D. would we probably called</p>

Figure 4. Quiz as test (cited in Chapelle and Douglas, 2006, p. 50)

Figure 5 shows an example of the quiz function being used in a communicative way to find students' opinions. After students completed this question, the teacher was able to see what students thought about the issue, and relay this information to the class. In other words quizzes can be used for communication in which the computer is asking a question to which it requires an authentic answer, rather than the often inauthentic situation of a test in which the questioner knows the answer while the respondent often does not. Such items will not test students proficiency as there is no way of telling whether students answered correctly. They may provide motivation and give an opportunity for meaningful communication between the teacher and student through the medium of the computer, and perhaps from there to the rest of the class. When used for assessment, every answer is given the same score, and students receive full credit for completing the question. This kind of assessment is measuring effort to interact rather than product knowledge, and encourages a process approach to learning, that includes exposure to comprehensible input.

<p>What do you think about the media's coverage of climate change? Is it accurate? Choose one answer.</p> <ul style="list-style-type: none">A. Everything in the media about climate change is completely true.B. Most things in the media about climate change are true.C. The coverage of climate change in the media contains some mistakes.D. The coverage of climate change in the media contains many mistakes.E. The media always get everything about climate change completely wrong.
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Figure 5. A communicative quiz item.

As the purpose of our quizzes is to communicate or instruct, rather than test students, we have taken great care when creating quizzes, especially with regard to backwash. We have tried to make quizzes provide both a learning experience in themselves, and guide students towards practices that will benefit their learning. While avoiding activities that might expose students to incorrect English, we use Moodle in several ways to facilitate language acquisition through task-based learning.

3.1 Item types in quizzes

Moodle offers a variety of item types in quizzes, including multiple choice, matching questions, short answers and cloze. There are many different settings for each quiz that allow flexibility in the way they are used.

Multiple-choice questions lend themselves to the online medium as they are quick for students to answer, and it is easy to collate data from them. Moodle allows us to facilitate process learning by setting up multiple correct answers. Alternative answers can be accommodated, or items can be graded so that partially correct answers get half marks. As a

result, learners are more likely to consider a range of possible answers.

Matching questions provide an efficient format that can provide pieces of text which students must read in many semantically different but syntactically correct ways to work out the answers. The process of answering the question can therefore provide a lot of comprehensible linguistic input.

In answering matching questions, students must build up sentences themselves, supporting a constructivist view of learning. This is also true of cloze questions, whether multiple choice or requiring students to type words into blanks. Such items provide scaffolding for students to produce accurate language.

Short answer questions will give credit for specified answers. The answer text can use wild cards, allowing credit to be given for answers containing key words. Because of the complexity of grammar, computers are still unable to check whether grammar is correct.

When compiling tests, the opportunities for cheating can be reduced by randomising functions, including the possibility of creating a pool of questions from which each student will be given a different selection. In a traditional test, this will prevent students from telling each other “the answer to question 3 is ‘b’”.

Moodle tests can be set so that students can retake them if they get low scores, but students can also receive a penalty each time they retake the test, maintaining differentiation between stronger and weaker students while still allowing everyone to get the correct answer and benefit from the test as a learning experience. If communication is the goal, rather than penalising students for helping each other and discussing questions and answers, the discussion may become the primary objective. The quiz becomes a part of the activity, which can easily be assessed, although the score on the test can only be seen as an indicator of performance, often telling us little more than whether the student took the quiz or not.

Another approach we have tried with the quiz function is to set up quizzes that groups of students must make and their peers can then take. This requires explicit teaching of some basic principles of test making, as well as instruction in how to use Moodle’s test making function. Pedagogically it has many benefits, requiring a range of cognitive processes and consideration of linguistic features from different perspectives. Seeing tests from the inside out is likely to help students’ test-taking technique, which may be of benefit in formal examinations whether within the university or in external tests.

4. Forums

Forums provide another powerful and flexible tool that can promote the negotiation of meaning, and foster comprehensible input. A forum will allow students to post messages that can be seen by other students as well as by the teacher. As students can reply to messages, forums can easily generate communication between students, and the negotiation of input. If the instruction and model are in the target language, and because the forum is visible to

teachers, students write in the target language. Many teachers find it very difficult to encourage students to stay in the target language during in-class spoken activities although it becomes very easy within Moodle.

Moodle allows four different types of forum. A single simple forum contains a single thread to which each student can answer. “Each person posts one discussion” means that there is a thread for each student in the class. Other students and the teacher can then read and may respond to what each student has posted. A Q and A forum means that students can only read other posts after writing one. This may be useful if the teacher wants students to work independently and submit their own work before seeing that of other students. In many cases teachers may want exactly the opposite so that weaker students can benefit from the examples of the stronger students, who are likely to post more quickly. A standard forum for general use provides no restrictions so each student can start any number of threads.

One feature of Moodle forums is that students’ posts can only be edited within thirty minutes of posting. This may be seen as a disadvantage as students are unable to go back to correct work; however, if the forums are seen as part of a process or as practice, there is no need to correct previous posts and indeed it is useful to preserve samples of students writing at different points throughout the course for possible comparison either by teachers or students themselves. For assessment, this may provide a larger sample of work than a single essay which may have been plagiarised.

Forums can stand alone as activities or play a part within a project. For example, a self-introduction forum allows students to write about themselves and read about their peers (see fig. 4) or a forum may address a single topic and require each student to answer (see fig. 5). A topic-choosing forum can force each student to choose a topic that is different to all other students. This may become the basis of students’ individual work, or may provide a wide range of choices from which each group of students may choose a topic. Choosing topics is a critical step in a project because it is important that students work with content and themes that are interesting, relevant and not too difficult.

4.1 Practical considerations in forums

When instructing students to use forums, we have found it important to teach the writing of titles as each post consists of a title and a message. Unless specifically taught otherwise, if students are instructed to write a post about their topic, the title of each post will be “My topic”. The most successful approach is for the teacher to post a model first, or to check the first few posts added to a forum as other students are likely to copy their format.

Within Moodle, it is also possible to set whether other students subscribe to each forum. Every post to the forum will be emailed to the subscribers. There are four settings for subscriptions, answering the question “Force everyone to be subscribed?”: “Yes, Permanently” may be appropriate with a news forum; “Yes” will send emails, but allow students to stop

them; “No” will not send emails, but allow students to subscribe; and “subscriptions not allowed” will never send any emails. In a class of 30 students, a forum requiring each student to reply to five peers will generate 150 posts. To avoid overloading students’ in boxes with emails that they may not want, we usually set forums that cannot be subscribed to. Teachers may also see this as an opportunity to teach digital literacy and internet etiquette to students, if there is time.

eALPS 2.0 総合英語(A)/前期/月曜・3時限 水曜・3時限

ホーム > 総合英語(A)/前期/月曜・3時限 水曜・3時限 > Forums > Self Introductions > Hello!!

Display replies in nested form | Move this discussion to ... | Search forums

Hello!!
by 総合英語(A) 前期/月曜・3時限 水曜・3時限 - Sunday, 19 April 2009, 06:19 pm

Hello. My name is [Nana Ohtsuga](#).

I'm a boy of 18. I like baseball. I greatly enjoyed looking at WBC. It took us a long time to calm down after the excitement.

Not to change the subject, but what do you think about an environmental problem?

The world's rainforests are rapidly being cut down for their lumber and burned to make room for housing, farming, and pastures. Burning these forests releases the greenhouse gas carbon dioxide. This gas can contribute to global warming. Many kinds of wildlife have also begun to disappear owing to the loss of the forests in which they once made their homes. We must do what we can to preserve the rainforests that still remain. I want to solve the environment a little.

Very glad to meet you.

[Edit](#) | [Delete](#) | [Reply](#)

Count of ratings: 1 (grade: 1 / 5) | 4 / 5

Re: Hello!!
by 総合英語(A) 前期/月曜・3時限 水曜・3時限 - Monday, 20 April 2009, 02:39 am

Hi! I'm [Kazuhiko](#).

Your opinion is excellent!!

I think my life is too BAD for an environment. I often go to university with a light on.

I will change my life!

Thank you!

[Show parent](#) | [Edit](#) | [Split](#) | [Delete](#) | [Reply](#)

Count of ratings: 1 (grade: 1 / 5) | 4 / 5

Re: Hello!!
by 総合英語(A) 前期/月曜・3時限 水曜・3時限 - Tuesday, 21 April 2009, 12:26 am

Hello!! I'm [Jurach Fujimori](#).

I assent your opinion.

I like baseball, too. But I like "seeing baseball".

Do you get used to living at Shunshu University?

[Show parent](#) | [Edit](#) | [Split](#) | [Delete](#) | [Reply](#)

Count of ratings: 1 (grade: 1 / 5) | 4 / 5

Hello!!
by 総合英語(A) 前期/月曜・3時限 水曜・3時限 - Wednesday, 22 April 2009, 05:39 pm

I'm interested in the serious problem, but it is difficult for me to write my long opinion.

Let's talk about it over lunch!

See you.

[Show parent](#) | [Edit](#) | [Split](#) | [Delete](#) | [Reply](#)

Count of ratings: 1 (grade: 1 / 5) | 4 / 5

Re: Hello!!
by 総合英語(A) 前期/月曜・3時限 水曜・3時限 - Friday, 24 April 2009, 02:21 am

Hi [Nana](#) (^v^)

You are so clever than I thought!!

I notice that I have to learn environment more.

At the beginning, I'm going to try to classify garbage.

From enka

[Show parent](#) | [Edit](#) | [Split](#) | [Delete](#) | [Reply](#)

Count of ratings: 1 (grade: 1 / 5) | 4 / 5

Re: Hello!!
by 総合英語(A) 前期/月曜・3時限 水曜・3時限 - Friday, 24 April 2009, 11:31 pm

Hi, [Nana](#)☆

I watched WBC, too.

It's very exciting game!!

I love ICHIRO!

[Show parent](#) | [Edit](#) | [Split](#) | [Delete](#) | [Reply](#)

Count of ratings: 1 (grade: 1 / 5) | 4 / 5

[Send in my latest ratings](#)

[Moodle Docs for this page](#)

You are logged in as BRIERLEY MARK ALAN (Logout) | [Logout](#)

総合英語(A)/前期/月曜・3時限 水曜・3時限

Figure 4. Self-introduction forum.

eALPS 2.0 英語會話I(B)/前期/水曜・4時限

ホーム ▶ 英語會話I(B)/前期/水曜・4時限 ▶ Forums ▶ Why study English? Update this Forum

Display replies in nested form

Subscriptions not allowed
Don't track unread posts

Why study English?
by BRIERLEY MARK ALAN - Wednesday, 3 June 2009, 08:57 am

Why should you study English? Please give one reason. Make sure your reason is different to all the other reasons. Click "Reply".

[Edit](#) | [Delete](#) | [Reply](#)

Re: Why study English?
by [User] - Friday, 22 May 2009, 12:52 pm

Because another language can make our brains work and we can improve ourselves.

[Show parent](#) | [Edit](#) | [Delete](#) | [Reply](#)

Maximum rating: 5 / 5

Re: Why study English?
by [User] - Saturday, 23 May 2009, 07:58 am

Because we can read the books, the newspapers, the articles, and so on in English. It's very meaningful.

[Show parent](#) | [Edit](#) | [Delete](#) | [Reply](#)

Maximum rating: 5 / 5

Re: Why study English?
by [User] - Wednesday, 27 May 2009, 04:07 pm

Because I think English is a useful tool to communicate with people around the world.

[Show parent](#) | [Edit](#) | [Delete](#) | [Reply](#)

Maximum rating: 5 / 5

Re: Why study English?
by [User] - Sunday, 24 May 2009, 01:59 pm

Because English is an international language.

[Show parent](#) | [Edit](#) | [Delete](#) | [Reply](#)

Maximum rating: 5 / 5

Re: Why study English?
by BRIERLEY MARK ALAN - Wednesday, 3 June 2009, 08:55 am

Is this the same answer as [User]'s?

[Show parent](#) | [Edit](#) | [Delete](#) | [Reply](#)

Re: Why study English?
by [User] - Monday, 25 May 2009, 07:15 pm

Because English is interesting.

[Show parent](#) | [Edit](#) | [Delete](#) | [Reply](#)

Maximum rating: 5 / 5

Re: Why study English?
by [User] - Tuesday, 26 May 2009, 07:50 pm

Because I can understand a word of English origin easy.

[Show parent](#) | [Edit](#) | [Delete](#) | [Reply](#)

Maximum rating: 5 / 5

Figure 5. Why study English?

4.2 Forum Assessment

Forum assessment can be set in several different ways in Moodle. "Count of ratings" will give points depending on how many posts a student makes. "Sum of ratings" will add up the score for each post. It is also possible to set the score as the average of ratings, highest rating or lowest rating. Ideally teachers may want some combination of these strategies so that both the quantity and quality of students' work can be taken into consideration. As there is generally a

correlation between the amount that a student writes and the quantity of writing, a function that adds up the total number of words in all of a student's posts would be useful.

Another Moodle function that we have used to assess students' work is a list of every post that a student has added to every forum in the course. This can be found by following the "forum posts" tab in a student's profile (found by clicking on a student's name). This provides a body of writing that can be assessed at the end of the course either quantitatively or qualitatively, on the basis of content or linguistic features.

There is a real concern about the accuracy of students' writing. The use of computers and related writing activities are often seen as resulting in a "dumbing down" of language. Many teachers perceive their role as correcting students' output, and some students may also see this as the teacher's job. Increasing the amount of output may therefore increase their workload. If we could choose between our students writing long, structured paragraphs in essays or short, blog-style fragments, we would likely choose essays. However, the choice may be between short, blog-style fragments and nothing. If the purpose of writing is to develop fluency, then clearly we want our students to write as much as possible.

Another positive light in which blog-style writing can be seen is as an intermediate language between speech and writing, through the use of which students may become more proficient at speaking. While many teachers struggle to keep their students in the target language while speaking in class, students all use the target language when writing in forums. In terms of motivation and affect, communicating in a free and uncensored way is likely to nurture students' ownership of English as their own language in which they can communicate their own ideas, rather than the language of a foreign power or of an examination board.

5. Wikis

Wikis provide another versatile activity through which students can work together online. While forums clearly indicate who has written what, wikis can be added to and edited by any users creating a collaborative work. New pages can easily be created within wikis, simply by adding square brackets around a word when editing a page, and pages may be easily linked to each other. Figure 5 shows a wiki about an environmental issue. Within the class, each group chose a different topic, and added links to other pages written about their own topic or others. Links can also be provided to external sources, and pictures, video and audio can be embedded.

Wiki assessment is not automatic. However, wiki logs can be retrieved to find how many times each student accessed or edited each part of the wiki. This tells us how often the students worked on the wiki, although it is more difficult to find exactly what each student did. As wikis are collaborative form of writing, it may be appropriate to allocate a part of the wiki to each group, however students may be more productive when each person, rather than each group, becomes accountable for a particular page or area.

Figure 6 shows a wiki used in the research and prewriting of an essay on global problems and solutions. Each student wrote about different topics, but all were encouraged to find connections between their problems and those of other students in the group. In this example, about acid rain, links can be seen to other students' pages on fossil fuels, global warming, water pollution and air pollutions (sic).

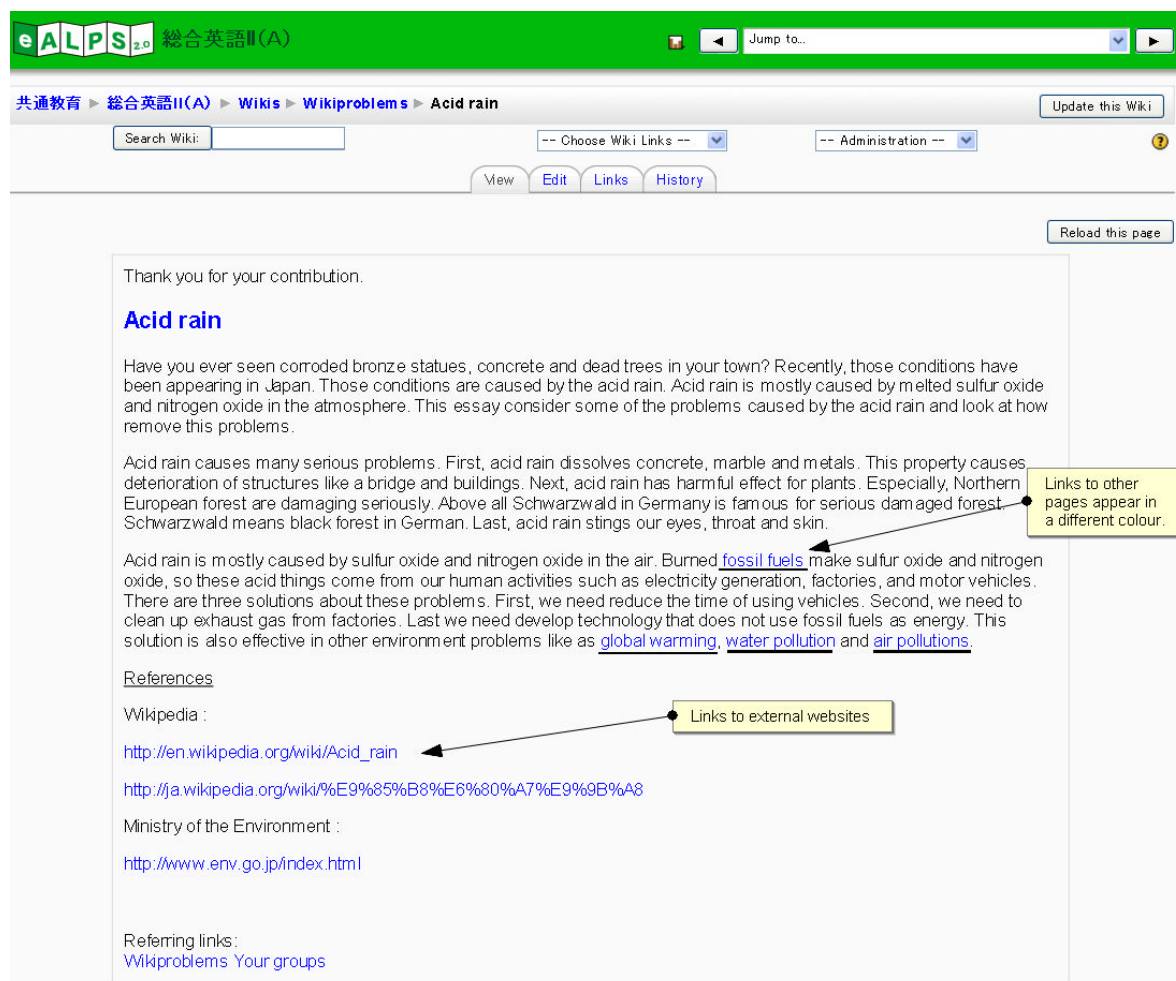


Figure 6. A wiki entry on acid rain, showing links to other pages within the wiki and to external websites.

6. Submitting files

A classical Moodle function is file submission, referred to in Blackboard as the “digital drop box”. The advantages over a conventional drop box are that students can submit papers while still keeping copies of them for future editing, and teachers can return the papers with feedback while still keeping copies of them. Most teachers currently prefer working on paper to working on a computer, although reading is increasingly shifting from the page to the screen. Adding comments to digital work can be done in several applications, for example Adobe Acrobat. Microsoft Word also has an editing function that records changes. Using

external software entails downloading files, opening them in other applications, adding comments or edits, then uploading the edited file or sending it back to the student. Several methods of editing or adding annotations to files within the browser are now emerging, for example Google docs, and paper-free approaches are likely to become easier to use and more powerful.

In one classroom implementation, after writing on the wiki, students were required to produce a problem-solution essay on the same subject, reformatting and augmenting the same information. For the students, the submit file dialogue appears as in figure 7. The teacher can see, download, comment upon and grade the students' work as in figure 8.



Figure 7. A student's view of a file submit activity.

7. Practical considerations for using eAlps in class

If eALPS is to be used in a class, we have found it best to start using it from the first lesson to establish a routine among students of going online after each lesson. Many teachers give details of homework and a summary of each class online to support in-class instructions. Some (e.g. Swanson, 2009) go further by only posting the homework online so that students must log on to find out what they must do.

The ideal place to introduce students to online sites, procedures or materials is in a computer room where each student can log on and take the first steps in the teacher's presence. Teachers are likely to encounter problems with students who have forgotten passwords in this case. If access to computer rooms is limited and time is short, a slightly less effective method is to show students what to do and where to go using a projector connected to a computer in the classroom. Student volunteers can be called upon to log in in front of their peers. Online

demonstrations in classrooms are prone to several possible problems although with experience, problems decrease and familiarity with the various contingencies increases. Handouts detailing the steps students must take to log in are also effective. And even writing the URL on the board and giving a verbal instruction to go to that site should result in students logging in. In cases where students' first access is outside the classroom, if they have any problems they will be tempted to contact other students or the university's support systems, so what was the teacher's problem in a computer room becomes the student's problem or the institution's problem.

We have found it helpful to tell students that their grade depends on their online activity, and some teachers require students to sign to show that they understand this. In terms of assessment, using online activities can generate a wealth of assessable material from students. This may be sampled for quality, students may be credited for the quantity of their work, or some combination of the quality and quantity of students' output can be used to calculate a grade. Moodle has advanced grade aggregating functions which can automatically categorise and weight each assessable item. If many grading items are to be used, grading becomes smoother when grading categories are set up from the beginning of the semester, and each item is added to the appropriate category as it comes up. Depending on the settings, students may be able to see their grades, which can give them a sense of how well they are doing throughout the course.

The screenshot shows a Moodle interface for a course named '総合英語II(A)'. The breadcrumb trail is: 共通教育 > 総合英語II(A) > Assignments > Your problem and solution essay > Submissions. At the top right, there is a 'Jump to...' search box. Below the breadcrumb, there are three buttons: 'Download feedback', 'Upload feedback', and 'Save all feedback'. Below these buttons, there are two rows of user selection links: 'User ID: All ABCDEFGHIJKLMNOPQRSTUVWXYZ' and 'Name: All ABCDEFGHIJKLMNOPQRSTUVWXYZ'. The main content is a table of submissions with the following columns: 'User ID / Name', 'Grade', 'Comment', and 'Last modified (学生)'. The table contains eight rows of data, each representing a student's submission with a grade and a comment from the teacher.

User ID / Name	Grade	Comment	Last modified (学生)
[User ID]	10 / 10	This is a serious problem and you have written about	Acid_rain.docx Tuesday, 6 January 2009, 12:13 am
[User ID]	9 / 10	Good job! You have written well about a serious topic. I	Have_you_ever_seen_a_life_of_refugee_camp.docx Monday, 26 January 2009, 05:13 am
[User ID]	8 / 10	Thanks for your suggestions of groups!	Wernher_von_Braun.docx Sunday, 1 February 2009, 03:58 am
[User ID]	8 / 10	You did a lot of research for this. Most of it is well	Water_pollution.docx Wednesday, 28 January 2009, 01:50 pm
[User ID]	8 / 10	I think the lack of fossil fuel will be a serious problem	Lack_of_fossil_fuel.doc Wednesday, 14 January 2009, 07:01 pm
[User ID]	8 / 10	You have written many things about earthquakes. This	english_speech_about_earthquake.docx Sunday, 4 January 2009, 11:09 pm
[User ID]	8 / 10	This is a serious problem, which you explain well. What	Heat_island_effect.docx Monday, 5 January 2009, 03:30 am

Figure 8. Teacher's page of submitted files, including messages from teacher to students.

8. Discussion

We must briefly note some arguments against CALL in general and some of the models of CALL in particular. Among these are technocentrism, the digital divide between those who own or do not own computers, and teachers' workload. Sergeant raises the issue that in many online curricula teachers must engage in "electronic baby sitting" instead of teaching their subjects (2001). He cites the tendency of using pre-packaged software programs as one factor with negative consequences.

While the ubiquity of computers is evidence of their ability to make work more efficient, there is certainly a learning curve and in the early days of adopting new technology, it usually takes more time to complete a task with computers than with established systems and practices. If we are to base student grades on their online activity, we must be sure that we are not simply testing whether students enjoy working on computers.

These disadvantages seem to be outweighed by possible advantages in terms of the quantity of output and both the quality and quantity of input, particularly if online assignments are given out of class. Meaningful out-of-class activities involve real communication with peers, motivated by goal-oriented tasks as defined by Pica et al (1993). Communication that takes place online will be clearly in the target language, and the tasks will promote a negotiation and discussion of input. Online activities can thus extend opportunities for developing input comprehensibility. This compares favourably with the "penicillin effect" that some teachers observe during classroom speaking sessions where only students in the immediate vicinity of the teacher speak in the target language while the rest of the class, out of earshot, revert to their L1.

Because students are engaging with the content between classes, opportunities to negotiate the language input will increase. As the time in class is extremely limited this is an important advantage. Creating opportunities for task-based activities online, such as choosing topics or peer assessment, can increase the time for activities that ordinarily take place in class, such as listening to the teacher and speaking to other students.

Online activities provide a permanent record of students' work, which can be referred back to by students themselves, or used by teachers. A large number and a wide variety of pieces of work can be used for assessment, by a combination of sampling for qualitative, product-based assessment. and aggregating for quantitative, process-based assessment.

While teaching in a computer room opens up many possibilities, assigning online homework activities means that students must work out technical problems themselves. In the computer room, any problems that occur become the teacher's problem; outside the computer room they are opportunities for students to solve problems in autonomous learning settings. In the ideal classroom, computers are available but not intrusive as in Kanda University's Blended Learning Spaces (MacKenzie et al., 2009).

9. Conclusion

The increasing use of computers for communication and entertainment are compatible with a communicative approach to language learning. This corresponds to theoretical frameworks such as the comprehensible input hypothesis. The Moodle platform offers many opportunities for students to learn through interaction, particularly in the use of forums and wikis, and in the imaginative implementation of quizzes.

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18/ Jan. / 2010 Received 8/ Feb. / 2010 Accepted