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A web-based mode of delivery is no substitute for face-to-face teaching, but is an alternative mode which is more flexible than classes and print resources. It provides accessibility for those who cannot attend classes, and is arguably a better option than print resources for independent learning. This paper outlines how classroom practices are integrated into the design of a web-based module for teaching reading skills and strategies. The paper discusses the types and levels of interaction that are possible in the module. It concludes by raising a number of issues that are more difficult to resolve when attempting to teach reading skills and strategies in a web environment.

While we acknowledge that there are major differences between web and face-to-face modes of delivery, the design of our web-based learning materials is an attempt to simulate the types of student-teacher and student-text interaction that are used in the classroom. The difference is that the control of learning paths is handed over to the student in web-based instruction. The student directs the sequence of learning and the type of interaction he or she wishes to have with the material. Although students have the ultimate control over the web-based material, to the extent that they can determine which information they access and which tasks they undertake, we have attempted to integrate the classroom practice of guided and scaffolded learning (Vygotsky 1978) as an optional path within the overall structure of the module.

For web development, an approach catering to different individuals learning styles and preferences had to be devised. Provision of consistent navigational features across the whole site and within modules allows users to decide which approach and which path they prefer to take — whether this be sequential movement through sections and tasks, a table of contents, or random choice of individual module sections. At any one time, users must be able to identify where exactly they are within the site as a whole, and be able to make a quick return. The freedom for students to make their own decisions as to whether they attempt tasks, call up information as their needs arise, or simply move on to the next section is recognised and built in to the web pages.

A typical pattern of teacher-student interaction used in the classroom to encourage critical thinking is teacher question — student reflection — teacher feedback. Whereas the teacher can control the reflection pause time before feedback is given, in the classroom context, the student controls the pause time on the web. Reflection time on the web will depend on whether the learner’s purpose is to seek information only, or whether a deeper learning experience is being sought.

Strategically positioned hypertext links invite the user to view additional and contextualised information - the user makes the decision to link and then return to the original passage. Similarly, hypertext links provide immediate feedback when questions or problems are posed. Although the student controls the reflection pause time in a decision to make a link, the inclusion of different types of hypertext links and styles of feedback simulates the dialogue of teacher-student interaction in the class-room.

Another type of interaction in the classroom derives from teacher-directed tasks or questions: teacher task — student reflection — student response — teacher feedback. Feedback from the
immediacy of the feedback is individualised. With more student control over web-based learning, responding to tasks (and thus the level of interaction with the material) becomes optional. If the student's purpose is to seek information only, the interaction pattern can be adapted to suit the purpose, that is, responding to tasks may be bypassed. In web-based learning, the student's needs and time available may determine the strategy adopted.

Teacher-directed tasks involve the student in looking at material, reflecting and seeking a response or entering their response into text boxes, then seeking an immediate comment. Although the tasks build upon each other, users are not locked into a series of related tasks, that is, they can move backwards or forwards at will. Although the design of the web activities encourages student responses, it does not demand a response from students before accessing comments.

The most complex form of classroom interaction to simulate on the web is teacher task — reading text — student reflection — student response — teacher feedback. The learner needs to be able to refer to a task and the related text, respond to the task, and then compare the response with the feedback, while also referring back to the task and the related text (Laurillard 1993). Although it is possible to simulate this pattern of interaction on the web, reading long texts in a screen environment may not be the preferred option for many students, particularly when a task requires a detailed reading rather than skimming or scanning.

Although possibly not an ideal solution, our design employs frames and pop-up windows to enable the display of task, text, response and feedback in one screen view. One limitation of pop-up windows is that students must remember to close after viewing to avoid multiple windows remaining open on the desktop. The design of the module incorporates choice for students in preferred media for the presentation of reading texts, that is, a screen or print version. It also includes the option to work from a printed version of the complete module.

Several issues arise in the attempt to use web technology to teach reading skills and strategies: accommodating individual purposes and abilities, monitoring understanding of processes, and in particular, representing hard-copy text objects in a web environment. Effective reading requires readers deal with the uniqueness of any given reading situation. As students adapt strategies to new situations, their attempts to overcome unexpected frustrations can be monitored in the classroom, and opportunities provided for discussion. However, to try and replicate such opportunities and monitoring online would require such extensive text that students probably would not read it. In addition, any such online discussion could not address directly the situation the student finds him/herself in.

This reading strategies module is directed towards strategies for making sense of academic texts. In fact to satisfactorily deal with strategies students can adopt, full length texts are needed. But of course, skimming/scanning by leafing through a hard copy text and by scrolling through a text on the screen are very different processes. Similarly, for example, the combining of various strategies (eg, use of index page, skimming introduction/conclusion, and scanning other sections) is better achieved on hard copy. The difference between text on-screen and in hard copy has repercussions for how strategies are employed, as well as which strategies are more or less plausible (Levy 1997; Snyder 1996; Foertsch 1995; Palumbo & Prater 1993).

Although we are aware of the limitations of teaching reading skills and strategies on the web, it is not our intention to present this mode of delivery as a substitute for a face-to-face teaching context. The module is intended as an alternative mode of delivery, and a gateway to learning, for the large numbers of the students who cannot attend LLS classes and benefit from face-to-
References


