Internet Research in the EFL Classroom

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Asao (1997, p. 71) lauds use of the Internet in teaching English as "a new paradigm of language learning." The Internet can be used in two ways. It can be used as a research tool to help students locate and synthesize knowledge and also as a means to communicate their findings and ideas to a world-wide audience (see Rule, 1997, p. 77). This paper will briefly describe a research seminar that makes use of the Internet in these two ways and discuss some of the basic issues in (a) teaching Internet research and research writing as a process, (b) designing attractive but simple webpages to display research papers, and (c) managing the online collection of papers.

朝尾(1997)は英語教育にインターネットを使うことを「言語学習の新しい模範」として称賛している。インターネットの使用方法は次のように2通りあります。学生が情報を特定し、総合的に取り扱うのを援助する研究手段としての使用方法と、世界中の読者に調査結果と見解を伝える道具としての使用方法です(参照：ルール1997)。この論文ではこれら2つの方法でインターネットを使用する研究ゼミを簡潔に紹介し、(a)インターネット調査の指導と手順としてのライティング、(b)興味を引きつけるがわかりやすいホームページのデザイン、(c)学生の研究論文を効果的に提示するウェブサイトの管理における基本的な問題点のいくつかを論じます。

For several years I taught a course on the histories and cultures of several foreign countries that included a research project. We met in the classroom once a week for 40 minutes. In 2002 the course became a seminar and was expanded to allow students an additional 40 minutes in the computer lab where they could gather their material from and prepare their research papers for posting on the Internet. I would like to describe this course and share some insights about (a) teaching Internet research and research writing as a process, (b) designing attractive but simple webpages to display research papers, and (c) managing the online collection of papers.

The present course

The class focuses on two activities: (a) discussions of countries, a different one each week and (b) a research project. For the research project each student creates a webpage on a topic involving a foreign country. In the first semester students are introduced to the use of computers to make webpages. Then they write their papers in five drafts.

Draft One is due at the end of the first semester. The next four drafts are spaced out at three week intervals during the second semester. Each successive draft requires one new reference and usually becomes about 90 words longer.

Printed copies of country histories are passed out to students one week before discussion and also posted on the Internet. There are links to photos, images and related websites. Dunkley (1997, pp. 33-34) argues for the use of materials derived from the Internet. In full agreement with him I would add the suggestion that it is valuable for teachers to put their own materials on the World Wide Web as webpages--in Hypertext Markup Language (html) text format, because of the added benefits of on-screen presentation and the increased access to people around the world, including the teacher's own students.

Writing papers in five drafts accomplishes three important purposes. First it breaks the research writing requirement down into smaller bite-sized pieces so that students do not feel overwhelmed and are less likely to copy material into their writing. Next it draws the students' attention to the process of writing and introduces the concept of rewriting: integrating new information into the text (not simply attaching it to the end of their previous writing) and eliminating material that does not add to the overall quality of the paper. Students learn the difference between part 2 and draft 2. Finally it allows the student to re-evaluate their writing after getting comments from the teacher and other students.

The fact that the papers are research papers helps introduce several important concepts: (a) audience. Students learn that the audience for a research paper is not about to go on an overseas tour. (b) references. They practice writing references that help their readers go back and find the source material used in their papers. They find where to look for the author's or editor's name, the publisher's name, and the year of publication. (c) and research. They learn to search the Internet for information.

Students get printed materials and have class time to view these materials on the Internet, explore the links, and use search engines to find related information on their own. Muehleisen (1997, p. 38) suggests teachers create their own "starting page" tailored to their own students' specific needs. I have expanded on that idea by creating an index page within the "draft0" folder that contains my own materials explaining the Internet and how to put student research papers into html text format.

Computers have become a vital tool for producing professional quality papers and for accessing information (Freirermuth, 1997, p. 89). During the second 40-minute period students use a 4 by 6 block of i-Macs in our computer lab. By viewing the web version of the printed class handouts, students learn how to use a browser and to navigate across the World Wide Web (WWW) with hyperlinks. The World Wide Web is a huge collection of documents stored on computers called servers located throughout the world maintained by universities (.edu or .ac), government agencies (.gov or .go), businesses (.com or .co), internet service providers (.net or .ne), and other organizations (.org or .or). The most common types of documents include html text format and two photo formats (jpg and gif). Computer addresses called URLs typically start with http://www. followed by (a) a server designation, (b) one or more folders, and finally (c) the document. Here is an example:

http://www.aichi-gakuin.ac.jp/~jeffreyb/draft2/index.html

The web (www) server at Aichi Gakuin University, an academic institution in Japan is …aichi-gakuin.ac.jp. My folder on the server is …~jeffreyb. Within that folder is a folder for my

seminar class' second drafts …draft2… which contains a document listing students and the titles of their papers… index. html. The title of each paper is linked to the paper itself. By clicking on the title any student, indeed anyone anywhere in the world connected to the Internet, may read any student's paper.

Most of my documents, including the country histories, reside in my main folder …~jeffreyb. Country histories such as

http://www.aichi-gakuin.ac.jp/~jeffreyb/canada.html

have external links that lead to documents on other servers around the world—a map of Canada as well as information concerning population and area which are posted on the U.S. Central Intelligence Agency's server, for example. My document also contains a beautiful photo in gif format of Niagara Falls that moves, a still photo of Celine Dion, and links to information and photos on her web site. The photos embedded in the country history are NOT actually on my web site, but are imported from these various sites, remotely loaded into the viewer's computer, and embedded into the country history there.

After viewing the weekly country handout as a webpage, students are encouraged to conduct their own search for information on the Internet. To do this they use a search engine, such as Webcrawler, Yahoo, or Google (see Ryan, 1997, pp. 43-44). A search engine provides them with a list of links to URLs that contain the word or phrase they have typed into the search box. The documents at those URLs may also provide further useful links. It is this *linking of documents* from one server to another that gives the Web its name. Without them the Web would not be a web. These links are what give the Web its tremendous power—the power of geometric progression.

Webpage structure

Once students are comfortable with their browser programs and viewing materials on the Web, it is time for them to learn how to write papers in Hypertext Markup Language (html) format. Although Davies (1997, p. 7) claims it can be learned in one week, I advise introducing it very early in the course to give students with little confidence in the use of computers a greater chance to become comfortable with the technology.

The next step is to introduce the structure of webpages. Here it is important to make a sharp distinction between (a) the computer instructions--the source document and (b) the image that those instructions create--the browser image. The browser image is what everyone sees when they look at a webpage. To write a webpage, however, students need to create a source document. The most efficient way to do this is to copy the source document of a browser image that the teacher provides, a template (Davies, 1997, p. 11). In this way students can concentrate on the content of the webpage without worrying about the design. Later paragraphing, photos, links, font, and tables and other design aspects can be dealt with as the need arises. Students learn to study source documents of webpages they like, copy parts of the html code that look useful or interesting, and insert them into their own research webpages. This incorporates the advantages of two techniques (see Newfields and McGuire, 1997, pp. 33-34): (1) captured code and (2) writing from scratch.

Students learn to view the entire source document (apple + e) and paste it into a simple wordprocessing document (Simple Text) on their own computer. They learn to identify various parts of the text--the heading, body, and reference section--and distinguish

them from the formatting commands. Then they can type or copy their own heading, body, and references into the appropriate locations, save, and view the newly created source document as a browser image. Here the distinction between documents on the Internet and documents on the student's own computer becomes important. Students must be viewing the newly created document on their own computer to see the changes. The original documents on the Internet will not change.

First drafts

Towards the end of the first semester students are ready to begin their research project. If sample papers from previous years are available, students are given a printed copy and encouraged to view the web version as well. They are told to choose a country and a topic. At this point a list of topics arranged by country may be helpful. Such a list has been posted on the Internet and linked with previous years' papers.

In the last class of the first semester, students' First Drafts are due. They bring their drafts to class and *discuss them in the classroom*. In the computer lab students have time to make any final changes. The teacher will then collect the documents onto a floppy disc for posting on the class webpage.

When students come back from summer vacation they begin where they left off, with their First Drafts. In the classroom they can see the printed webpage version of the three or four papers in their own group and the teacher's comments. In the computer lab they can view each and every paper submitted. All the papers and the teacher's comments are indexed at

http://www.aichi-gakuin.ac.jp/~jeffreyb/draft1/index.html

The teacher's comments are linked to the specific papers to which each comment refers and thus provide clear concrete examples. Hyperlinks are also inserted at the top of each student's paper to allow instant access to the other four drafts as they come online. Thus at any point in the writing process students can read each classmate's work and see how it has progressed.

All posting of students' work is done by the teacher, whose website is where the class folders are located. Students keep their work in a folder on their assigned computers, and are encouraged to keep backup copies on a memory card. I collect the source documents on my own floppy disc and transfer it to my office computer. Before actually posting them on my website I usually check the reference section to make sure that (a) the references are correctly written, (b) there are corresponding in-text citations, and (c) the URLs will actually connect the reader with the appropriate information. I make appropriate minor adjustments to the paper, including insertion of hyperlinks and changes in photo layout. Only then do I post the work on the website. It is important that students understand this process, so that they copy the posted version of each draft, with the adjustments, as the starting point for their next draft.

Subsequent drafts

In the First Draft students master the basic format for a simple research paper: heading, body, and reference section. Starting with Draft Two. They need to have information from two different references. The paper should no longer be simply a summary of what they have read. First, students need to decide where the new information goes in their text. Closely related information will almost invariably be grouped together in the text for a smooth flow of ideas and easy comprehension.

Secondly, they have to make it clear which of their two references information comes from. This is a suitable point at which to introduce in-text citations--(author, year)--which are then connected with hyperlinks to the full citations in the reference section. The title in the full citation is similarly linked to the website containing the information.

Students learn how to write simple, functional electronic references:

Author or editor (year). Title. [English translation, if original document is in Japanese.] URL address.

and print references:

Author or editor (year). Title. [English translation, if original document is in Japanese.] City: Publisher, pages.

They learn how and where to search websites for the necessary information--author, year, and titles. The necessary information may be located in a separate document. Students need to know how to (a) navigate the hyperlinks, (b) truncate the URL address, and (c) search the source document for information that may not appear on the browser image. Even finding the URL address may present some difficulties. Many websites use a frames format, which allows multiple documents to appear simultaneously but fails to show their URL locations. Students can escape the frames format by manually typing in hyperlinked locations or examining the frame source document for URLs of the component documents.

After students become comfortable with text insertion, they are ready for the embedding of .jpg and .gif photos and hyperlinks into their research reports. Attractive photos make their work much more pleasing, grabs the reader's attention, and provides visual support that may be essential for non-native English readers. Hyperlinks can be used to connect the reader with related information. That information does not have to be in English. Many of my students find their material in Japanese. Thus other Japanese students reading their papers can get information in both student-level English and in their native language, a splendid and natural way to provide bilingual input. Unlike Davies (1997, p. 9) I recommend the liberal use of external hyperlinks integrated into the texts of webpages, especially research papers. In addition to giving the Web its tremendous power, this linking of texts and ideas is at the very core of the research paradigm.

Once the students understand the process and are actively engaged in producing their research, the teacher will be busy and must try to keep all these incoming documents straight. To do this I have created five folders: draft1, draft2, …draft5. Each folder has an index page linking it with each student's draft and the teacher's comments on the drafts at that point. To keep things manageable it is important to get the students to turn in each draft on time. There should be two or three weeks between each draft, and the students must realize that each draft requires (a) rethinking and rewriting of the entire work, (b) the integration of new information throughout the paper, and (c) review and comments from other students and the teacher. They must not turn in two or more drafts simultaneously.

When the course is finished the teacher is left with a formidable collection of student-generated research. Then the question arises as to what to do with it all. With this in mind I passed out questionnaires to all students attending the final class (n=19) in which they were asked about the final disposition of their

work. First, did they want me to continue the posting of their papers? There were three choices: post all drafts (10), post only the Final Draft (5), or remove all drafts (4). Those who gave permission to continue the posting of their work had more choices to make about names/contact and editing. Did they want their full names (2), given name only (13), or a fictious pen name (0) to appear on the papers? Finally could the teacher continue to edit the papers? Almost all (14) welcomed the idea of the teacher's being able to revise their work.

This has provided later students with an abundance of sample materials to look at and discuss prior to and during the writing of their own research papers. They have access to all five drafts of several papers and are able to see for themselves (a) how references are written and linked to the papers and (b) where the new information has been integrated into the papers. They also have an opportunity to evaluate and comment upon the papers. In cases where the teacher has permission to edit, revisions can be discussed with the new class and then made in the posted paper, thereby demonstrating the process of rethinking and rewriting a text. The Final Drafts that remain posted are all linked to an index that is organized by country and topic.

Conclusions

In conclusion I would encourage teachers, especially language teachers, to make greater use of the World Wide Web. The Web offers several distinct advantages to teachers who post their educational materials in html text format: (a) photos can easily be embedded in an otherwise forbidding text, (b) photos can be linked to a larger version of the photo with or without explanatory captions, (c) text can be linked to related materials, (d) hyperlinks can be used in an index for quick accessibility to the materials, (e) materials are accessible throughout the world, and (f) they can easily be updated each academic year.

For language students in Japan the Web is an ideal vehicle for research papers and other writing projects. It allows them to produce professional quality papers with visual support and easy accessibility to teachers and their fellow students in class and around the world. Research papers can be linked to the original sources and other related materials. Hyperlinks can also be used for indexing papers and linking the several drafts. As Rule (1997, p. 77) pointed out, the Internet can help students to "construct, manage, and synthesize knowledge". It can help teachers, too.

Acknowledgments

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