The use of collaborative Web page-design projects for teaching EFL, with a focus on Japanese university students

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Introduction

The relatively new area of Computer Assisted Language learning (CALL) is now regarded to be in its third phase of development (Trotman, 2000) which is characterised by the dominance of the Internet, and in particular the World Wide Web (WWW or Web.). Whereas in the early 1980s, CALL consisted almost entirely of relatively simple grammar or text-reconstruction programmes, and by the late 1980s, there was the emergence of "multimedia", which allowed for the more interactive use of sound, text, and images. Finally, it has been during the '90s that the third phase emerged with the phenomenal growth of the Internet.

Over the past ten years, using the Internet as an EFL tool has received much attention that is evidenced by the plethora of articles that are dedicated to this growing area of teaching (e.g. Fox 1998, Garner & Gillingham 1996, Motteram 1997).

As a useful summary, Grey (1999) identifies four ways that the Internet may be utilised in the class:

1. Search for and receive: Activities that involve researching from the information held on the Web
2. Publish and provide: When students create their material for the Web.
3. Talk to and reply: Activities using e-mail, virtual chat rooms (MOOs, etc).
4. Collaborate and learn: When students, ideally from different classes or even different countries, work together on a joint project.

Although this paper will mainly focus on the second category, the various issues and activities that will be covered will also involve the other three categories. Particular areas for attention will include aspects of authenticity, motivation, task-based learning, and collaborating learning.

While considering what web page-design activities may involve, the paper will look at how the various facets of such work can be applied to the ELT classroom together with the benefits, and the possible obstacles, of doing so. The paper will relate the main points to the experiences of a project that was carried out with Japanese university students.

Finally, data collected from a questionnaire given to the students after they had completed their projects will be considered and then used to form a conclusion.

What a collaborative Web page-design project can involve

The main goal is to provide the students with a significant task that requires meaningful communication through collaboration, either inside or outside the classroom. In the context of language teaching, a task is:

'   Any classroom work which involves learners in comprehending, manipulating, producing or interacting in the target language while their attention is primarily focused on meaning rather than form'(Nunan, 1993:59)

As we shall see in this paper, in addition to Web page-design skills, good tasks have the potential to encapsulate the use and development of many other skills such as E-mailing, browsing, and creative design. However, because of the technical aspect of this kind of project work, students must be given adequate training and experience in using the Internet. As Trokeloshvilli & Jost (1997), among others, point out, computer competence may be regarded as the single most important aspect of a web-integrated class.

In most cases teachers should assume minimally or even no experience of the Internet among the students and progressively take them through a number of tasks that teach them basic Web orientation and navigation skills, and how to use E-mail. If this stage is neglected, students will soon find the main tasks that follow too difficult, and overwhelming. Therefore, as Fox (1998) comments, teacher support is essential.

Adequate teacher training in computer skills is equally important if they are to provide additional support (as compared to non-CALL language classes) students will need to overcome the technical problems that will inevitably occur. At my university, in addition to trained teachers, assistants are provided to help with the support of the CALL classes.

In the planning stage of any project, it is also important to consider the contact hours and facilities that are available when deciding on the type and level of support.

Once the students are familiar with the rudimentary skills of using the Web, they can be introduced to the basics of using web page editors. These are software programmes used to make basic web pages and which are often provided free (e.g. Netscape Composer, FrontPage). Because most of the functions are similar to those found on word processing software packages, they are very user-friendly and therefore, relatively easy and fun to use.

For the more able and ambitious students (and teachers), an alternative is to use HTML (Hypertext Mark-up Language), the actual computer language that most web pages are based on. The advantages are that it gives the user a better understanding of how a web page works and allows greater control over how the web page looks. In addition, pages are written directly in HTML typically use fewer HTML codes, and so load more quickly. This may become an important factor if you are planning to publish a sizeable web site.

Fortunately, for the less technically enthused students (and teachers) the advantages of learning and using HTML codes are likely to become less distinct as web page editing software continues to improve.

If the stages above are adequately covered, students should then be ready to carry out a web page-designing task, either individually or collaboratively. The following are a number of useful steps adapted from work by Muehleisen (1997), which can be used to help structure project tasks successfully.

1. Decide whether students are to work individually or in groups and if the latter, what size the groups should be.

2. Decide a topic; related either to classwork or the students' own interests. As Breen (1987) points out, for successful tasks, it is important to have a clear objective and a range of possible outcomes. At this stage, decisions on the format of the pages are also important and will depend on factors such as students' English level (lower levels using more graphics, and less text), and computer experience.
3. Decide on the target audience: e.g. for other students or groups in their school or University, people outside the country they are in, or for people with general or special interests?
4. Look for related pages. This will give the teacher an idea of how much support and guidance the students are likely to need researching their topic.
5. Get the students to focus on Web page design. This can be done through tasks that involve browsing and evaluating a variety of pages which could include pages published by other students. For example, at http://www.kyoto-su.ac.jp/ information/famous/ there are the Famous Personages in Japan site made by students of Sangyo University. Examples of other awareness-building activities can be seen in appendix I. The Basic requirements of a good web page are that it is useful, interesting or fun, easy to use (uncluttered and easy to navigate), and fast to download.

Finally, with these points in mind, it is also important not to neglect the more fundamental pedagogic ideas. In this context, the teacher should ensure that any project, rather than an appendage, is an integral part of the syllabus (Fox, 1998).

Advantages and disadvantages for the EFL classroom

An in-depth article that considers the theoretical implications of computer-mediated collaborative language learning, Warschauer (1997) points out that, rather than research studies, most work in this area is based on teachers' evaluations. Because this is true for most of the work that follows, it should be regarded with some caution. Although such evaluations are valuable, much still needs to be learnt about using computers in the classroom and their relative effectiveness at helping to develop students' communicative skills.

Many writers advocate the use of the Internet for EFL because of the inherent authenticity of its use. The Web offers authentic information (e.g. current news and weather, prices of goods, travel timetables) which can be used for collaborative ELT tasks, and by offering a diverse and almost limitless source of authentic texts that cover a wide range of topics, it also has great potential for content-based materials.

As Singhal (1997) observes, the Internet allows students to use English in an "authentic setting" and "promotes literacy for authentic purposes". Although a task is inevitably contrived, if collaboration is needed to complete it, then genuine communication will take place. Ideally, if collaboration is between students from different classes or even different countries then the use of E-mail will necessitate an authentic use of communicative skills. In addition, and as with web-based publishing, the students are provided with a 'real audience' (Bicknell, 1997) which is often recognised as a successful technique to motivate students with their writing.

Many claims are also made about the motivational aspects of using the Internet. Lee (2000), for example, while considering the motivational aspects of tasks that involve

the Internet, describes creating and publishing web pages as a task that is "one of the most potentially valuable and energising" (Lee, 2000)

Muehleisen (1997) is more specific and points to the 'intrinsic' (Harmer, 1991) motivation which comes from wanting to be part of the Internet 'boom', and from the realisation that the skills learnt will become useful, if not essential, in the future.

The experimental and goal-orientated nature of such collaborative projects involves tasks such as deciding with a partner where to place a picture on a page being constructed, or browsing, which requires active choices of where to search next. These are claimed to help promote higher-order thinking skills (Mike, 1996), which include reviewing, scanning, selecting and negotiating, and particularly important for EFL students doing further studies in other disciplines, research, and rhetorical skills that may be developed.

Furthermore, Warschauer (1997) points out that these skills encompass 'situated learning': that which allows students:

"to carry out meaningful tasks, and solve meaningful problems, in an environment that reflects their interests as well as the multiple purposes to which their knowledge will be put in the future" (Collins, Brown, & Newman, 1989:487)

Indeed, to design and publish web pages, students can actively make use of new technologies, skills, and knowledge. Warschauer (1997) also acknowledges this and highlights the view of Cummins & Sayer's (1990; 1995) that many skills, in particular, those which are involved in collaboratively accessing and interpreting world-wide information, and with peoples from different cultures, will be critical for success in the 21st century.

The Internet has become an ideal medium for EFL students to easily present creative works, and, in the form of research projects, motivates them to extend their knowledge and demonstrate their understanding of class topics. Whereas the Internet was once exclusively for the technically 'elite', the range of freeware now available is making the relatively sophisticated 'creative' use of the Internet possible for everyone with the necessary hardware. As mentioned earlier, free page editing software is becoming increasingly powerful and user-friendly, and this reduces the need for students to learn the more complicated HTML machine code.

Web Whacker,(at http://www.bluesquirrel.com/products/whacker/whacker.html) which allows the user to download external web sites for local access and browsing, is another software programme that can offer many applications for Internet support and training.

Publishing work is also becoming cheaper and easier with, for example, sites such as http://www.geocities.com, and http://www.freecitywebpages.com/ that offer free services for posting web sites.

Using E-mail as part of a project can also provide important benefits for the students. Because it can facilitate asynchronous (rather than synchronous) online collaboration, it has been shown in a study by Wang (1993) to allow more reflection and analysis. This can help minimise 'communicative stress', which Brown & Yule (1983:34) lists as a major factor for creating optimum communicative learning conditions. A further benefit associated with online communication is that it can expand the students' ability to communicate in the target language beyond class times.

All these points commonly demonstrate the nature of Internet-based material to be task-based and therefore, essentially learner-centered and interactive. However, there are

some important obstacles, which if not accounted for, may seriously limit the benefits that have been highlighted.

Despite the huge potential, the information on the Internet can offer, it is not provided without its problems. Ironically, the freedom and ease of using and contributing to the Internet, and shown earlier to provide important benefits, is also the cause of one of the Internet's most serious limitations. The current freedom of expression, combined with very limited accountability, means that there is no means to validate the information available. In addition, the accessing of information, can itself, be difficult because search tools are still relatively crude, Web pages and links are unpredictable and unstable, and technical support is invariably limited.

To minimise these problems, teachers should, therefore, develop the skills and knowledge so that they can provide some technical support themselves. This also applies to the continuous inflow of new jargon, which may include technical terms, acronyms, and abbreviations, which both teachers and students will need to deal with.

Teachers will need to consider the students' technical skills and experience, which may cause an otherwise carefully streamed language class, to become divided in terms of the overall abilities of the students. While it is important to ensure that tasks make it necessary for the weaker learners to practise and learn the technical skills, to help compensate for the differences in abilities, the teacher should try and group the students in a way that encourages peer support so that weaker students do not get left out, and fall behind in the tasks.

The amount of time students have to use computers, either inside or outside the class, is also important. If a student is expected to complete a Web-design project successfully, they will have needed a certain amount of time using the Internet. Many of the activities, once demonstrated, will, therefore, need to be practised to be properly learned.

Finally, although the Internet itself may appear free, the cost of supplying the necessary hardware to access it, and the telephone and provider charges, all need to be considered and may become a limiting factor in the providing adequate availability of services.

A Web-design project at a Japanese university

Background

This project was carried with four CALL classes at a Japanese university. All the students were first-years doing their second term of the course. All the classes were compulsory, and therefore, had larger student numbers and a fixed syllabus. This type of class aims to teach students, through the medium of English, the basics of using computers. At the same time, computers are used as a tool to provide opportunities and motivation for students to improve their English skills. Each class is run by an English speaking teacher (either a native English speaker or Japanese), and a student assistant, who has had training in all the workings of the classroom computer facilities. The term's course is 14 weeks long and meets once a week for 90 minutes.

In the first term, students had become familiar with file management skills, text editing, and formatting, E-mail, browsing the Internet, book-marking, and copying and

using pictures and photographs from the Internet. This ensured they all had reached a level of computer literacy that would allow them to carry out a Web-design project.

At the beginning of the second term, the students were introduced to the freeware web page editor, Netscape Composer. This was chosen simply because Netscape is the browser used by the university computers. The different functions they would need were introduced one at a time, by demonstrations that were relayed to each student's monitor. The students were instructed to watch, take notes, and then practise each skill in turn, to minimise the input load and ensure that the students were able to fully understand the necessary functions of Composer. In order, the functions included; text formatting, selecting suitable backgrounds (including downloaded patterns and colours of their choice), using tables, and finally, creating links. This was spread over two classes to ensure that weaker students were able to keep up, and students that may have been absent, the chance to catch up.

In preparation for the project, the students were put into groups of 4 or 5. However, because the classes were monolingual, the potential for L2 communication within the class was limited, with students naturally reverting to their L1. This is particularly true for university classes where the intrinsic motivation will often be lower than with fee-paying private language classes. Furthermore, because the sizes of university classes are often large, monitoring students can be more difficult.

To encourage more collaboration in English, groups were made up of students from two different classes, with E-mail as their only means of communication. For additional 'encouragement' to use English, they were told to keep a record of all e-mail messages for review.

To get students thinking about what makes a good web page design, and the points the teacher would be considering while grading the assignments a few matching tasks (appendix I) were then given.

Finally, details (Appendix II) of the main project task, which would last 6 weeks, were handed out and explained. The aim of the project was for the students to produce a collaborative web site that introduces each member of the group, and presents their research on a topic of their choice, but from the book 'Introductory Topics'(Sophia & Frazier, 1994). This was chosen because it gave the students the chance to work on a topic that they had recently covered. The same book was being used in another English course that runs concurrently with the CALL course.

For feedback, a questionnaire (appendix III) was given out after the projects had been completed. Because of the large class sizes, in addition to observations in the classes, I felt that a questionnaire was the most feasible method of getting the students' general thoughts towards the project.

Observations

Introducing the students to the workings of Composer was relatively straightforward because of the structured way in which it was done. The students seemed to do well, because the tasks, by being structured, closely resembled what most students would have already experienced at the schools in Japan, which largely, still maintain the traditional teacher-student roles whereby the students passively receive and learn streams of information.

However, this may also have contributed to a lack of organisation and initiative shown by the students towards working with group members, particularly those from another class. This became a significant problem that caused many delays with, for example, students passively waiting for replies, rather than getting on with other tasks, or sending further messages explaining contingency plans should they not receive a quick reply.

The input for the students which focused on design issues, and was based on the discovery technique, did not work well. Students' answers indicated that they had not made an effort to think about the questions, or were not able to grasp the meanings as well as I had anticipated.

Although the students used English throughout the project, this was mostly limited to E-mails, browsing the Internet, writing the text for their web pages, or asking me questions. Most verbal interaction between the students was, however, in Japanese. Furthermore, although students had been instructed to use English based sites, on more than a few occasions, they were found to be browsing Japanese sites. Despite the earlier positive comments about the motivational aspects of using the Internet, this suggests a lack of general motivation towards English which many university students often demonstrate, particularly when the classes are compulsory.

Despite the problems that were encountered, the final results were generally positive. Many of the web sites were well put together and the majority of the students had put in a lot of effort into what they that been doing. Also, as the deadline approached there was a marked increase in collaboration and peer teaching. Although E-mail activity dropped sharply after initial exchanges, it significantly increased during the last few weeks of the project.

Findings

From the classes I was teaching, I received 68 completed questionnaires. The answers were totalled, and then converted into a percentage (see appendix IV for the final figures). However, it should be noted that because some sections allow for more than one answer, the combined percentages might be greater than a hundred.

Answers to the first two parts of the questionnaire show that the majority (65%) of the students sometimes use computers other than for university classes. However, it also confirmed that most students (82%) had never made a web page before. Ideally, these questions should be part of a pre-course needs analysis, but as mentioned earlier, a prudent approach was taken that assumed minimal experience from the students. Although each course should be assessed based on its particular circumstances, for university classes in Japan, it can be difficult to carry out an effective needs analysis with large and non-elective (compulsory) courses.

Questions three, four, and five were designed to see how the students found the tasks. Although the majority of students (51%) only found the tasks "a little difficult", a significant number (41%) said that working with members from another class was "too difficult". From class observations, the main factors for this seemed to be slow or even no replies from their partners, combined with the time constraints of the project. In addition, however, a combined average of 38% thought that working with others was "interesting" and 16%, even "fun".

The remaining questions were again more suitable for an initial needs analysis. However, they were included as part of the post-course feedback I needed for my work towards this paper. The results show that the majority of students had never used HTML (75%), and indeed, had not heard of it (59%). Almost half, however, said they would like to learn how to use it to make more sophisticated web pages. These results need to be clarified before any conclusions about their significance can be made. Possible explanations include a genuine interest in learning HTML, or that they would like to do more work with web pages per se.

Half the students also said that they thought to learn how to make web pages was "useful" or even "very useful", and 43% thought that it "may be useful". These results seem to show the high levels of motivation associated with web-based material.

For the final section, students identified "using English" as the greatest problem during the project, which may reflect the fact that they had not chosen to study English. Because the course is a compulsory part of their majors (mostly business or economics), English is not their specialty and is therefore at a relatively low level. The other significant problems came from difficulties in finding information, and of learning how to use Netscape Composer. The former may be partly due to experience, but also because of difficulties with having to use English.

Concerning collecting feedback, the set nature of the course schedule dictated that the projects run at least up to if not beyond the Christmas period. Consequently, other than the questionnaire, there was little time to collect adequate feedback from the students. Ideally, I would have hoped to find out more details as to why the students answered as they did. Particular areas I would like to have focused on would have been to clarify why they found working with others too difficult, and why the project was interesting for them, and why they would, or would not, like to learn HTML. The additional information could then be used as a basis for designing the next web design project.

Conclusion

The problems that students had working with group members from another class seemed to result from the timing between the different class schedules, and because the students simply were not used to working and collaborating to such a level. For future projects, I will set up the groups and partnerships at the very start of the course, and give minor pre-project collaborative tasks to sensitise the students to collaborative work, and to the sending and replying of messages.

Earlier the advantages of introducing HTML into the class were considered. The feedback questions regarding the use of HTML, were among the most surprising results of this work. If the students who indicated an interest in learning HTML, understood the questionnaire correctly and did want to learn HTML, then the introduction of HTML could be an option for future classes. However, because learning HTML would require a relatively in-depth teaching approach, it may be best suited for small, non-compulsory courses which would allow more adequate levels of tutoring and assistance.

After accounting for the limiting factors of large student numbers and the compulsory nature of the classes, the project was generally successful. The students demonstrated that they had learned a useful skill, and at the same time, had used a relatively high amount of English in one form or another. In addition, the number of

students who said they felt the project was useful indicated that the level of motivation was quite high.

Finally, this motivation, together with the aspects of authenticity that were discussed, strongly suggests that projects which involve the use of the Internet provide the two singularly most important factors for successful communicative EFL materials.

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Appendix I

Designing a good Web page site

Match the following

the first page you enter at a Web site	a Web site
a collection of different Web pages	a connection to another Web page or site
a link	a homepage

Think about if the following sentences are generally true (T) or false (F) and why?

1. Many pictures are always good.
2. Use of basic/simple colours is good.
3. A lot of bold and italics is good.
4. Attractive pages always download fast.
5. It's not good to use many different text colours.
6. Lots of animation can be bad.
7. Titles and Paragraphs should be used.
8. Lines of text should be short (6/7 words)
9. Grey and green colours are friendly.
10. Pages should be very short.
11. Reds are friendly colours.
12. Dark backgrounds are good.

Put the points below into the table

- some pictures
- no copied work
- use of tables & menus
- spelling and grammar checked
- some bold and italics
- e-mail links
- some animation
- a few different font sizes
- links to other pages and sites
- interesting information

A good Web page site is:

useful	easy to use	attractive	professional

Appendix II

Assignment: To make a group Web site.

Finish Date: _____

The Web site should include the following:

- A homepage showing what is at your Web site: Clear titles, index/menu with links to other pages.
- Pages with information about the topic and links to other resources.
- E-mail links to contact each member of the group.

For a good Web site:

- Each page is the same or similar style (background colours & patterns, fonts etc)
- Each page is easy to see and use.
- Pages load quickly (not too many pictures).
- It is easy to read (short lines and paragraphs, not too much bold & italics, and not too many colours or animation.
- Has information that is interesting, not copied, and checked for spelling and grammar.

The assignment

1. E-mail your group members, introduce yourself and together, decide on a topic for this project from your textbook "Selected Topics".
2. Plan your site. Exchange ideas and decide with your partner about the following points:
- Who you want to make a Web page for: other language students, foreigners visiting Japan etc.
- What information you want to give
- How many pages there will be
- What links to and from each page there will be
- What colours, fonts, backgrounds you will use
3. Decide what each group member will be doing and what king of information you will need to look for and write about.

4. Each week, share and exchange your work, information, and ideas with each other, to make your Web site TOGETHER.
5. Save a copy ALL your groups work on your disk, and in S:/iain/group pages/......

Appendix III

Web site design project: Questionnaire

Please read the following and choose the best words to describe your answers or feelings. Note: For questions 4 and 5, you can choose more than one answer.

1. How much do you use a computer other than for university classes?
    a. never
    b. sometimes
    c. a lot
2. Before doing this course had you ever made a Web page
    a. yes
    b. no
3. Learning how to make a Web page was:
    a. easy
    b. a little difficult
    c. difficult
    d. very difficult
4. Working with group members from another class was:
    a. fun
    b. interesting
    c. too much work
    d. too difficult
    e. other _____
5. Working with group members in my class was:
    a. fun
    b. interesting
    c. too much work
    d. too difficult
    e. other _____
6. Do you know what HTML is?
    a. no
    b. may be
    c. yes
7. Have you ever used HTML?
    a. yes
    b. no
8. In the future would you like to learn how to make more sophisticated Web pages by using the computer language HTML?

      a. no, not at all
      b. may be
      c. yes, but only if it isn't too difficult.
      d. yes, definitely

9. For me, I think learning how to make a Web page is:
      a. not at all useful
      b. may be useful
      c. useful
      d. very useful
      e. other _____

10. What was the main problem for you while you were doing the assignments?
      a. slow internet
      b. using e-mail
      c. using English
      d. finding information
      e. understanding the assignment instructions
      f. learning Composer
      g. other _____

Appendix IV

Results (as percentages) from the 68 returned questionnaires that were based on the students' experiences of doing the Web-site design project.

1. How much do you use a computer other than for university classes?
    6% never
    65% sometimes
    29% a lot

2. Before doing this course had you ever made a Web page
    17% yes
    83% no

3. Learning how to make a Web page was:
    9% easy
    51% a little difficult
    22% difficult
    18% very difficult

4. Working with group members from another class was:
    6% fun
    43% interesting
    10% too much work
    41% too difficult
    6% other

5. Working with group members in my class was:

        26% fun

        33% interesting

        10% too much work

        28% too difficult

        3%   other

6. Do you know what HTML is?

        59% no

        22% may be

        19% yes

7. Have you ever used HTML?

        25% yes

        75% no

8. In the future would you like to learn how to make more sophisticated Web pages by using the computer language HTML?

        15% no, not at all

        37% may be

        29% yes, but only if it isn't too difficult.

        19% yes, definitely

9. For me, I think learning how to make a Web page is:

        6%   not at all useful

        43% may be useful

        32% useful

        18% very useful

        1%   other

10. What was the main problem for you while you were doing the assignments?

        16% slow internet

        1%   using e-mail

        49% using English

        34% finding information

        12% understanding the assignment instructions

        19% learning Composer

        3%   other