According to Eskey (1993, 2002), second language (L2) reading and writing teachers have a dual role: teaching reading and writing as sociocultural practice and as a psycholinguistic process. The former involves motivating students to read and write and the latter involves helping students to develop strategic competence. This article argues that Eskey’s views are relevant to the teaching of reading and writing using the Internet. The article describes the theoretical rationales for integrating instruction on the Internet into the English for Academic Purposes (EAP) classroom and presents the pedagogical principles relied upon to integrate the Internet into the EAP classroom. The article concludes with a discussion of implications for the classroom.

Introduction

In 1993, David E. Eskey argued that to help second language (L2) students become literate in English, teachers of L2 literacy must do two important things: First, they must motivate students to read and write texts in the way members of the discourse community in which the students are participants would. According to Eskey (2002), this can be accomplished, for example, by introducing L2 students to texts that are interesting and relevant to their needs, engaging students in extensive reading and reading-related activities, and so forth. This view of literacy emphasizes the notion that instruction involves teaching reading and writing as a form of cultural behavior (Eskey, 2002).

The second thing teachers of reading and writing must do is facilitate the “acquisition of the reading and writing skills” (Eskey, 1993, p. 231). Eskey (2002) noted that this can be accomplished by teaching students how to become strategic readers (e.g., by relying on bottom-up strategies, top-down strategies, etc.). This view of literacy emphasizes the notion that instruction in English for Academic Purposes (EAP) involves teaching the skills required to successfully read and write for academic purposes.
As new technologies such as the Internet begin to be integrated into EAP classrooms, it seems appropriate to draw on Eskey’s ideas and ask the following questions: How can EAP instructors motivate students to read and write using new technologies such as the Internet? How can EAP instructors help students develop Internet-based literacy skills? This article describes the theoretical rationales for integrating instruction on the Internet into the EAP classroom. It also presents the pedagogical principles relied upon to integrate the Internet into the EAP classroom. The article concludes with a discussion of implications for the classroom.

Linking Reading, Writing, and the Internet

Research focusing on the academic literacy demands of U.S. colleges and universities has shown that students are expected to complete a variety of reading-to-write tasks requiring the ability to integrate information from multiple sources (e.g., Braine, 1995; Carson, 2001; Carson, Chase, Gibson, & Hargrove, 1992; Horowitz, 1986; Leki & Carson, 1997). These tasks include but are not limited to writing book reviews or critiques; completing lab reports; conducting case studies; writing marketing reports, research essays, research projects, and so forth.

How does the Internet fit into a discussion of EAP instruction? Traditional views of L2 reading and writing instruction place emphasis on helping students to develop “strategies for understanding, discussing, organizing, and producing texts” (Johns, 1997, p. 2). However, with the growth of the Internet and the current emphasis on Internet-based research, it is practically impossible to function in an academic environment unless students have the ability to use the Internet and “have the ability to locate, evaluate, and use effectively the needed information” (Association of College and Research Libraries, 2000, Information Literacy Standards for Higher Education, Information Literacy Defined, para. 1). This view is shared by The New London Group (1996), which argues that current views of literacy instruction need to take into account the wide variety of text forms “associated with information and multimedia technologies” (p. 61).

Support for the integration of the Internet into the EAP classroom comes from work in five areas: comprehensible input, content-based instruction, computers and motivation, scaffolding, and strategic reading and learning. The sections below describe work in these five areas.

Theoretical Rationales

The Internet as a Source of Comprehensible Input

The integration of the Internet into the EAP classroom is supported by Krashen’s (1982, 1985) work on input and L2 development. According to Krashen’s input hypothesis, learners acquire language through extensive exposure to comprehensible input, that is, input that contains forms and structures just beyond the learners’ current level of L2 competence.
Comprehensible input can be provided through exposure to aural discourse or through exposure to written text (Krashen, 1982). The Internet provides L2 students exposure both to written text and aural discourse. Internet sources are usually redundant in that they provide written text, hyperlinks, and visual displays in the form of pictures and video segments.

Research has shown that extensive reading, involving “rapid reading of large quantities of material or longer readings (e.g., whole books) for general understanding” (Carrell & Carson, 1997, pp. 49-50) can provide L2 students with comprehensible input and assist in the development of L2 competence (Cho & Krashen, 1994; Day & Bamford, 1998; Kim & Krashen, 1997). As noted by Grabe (1995, as cited in Carrell & Carson, 1997), extensive reading helps develop automatic word recognition, promotes student motivation, facilitates the development of general background knowledge, helps students to develop reading strategies, and “is essential for developing the ability to ‘read to learn,’ a major goal for academically-oriented instruction” (p. 50).

The Internet offers an ever-growing number of sources focusing on a variety of topics that can be accessed by simple actions (e.g., pointing and clicking). By implementing such actions, L2 students are given multiple opportunities to access written and aural sources on a wide variety of topics. This access and the subsequent exposure to the texts (through readings and listening) potentially contribute to the development of L2 competence.

Another feature of the Internet is that it allows students to receive comprehensible input in the form of authentic texts, that is, texts that have not been developed for the purposes of language learning. Rather than presenting simplified texts that eliminate redundancy or discourse markers (Alderson, 2000; Chandler, 1990; Davies, 1984), authentic materials can be easily comprehended by L2 readers because they present the discourse and its message as intended by the writer.

**Content-Based Instruction**

The integration of the Internet into the EAP classroom is also supported by work in the area of content-based instruction (CBI), understood as the integration of language and content (Brinton, Snow, & Wesche, 1989). As noted by Eskey (1997), at its best, CBI “integrates all three dimensions of the good language course—the dimensions of content, function, and form” (p. 138). The integration of the Internet and CBI relies on several rationales consistent with CBI (e.g., Brinton, Snow, & Wesche, 1989; Stoller, 1999). First, the Internet lends itself well to the integration of instruction on content and reading and writing skills: It provides access to a wide variety of topics. By engaging students in reading and writing activities focusing on the topics available on the Internet, L2 students develop both content knowledge and academic skills needed to succeed in college and university courses.

Second, Internet sites are usually designed around topics or themes. This feature is consistent with CBI in that, as explained by Stoller (1999), CBI instruction is usually organized around logical themes, and this feature has
been found to promote learning. Third, CBI instruction emphasizes the integration of skills. The integration of the Internet into EAP courses enhances the opportunities for skills integration since it allows students to explore ideas, to communicate with other people outside the classroom setting, and to write with an audience in mind.

**Motivational Effects of Computers**

Complementing the above, the integration of computers in the classroom has been found to be motivating for students. In general, students credit computers for promoting positive feelings (Davis & Lyman-Hager, 1997) and providing fun in that they allow students to explore ideas and experiment with them (Chen & McGrath, 2003; Lindroth, 1996; Meloni, 1998; Wang & Newlin, 2002). They are also motivating because they allow students to interact and learn from one another (Chen & McGrath, 2003; Kamhi-Stein, 2000). Moreover, computers have been found to motivate students to engage in the essay revision process (Daiute, 1983, as cited in Kamil, Intrator, & Kim, 2000).

**Teaching as Scaffolding**

Further support for the integration of the Internet into the EAP classroom comes from the Vygotskian-based notion of “scaffolding” (Wood, Bruner, & Ross, 1976) or “assisted performance” (Tharp & Gallimore, 1988, p. 30), understood as what learners are able to do with the help of “more capable others.” The distance between what learners can do independently and what they can do with the assistance of a “more capable other” is the “Zone of Proximal Development” (ZPD), and it is through negotiation in the ZPD that learners advance to a higher level of knowledge and performance.

The notions of scaffolding and negotiation are relevant to an instructional model that relies on the completion of classroom tasks that provide students multiple opportunities to negotiate information with more knowledgeable peers. In this model, scaffolding involves breaking up reading and writing tasks, including but not limited to tasks designed to teach students how to use the Internet—to provide students with assistance to develop the skills needed to complete the task, and so forth.

The notion of scaffolding has been investigated in L2 settings. Research in this area, conducted by Lantolf and others (Aljaafreh & Lantolf, 1994; Brooks & Donato, 1994; Donato, 1994; Guerrero & Villamil, 1994, 2000; Lantolf & Appel, 1994; Villamil & Guerrero, 1996, 1998) has shown that when language learners participate in collaborative interactions, they are capable of providing their peers with guided support similar to the support observed in parent-child and expert-novice interactions (Donato, 1994).

**Strategic Reading and Learning**

In traditional media (chapters in books, television, or radio), information is organized linearly, that is, “information units are organized in predefined
sequences" (Rouet & Levonen, 1996, p. 9). In contrast, hypertext is nonlinear, and readers have more flexibility since they can build their “own paths” (p. 9).

Recent research comparing L2 hypertext- and paper-reading strategies has shown that hypertext reading requires the use of strategies that are common across text format (e.g., adjusting the reading rate, recognizing one’s loss of concentration, activating one’s background knowledge, making predictions, responding to the content, summarizing information, etc.) and strategies that are unique to the format in which the reading is presented (e.g., relying on hyperlinks to gather further information, relying on additional Internet references, using the mouse pointer to highlight text, etc.) (Kim, 2003).

L2 reading research has also shown that hypermedia readers use internal glosses (words that have been glossed by the author of the text) more extensively than external dictionaries—dictionaries available on hypermedia technology; that L2 readers find internal glosses to be helpful since they do not disrupt the reading process (Chun, 2001); and that L2 readers learn more vocabulary words when visual and verbal annotations are present than when visual, verbal, or no annotation is present (Plass, Chun, Mayer, & Leutner, 2003).

Recent first language (L1) and L2 research designed to compare comprehension differences between linear text and hypertext has shown that there are very few differences in comprehension between text formats (see Dillon & Gabbard, 1998, for a review of relevant literature; Foltz, 1996; Kim, 2003; see Leu, 2002, for a review of relevant literature). As noted by Dillon and Gabbard, an explanation for this finding could be that knowledge as how best to organize hypertext is limited.

Leu (2002) argues that rather than investigating the efficacy of different text formats, there is a need to investigate “the conditions within new technologies that lead to gains in comprehension and learning” (p. 321). Recent examples of EAP classroom curricula suggest that such conditions include the consistent integration of academic language instruction, content instruction, and instruction on the Internet as a means to promote the development of the L2 students’ cognitive and linguistic skills needed to succeed in a competitive academic environment (Kamhi-Stein, 1996; Kamhi-Stein, Stein, & Snow, 2003; Kasper, 2000a, 2000b). Common to these curricula is Grabe and Stoller’s (1997) idea that strategy instruction works best when “it is integrated within the regular curriculum as a consistent feature of content and language instruction” (p. 9).

Integrating Instruction on the Internet Into the EAP Classroom: Pedagogical Principles

The model of Internet instruction proposed in this paper relies on four pedagogical principles:

**Principle 1.** Instruction on the Internet needs to be centered around the demands of the EAP courses in which students are enrolled (Kamhi-Stein & Stein, 2003). For example, in an ESL course for students enrolled in a Masters in Business Administration (MBA) program, students learn the vocabulary
necessary for effective Web search engine and database use, learn how to apply the vocabulary learned to relevant tasks (e.g., evaluating a Web site), and reflect on the extent to which the strategies learned can be transferred to other content areas. In this way, students are given multiple opportunities to engage in activities designed to develop literacy skills in English and Internet-based skills needed to succeed in EAP course and in content courses.

**Principle 2.** Instruction on the Internet needs to provide L2 students with scaffolds (Kamhi-Stein & Stein, 2003). In this way, students can safely take risks and reach beyond their current level of independent performance. Scaffolding, in this view, involves breaking down Internet-based reading and writing tasks into subtasks, modeling the strategies needed to complete the tasks, and engaging students in activities that promote student–teacher and student–student interaction and ensure a gradual shift in responsibility from the instructor to the students. For example, in the ESL course for MBA students, students, working in groups, are asked to critique a Web site and email the critique to the Web master. To this end, students review several Web sites, produce oral summaries and written critiques (using a set of guidelines), provide and receive feedback on the critiques, and email the critiques to the companies’ Web masters. Finally, students reflect on their learning experience and reflect on the applicability of the strategies learned to other content areas.

**Principle 3.** Instruction on the Internet needs to integrate strategy instruction (Kamhi-Stein & Stein, 2003). As earlier discussed, research on reading strategies has shown that strategy instruction works best when it is anchored in and consistently taught as part of the language or content curriculum (Grabe & Stoller, 1997). Underlying the model of Internet instruction proposed in this article is the principle that a focus on strategy training that is integrated within the EAP classroom curriculum will provide students with experiences that promote the development of strategic performance. For example, students conduct Internet search activities by using search engine math symbols (Boolean operators), discuss the similarities and differences of various techniques, express personal preference and rationale for a choice of techniques, and reflect on their learning experience (Pizzorno, forthcoming).

**Principle 4.** Instruction on the Internet needs to be hands-on (Kamhi-Stein & Stein, 2003). In a hands-on approach to Internet instruction, students are not mere observers; instead, they are active participants in the learning process. In the model of Internet instruction described in this paper, instruction begins with the teacher’s leading students in a hands-on demonstration of the Internet strategies relevant to the task at hand. The instructor slowly walks students through step-by-step procedures, allowing them time to follow each step on handouts while working at their computer terminals. After the hands-on demonstration, students work in pairs or triads to complete the day’s tasks (Kamhi-Stein, Bezdikian, Gillis, Lee, Lemes, Michelson, & Tamaki, 2002).
Implications for the Classroom

The model of Internet instruction described in this article is consistent with Eskey’s (1993, 2002) idea that teachers of reading and writing have a dual role: teaching reading and writing as sociocultural practice and as a psycholinguistic process. The former would involve motivating students to read and write, in this case, using new technologies such as the Internet. It could be argued that this role is facilitated by the fact that L1 and L2 students find computers to be motivating. L1 and L2 computer research has shown that, regardless of the students’ language background and gender, the integration of the Internet and Internet-based tools (e.g., computer-mediated communication tools, etc.) into the classroom promotes student motivation since it allows students to communicate with peers for authentic purposes, to engage in reading activities relevant to the academic task at hand, and to publish information with an audience in mind (see Leu, 2002, for a review of L1 research; see Warschauer, 1996, for a review of L2 research).

The view of teaching reading and writing as sociocultural practice is also consistent with Carrell and Carson’s (1997) notion that EAP classrooms should integrate instruction in extensive reading. It seems safe to argue that one way to motivate students to read—an important objective when teaching extensive reading—on the Internet would be by engaging students in “Internet Projects,” designed to allow the exploration of multiple Internet sites for the purposes of developing background knowledge about a topic (Leu, 2002). Another way to motivate students would involve having them read several Internet articles presenting different points of view on a topic and report their opinions about the articles (a technique described by Dobson & Feak, 2001, for non-Internet reading purposes).

As noted above, the second role that reading and writing teachers have is that of teaching L2 literacy as a psycholinguistic process (Eskey, 1993, 2002). This involves facilitating the acquisition of strategies designed to effectively use the Internet. This would include, but not be limited to, the teaching of strategies designed to help students effectively identify information on the Internet, learn Internet-related vocabulary, develop strategies for the purposes of extracting information from Internet sources, develop critical literacy strategies designed to evaluate the credibility, authenticity, and reliability of Internet sources, and so forth.

The view of teaching reading and writing as a psycholinguistic process is consistent with Carrell and Carson’s (1997) notion that EAP classrooms should integrate instruction in intensive reading. One way in which students can be assisted in the development of Internet reading strategies is by engaging students in thematic WebQuests, Web-based lessons involving inquiry-based activities (Dodge, 1997) designed to promote the development of strategic competence, content knowledge, and academic skills. Another way in which students could develop strategic competence is by integrating instruction in multistep reading-to-write tasks that guide students through the writing process, teaching students the skills—including Internet skills—
underlying the tasks, such as conducting research using search engines and databases, summarizing sources, preparing literature reviews, analyzing data, reaching conclusions, and so forth.

It needs to be acknowledged that the integration of the Internet into the EAP classroom may be challenged by several factors. First, the use of the Internet may negatively affect student motivation in several respects. For example, as explained by Leu (2002), could excessive student interest in the Internet and Internet-based tools negatively affect student motivation to engage in more traditional forms of literacy practices? Second, because the Internet allows access to an ever-growing number of sources, students are often under the impression that the Internet will provide them immediate answers to their questions. This perception leads students to lose motivation if they are unable to find information within a couple of clicks. Also, the fact that the Internet contains an unlimited number of sources often leads students to believe that it will provide them access to all kinds of sources, including sources that are academic and reliable. Therefore, it is critical that instruction helps students develop critical literacy skills, involving, but not limited to, understanding the structure of the Internet (e.g., the various purposes of the different types of sites—commercial, academic, governmental, etc.) and evaluating Internet sources to determine the extent to which they are reliable and credible according to the norms of different discourse communities.

Third, teaching Internet-based reading as a psycholinguistic process can be a challenging task for EAP instructors (and for L1 reading and writing instructors). EAP instructors may not feel comfortable with the Internet and may feel anxious about integrating the Internet into their own teaching. Another challenge faced by EAP instructors is that the Internet is in constant evolution, thereby requiring the implementation of new forms of strategic knowledge (Mayer, 1997). These two factors support the idea that teacher preparation and staff-development programs need to provide teacher candidates and teachers with information in new technologies and technology integration in the classroom. However, while accreditation agencies such as the National Council for the Accreditation of Teachers (NCATE), which TESOL has recently joined, and the International Reading Association (IRA) have made a call for the preparation of teacher candidates in the use of new technologies, there has not been an adequate response to this call from either colleges of education or school districts (Leu, 2002).

To conclude, this paper has argued that the integration of the Internet into the EAP classroom can create conditions for the teaching of L2 reading and writing that are consistent with Eskey’s (1993, 2002) view of L2 literacy as sociocultural practice and as a psycholinguistic process. At this time, there is a strong knowledge base regarding paper texts in relation to the teaching of L2 reading and writing as sociocultural practice and as a psycholinguistic process. However, there is very limited knowledge of how the notions of reading as sociocultural practice and as a linguistic process can be integrated when the Internet is used in the EAP classroom. This
article has described the rationales supporting the integration of the Internet into the EAP classroom, has described some pedagogical principles underlying such integration, and has offered some examples of how the Internet can be used to support both views of L2 reading and writing. It is expected that future work will help to develop an understanding of L2 Internet reading and writing and of effective practices designed to assist L2 students to become strategic Internet users.

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