Integrating New Technologies into Language Teaching: Two Activities for an EAP Classroom

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In its position statement, the International Reading Association states that technology needs to be an integral part of literacy instruction. This article describes two ways of integrating technology into an EAP curriculum that focuses on building students' reading and writing skills. In essence, the goal of the article is to demonstrate that teachers can quite easily integrate the existing content with assignments and activities that involve the use of technology without necessarily adding new pieces to the curriculum.

Dans la déclaration sur sa prise de position, l'Association internationale pour la lecture affirme que la technologie doit faire partie intégrale de l'enseignement de la littéracie. Cet article décrit deux façons d'intégrer la technologie à un programme d'études d'anglais pour des fins académiques qui vise l'amélioration des habiletés en lecture et en rédaction. En somme, l'article veut démontrer que les enseignants peuvent facilement intégrer, au contenu de leurs cours et sans ajouter d'éléments à leur programme, des devoirs et des activités qui impliquent la technologie.

Introduction

Teaching an advanced-level English for Academic Purposes (EAP) class can at times seem overwhelming. With content pertaining to all aspects of literacy instruction—reading, writing, listening, and speaking—and with the program also focusing on other curricular and co-curricular concerns, the course can appear crammed with information, outcomes, and assignments, both from the teacher's and from the students' perspective. Despite this, it is important that the teaching of technology also be part of the EAP curriculum.

In today's digital world, the ubiquity of technology has contributed to an expanded understanding of literacy. Besides having basic literacy skills, students today also need technology skills for computing, communicating, investigating, accessing, and using information. They also need these skills to think critically about messages in the new media and understand and evaluate data. As educational administrators and educators ponder the

meaning of this expanded definition, they are certain that being literate in a digitized society is not the same as being literate in the historical sense, although researchers have viewed literacy as a multifaceted concept for a number of years (Johns, 1997). Success in a digital, information-oriented society demands multiliteracies. To be considered multiliterate, students today must acquire a battery of skills that will enable them to take advantage of the diverse modes of communication made possible by new technologies and to participate in global learning communities.

Becoming multiliterate, especially for ESL students, is an enormous challenge. These students must acquire linguistic competence in a new language and at the same time develop the cognitive and sociocultural skills necessary to gain access into the social, academic, and workforce environments of the 21st century. They must become functionally literate—able to speak, understand, read, and write English—as well as use the language to acquire, articulate, and expand their knowledge. In an EAP program, they must also become academically literate, being able to read and understand interdisciplinary texts, analyze and respond to those texts through various modes of written and oral discourse, and expand their knowledge through sustained and focused research. Students are expected to become critically literate, able to evaluate the validity and reliability of informational sources in order to draw appropriate conclusions from their research efforts. Finally, in the digital age, students in all fields must become electronically literate, being able "to select and use electronic tools for communication, construction, research, and autonomous learning" (Shetzer, 1998). If literacy is understood in this broader sense rather than as a narrow cognitive skill, it has several important consequences for literacy/EAP teachers. It would seem difficult to justify an advanced course in reading and writing in an EAP setting that does not give students some experience using these new literacies.

Technology lends itself well to help teachers access a plethora of resources that they can use in their instruction, to open the door to their classroom, and to enrich the teaching and learning environment. Moreover, good use of technology in the classroom helps students in their literacy development. However, both educational researchers and practitioners assert that the potential of new technologies for learning is to be found not in the technologies themselves, but in how these are used as tools for learning (Means & Olson, 1995; Owston, 1997; Valdez et al., 1999). According to the International Reading Association's position statement (2001), the teacher's responsibility is to "systematically integrate Internet and other information and communication technology (ICT) in thoughtful ways into the literacy curriculum, especially in developing the critical literacies essential to effective information use" (p. 2). Although some educators have embraced technology with enthusiasm, others have viewed it with skepticism. However,

everyone tends to agree that they need information on teaching literacy skills in the digital age in the light of the growing influence of technology in our daily lives. Therefore, incorporating technology into a literacy-focused EAP curriculum is a requirement, and not a question of why or if it should be added to an already-crowded syllabus.

Aside from literacy issues, research has shown that there exist a number of other reasons for integrating the teaching of technology in classrooms in all subject areas. One is that students live in a world where technology is ubiquitous (Buckingham, 1993; Wood 2000, and others); using the technology for pedagogical purposes becomes increasingly important as a means of broadening students' exposure to current educational frameworks. Another reason is that new technologies in the classroom help students in both the process and the content areas of literacy learning (Semali & Hammett, 1999). New technologies also promote collaborative learning, a concept that has been widely researched and advocated throughout the literature (Johnson & Johnson, 1986; Totten, Sills, Digby, & Russ, 1991). Finally, teaching with new technologies encourages students to become critical consumers (Steinberg & Kinncheloe, 1997), and it promotes democratic values in the classroom (Kellner, 1990, 1995).

In addition to the above reasons, yet another justification for including technology in my EAP classes came when I considered what it would mean for the ESL students to enter a postsecondary institution in Canada, where they would compete with students graduating from the Canadian school system and who, according to a recent Ipsos-Reid survey (2000), are second only to their Swedish counterparts in terms of their (K-12 students') exposure to the Internet. Would it be an oversight on the part of our budget-constrained ESL institutions to ignore the need to incorporate technology into the curriculum? Would this oversight trigger a "digital divide" in the workforce between the ESL-educated citizens and citizens with native-speaker proficiency from a Canadian school system? As I pondered these questions, the answer and its implications concerned me enough to reflect on and ultimately transform the way I taught my classes.

Background

For three years, I have taught English for Academic Purposes for pre-university ESL students at a language institute in a university in Toronto. Most of the students are from Southeast Asian countries such as China, Korea, and Japan, but there is also significant student representation from other Asian, Latin American, European, and Middle Eastern countries. Although most of them are visa students in Canada, some are permanent residents seeking to enter a university program whose language skills need upgrading. As a result, the length of English-language exposure between these two groups of students might vary. The program consists of six levels, level 6 comprising

advanced ESL students, several of them preparing to enter degree programs at the university. Each level often has multiple sections, depending on enrollment for a particular session. The program has between 15 and 20 full-time and part-time teaching staff, and it serves nearly 1,200 students each year. The institute has a well-equipped computer laboratory where students have the opportunity to practice language skills independently or under the guidance of their instructor, with each instructor giving technology the emphasis he or she desires. Although technology is not the passion of every instructor, I decided to integrate it into my higher-level (level 5) classes. Instead of separating technology components by requiring students to navigate Web sites or to master specific software programs and devices, I decided to incorporate a number of assignments that required students to use technology within the framework of the existing curriculum. This decision was based on research (Singh & Means, 1994) that underscores the importance of both the traditional and authentic uses of technology in literacy instruction. A traditional use of technology is skills reinforcement; for example, students who need supplementary practice in reading might work individually on computers equipped with reading-comprehension software.[1] An authentic use of technology is using it as a tool to accomplish a complex task; for example, students who are creating a written report might use the Internet for research, word-processing software to write and format the text, and hypermedia software to add images to it. So it made sense to consider the variety of uses of technology because they illustrated best practices.

Two Activities

In the following sections, I discuss two assignments that I integrated into my EAP course: a research paper (section 3.1) and a WebQuest activity (section 3.2). A research paper written by a student in the EAP program is expected to present the results of his or her investigations on a selected topic in a coherent and succinct manner. The written piece has to be uniquely based on the student's own thoughts and on the facts and ideas that he or she gathered from a variety of sources. The experience of gathering, interpreting, and documenting information; developing and organizing ideas and conclusions; and communicating them clearly was an important objective of their literacy education in the program. A WebQuest is a project-based learning activity that is often used to integrate the Internet into instructional activities across disciplines. It is a format for an online activity that involves individual research and/or creation of a group report or product. WebQuests can be short-term, 1-3 class periods, or longer term, 3-4 weeks. I made use of the extensive materials available from the WebQuest portal (webquest.org), which is not only classroom-ready, but which incorporates the same features as a good online course.

Research Paper

Writing a research paper is a requirement for all EAP students in the program in levels 4 (intermediate) through 6 (advanced). This assignment is primarily designed to give students an opportunity to write a coherent, well-argued academic paper about any topic that the student chooses to explore, in a subject approved by the instructor. Students are required to write a 400-500-word paper using at least three references, of which only one can be a Web site. In addition, students have to present and defend their arguments in class. The research task requires students to plan the development of the written piece, learn to access relevant resources, evaluate those resources, communicate with the instructor, perform research, and most important, correctly document the sources. Leading up to the final paper, students are required to gather information from journals, textbooks, and material from the Internet; reflect on the issues with their peers during in-class discussion sessions and write feedback; create a list of problems pertaining to their individual topic; and confer with the instructor to assist them further in their attempt to organize an outline. An important element of the research assignment is for the students to find and evaluate three Web sites that pertain to their topic, using a simple set of criteria.[2]

In my classes, students searched the Web, found relevant, reliable sites that they wanted to share with the class, and wrote a short paragraph about each site using the above set of criteria. At the beginning of each session, students are also taught how to access books and other materials from the library at an information literacy workshop. These workshops offer lessons on cataloguing and classification systems used in all major libraries throughout the world. This workshop is quite useful, as students in my course had to retrieve their selected material from the campus library and start evaluating the resources. Also, because these information literacy workshops are conducted early in the session, students got plenty of lead time to find all the resources they needed to start preparing a one-page outline of their essay for the instructor's approval. Online research using the university library's database is accessible off campus, so most of the research could be done at home; students had to travel physically to the library only when they needed to pick up the materials.

A particularly interesting aspect of this project was when my students discovered and learned to use the citation-building facility available as part of their word-processing software such as Word and WordPerfect. To create a Table of Authorities, the student had to highlight the citation in the document that needed a reference, press the Alt+Shift+I keys to categorize it and then simply continue with this process until he or she was ready to generate the final reference list. I also explained to the students about online bibliographic database programs such as Citation (citationonline.net) and EndNote (endnote.com). Citation, for example, is a useful tool as it helps keep all the

information on the reading list in one place while giving students a head start on the next phases of their writing assignment.[3] Although I did not make computer-generated citation lists part of the requirement for my course, students thought it was magic when they learned how to use it, especially because manually creating an alphabetical list of references is both time-consuming and prone to error.

The reason for placing such emphasis on correct referencing is seen as a particular cultural and historical development in the European and North American contexts. In the second-language writing literature, explanations for this phenomenon have centered on supposed cultural differences. Students from cultures that value collective effort, it has been suggested, may not grasp the concept of intellectual property; in the West, paraphrasing of the written word is seen as an unwarranted liberty. Howard (1995, 1999), has theorized that source-dependent writing may be an inevitable phase in a writer's development before he or she learns to compose autonomously. She has coined the term *patchwriting* to describe this pre-autonomous writing strategy, to distinguish it from (intentionally dishonest) plagiarism. However, universities consider any form of reproduced text as plagiarism and address it punitively, not pedagogically. Hence students in the EAP program are taught both the merits and the method of accurate referencing.

Although students are allowed to make their own choices about what to use in their research, the process of developing a research paper and summarizing Web sites taught them to recognize the biases inherent in commercial sites and self-published material. For example, students learned that a Web site at a reputable university in which a faculty member is describing his or her work is considered more credible than a Web site from an unknown author or one that is not verifiable. Ultimately, students' choices of resources were informed, and they became more aware of the pitfalls to avoid later when embarking on a research project in a university course. In addition, the research activity taught students to work collaboratively while performing various activities and in such a way as to "enhance the ability of learners to transfer their previously acquired knowledge to new application situations" (Jacobson & Spiro, 1995, p. 302).

Overall, this research project not only gave students exposure to technology resources, but it also demonstrated the most advantageous use of the various software for documenting references and creating a quality finished product. Above all, it showed students the importance of critical reading, writing, and reasoning.

WebQuest

The instructional goal of a short-term WebQuests[4] is knowledge acquisition and integration, designed to be completed in one to three class periods. The instructional goal of a longer-term WebQuest is to extend and refine know-

ledge; and it typically takes between one week and a month to complete in a classroom setting. But in either type of a WebQuest activity, the learner is not left to wander aimlessly through cyberspace, as pointers to resources are included in the WebQuest matrix. A good WebQuest activity should follow a few simple steps. First, the instructor must choose a task that is appropriate for the language level and interests of the students, and then set the stage for the activity by providing some background information, including vocabulary worksheets, pre-activity quizzes, discussion worksheets, and so forth. Next, the instructor should provide a description of the process that the learners will go through in accomplishing the task. During the activity, the instructor must offer some guidance on how to organize the information acquired. This input can take many forms such as guiding questions, directions to complete organizational frameworks such as timelines, concept maps, or cause-and-effect diagrams. The instructor may also include motivational elements to the basic structure, such as giving the students a role to play, real or simulated personae to interact with via e-mail, and so forth. In effect, instructors must choose activities that will enable students to induce, deduce, analyze, abstract, classify, and compare. Finally, at the end of a WebQuest activity, the instructor must bring closure to the quest by reminding the learners about what they have learned and encouraging them to extend the experience into other domains. Following the above steps helps both students and teachers achieve efficiency, clarity of purpose, and a sense of accomplishment.

Before embarking on the WebQuest activity, I made sure that all my students had access to the Internet either at home and/or at school and that they were able to perform basic activities such as browsing, downloading, and using word-processing software. I eventually chose a WebQuest activity that did not require extensive Internet time at home, so that if students did not have access to computers at home, they could use the Internet time in the school computer lab. Also, because I had only recently added WebQuest to my curriculum, I decided not to choose a difficult or complicated series of activities. The WebQuest portal (webquest.org) incorporates a wide assortment of materials covering approximately 11 subject areas and spanning learner ranges from K-12, in addition to providing materials suitable for adult learners. I found the WebQuest classification, presented in the form of a grid, useful for quickly retrieving appropriate material for my students.

In several classroom discussions, formal and informal, my class deliberated on issues such as globalization, marketing strategies, and corporate greed, and we gradually shifted our attention toward exploring how advertisers and corporations try to get people to buy things. After I had explored several WebQuest activities in advance to maximize student learning time, I zeroed in on the topic of advertising and media literacy. The activity I finally selected focused on critical reading, writing, discussion, and

presentation, which I also hoped would foster in students an ability to think critically about media messages. I visited the portal and did a term search of *advertising*. The search results brought up several activities. I selected a lesson called *Advertisers: Interpreters of our Dreams?* because it was intended primarily for ESL students at the intermediate to advanced levels and provided ample opportunities for both written and oral communication. Although the original WebQuest lesson is a longer-term activity consisting of seven sections and spanning at least 15 hours, I decided to spend no more than five hours on the topic because, as it was my first attempt at using a WebQuest activity in the classroom, I wanted to get a better sense of how it benefited the students without overwhelming them with a surfeit of information and activities.

In the first class, we went over the advertising glossary sheet (http://et.sdsu.edu/APaxton-smith/eslwebquest/glossary.htm) for a few minutes, after which the students individually completed the *Advertising in My Country* worksheet (http://et.sdsu.edu/APaxton-smith/eslwebquest/admycountry.htm). When everyone had finished, they formed small groups to discuss this worksheet, and one student from each group shared his or her worksheet with the class in an informal exchange of cultural experiences with advertisements. For homework that day, I gave students copies of the transcript of the Frontline (PBS) documentary *Merchants of Cool* (http://www.pbs.org/wgbh/pages/frontline/shows/cool/etc/script. html) along with a worksheet (http://et.sdsu.edu/APaxton-smith/eslwebquest/mocworksheet.htm) consisting of about 10 questions about the documentary that students had to go over cursorily. The following day, after a brief review of vocabulary, students watched the documentary (http://www.pbs.org/wgbh/pages/frontline/shows/cool/) in class (53 minutes) and individually completed the worksheet. On the third day of this WebQuest, I split the students up into groups of four. They were told that they were going to go through the process of creating a video advertisement for a lemon-lime soft drink and that they could make up the name for the storyboard. Students were asked to choose an advertisement technique they would like to try (http://et.sdsu.edu/APaxton-smith/eslwebquest/ techtourworksheet. htm), and once they had collectively chosen the technique following some discussion, each student in the group wrote a rationale for it. This rationale piece was a persuasive paragraph about why this technique would work for them. Later, each group presented their arguments in turn. For student evaluation of this activity, I collected all the completed worksheets and written tasks from the students on the last day of this activity and used the appropriate rubrics (http://et.sdsu.edu/APaxton- smith/eslwebquest/rubrics/classdis_rubric.htm) to assign a grade, not only for the written output, but also for the classroom discussion. We wrapped up the WebQuest

by identifying, analyzing, and articulating varied perspectives about the issues and about WebQuest itself as a learning tool.

The entire WebQuest over the three days did not exceed five hours as originally planned, and the students seemed to have enjoyed the various activities involving a topic that they had so much to say about.

Conclusion

Although many reviews of empirical studies relate to the use of new technologies in support of literacy education (Kamil, Intrator, & Kim, 2000; Leu, 2000), the biggest challenge for educators is the paucity of comprehensive literacy studies offering informed commentary. Research indicates that students who are comfortable with word-processing write longer papers, spend more time writing and revising, and show improved mechanics and word choice (Lehr, 1995). On the other hand, research also indicates that using a word-processor does not in itself improve student writing. Rather, the teacher has a critical role in guiding and facilitating the writing process, providing feedback, and encouraging revision (Reinking & Bridwell-Bowles, 1996). Incorporating technology in my classroom at the same time as instructing students on its most appropriate uses proved to me that most students wrote good research papers that reflected critical thinking and measured conclusions. The use of the computer and the Internet for the research paper also promoted collaborative writing[5] among students. Weekly lab sessions enabled students in small groups to see the writing that had been input, discuss its fine points, and make suggestions that would improve it.

In addition, educational technology has expanded the instructional potential of collaboration. Nowadays, educators can access and share a global curriculum-development lab with others. They can even engage their class with another in literacy-based projects without geographic boundaries. WebQuest is a good example of such collaboration. Although collaboration in itself does not necessarily promise to improve literacy skills or guarantee learning, it has proven to be a powerful motivation tool for students. Anecdotal evidence abounds from teachers, including myself, who cite measurable improvements in reading, writing, listening, and speaking skills among students whose classroom walls have widened to embrace the global community.

In addition to the benefits of technology integration to students, the importance of ongoing professional development in educational technology has been reiterated by researchers reviewing not only the needs of teachers of language arts and English, but also those of educators across all curricular contexts (Means & Olson, 1995; Valdez et al., 1999). Leu (2000) notes the necessity of "staff development to continually support teachers as new technologies regularly appear" (p. 757). In general, teachers need ongoing, hands-on training in various literacy-based technologies. This training

should provide exposure to literacy software programs, computer-assisted instruction, and multimedia composing, while helping them to become proficient in word-processing, basic computer skills, e-mail, classroom conferencing, and electronic bulletin boards. Of the utmost importance is learning how to integrate these technologies effectively into literacy instruction.

In my technology-enhanced literacy assignments, the objective was to present content in a way that encouraged students to use and appreciate the potential of new technologies. I believe that I have achieved this goal without leaving out conventional content. I continue to explore and evaluate new material in the literacy and technology content area in order to incorporate this material into my future classes. However, I am careful not to introduce technology for its own sake, but rather as a means of enhancing the learning experience using a variety of teaching modes. Thus we must remember that technology needs to be appropriate, not just new, and also be aware that digital is not always best. Another point of caution to teachers who may wish to incorporate technology into their classroom is that they must not introduce the technology components all at once. Doing so will overwhelm the students, perhaps even turning them off technology. Hence I add only one or two new components each session, and doing so helps me monitor the effects that these assignments have on students. An astute teacher should, therefore, ensure that new technology does not interfere with the process of learning and be aware of the strengths and weaknesses of each type.

To conclude, as I model electronic literacy in my classroom, I strive to help my students understand that even a teacher has things to learn, and that knowledge is not about filling a vessel, but about seeking new avenues to build ourselves better lives.

Notes

[1]For example, www.readingcomprehensionconnection.com

[2]The Web site evaluation criteria included the following aspects: Accuracy (If the page lists the author and institution that published the page and provides a way of contacting him or her); Authority (If the page lists the author credentials and its domain is preferred [.ca, .edu, .gov, .org, or .net]); Currency (If the page is current and updated regularly [as stated on the page] and the links [if any] are also up-to-date); Objectivity (If the page provides accurate information with limited advertising and it is objective in presenting the information); Coverage (If you can view the information properly; access to information is not limited to fees, browser technology, or software requirement).

[3]Even teachers can use Citation or the citation functionality available in their word-processing software to generate reading lists and so forth.

[4]The WebQuest instructional model was developed in 1995 by Prof. Bernie Dodge with Tom March, both from San Diego State University.

[5]Wood (2000) notes that when using computers collaboratively "children worked together more than they normally would to write stories, search the Web, or create multimedia presentations" (p. 120).

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