

# Modeling and the use of graphics in Web tutorials

## A lesson from social learning theory

by Doug Suarez

How do we create effective learning environments for our students to help them learn how to use library resources? And how do we do this so they retain these skills for use throughout their lives? One potentially useful explanation that can help us plan and execute our library Web instructional tutorials comes from the discipline of social psychology.

### Social learning theory

Observational learning, or modeling, is a key component of social learning theory. Psychologist Albert Bandura<sup>1</sup> first proposed that social learning theory could explain psychological functioning in terms of a continuous reciprocal interaction between personal and environmental determinants. His assumptions were that most behavior is learned by direct experience or by visual observation; that

most behavior is learned, deliberately or inadvertently, through modeling; and that modeling can take the form of observing others performing certain skills or learning by observing representations of desired skills. Modeling can significantly help reduce the trial and error of learning.

The theory involves four essential steps in the modeling process:

- **Attention.** The most fundamental and obvious step in the learning process is paying attention. Physical discomforts such as sleepiness, sickness, or being tense and nervous are obvious examples of distractions, but there are others. If the examples used in your

tutorial lessons are not attractive and do not grab your students' attention, then they could be doing just the opposite of what you intended.

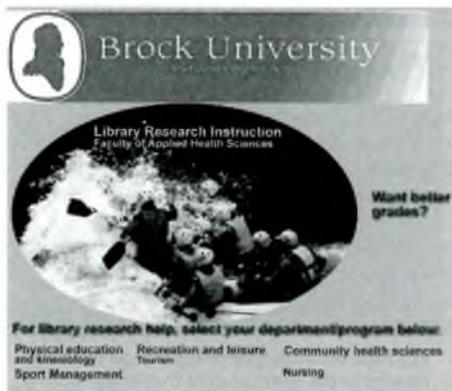


Figure 1. The white water rafting image implies dynamic team activity; it accompanies library instruction tutorials for the Faculty of Applied Health Sciences.

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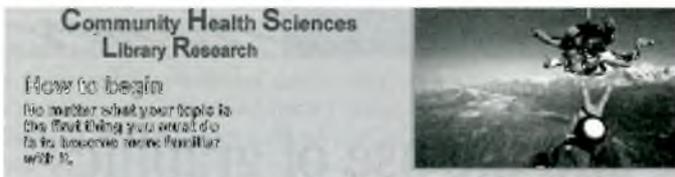


Figure 2. Skydiving image is used throughout the library instruction tutorial for Community Health Sciences Department, Faculty of Applied Health Sciences.

One good way to create attention is to use images in your tutorial that make interesting metaphors. For example, on the library instruction Web pages created for teaching support in the Faculty of Applied Health Sciences departments at Brock University,<sup>2</sup> the homepage prominently displays a large image of white water rafting. The goal is to generate interest from students in the Physical Education, Recreation and Leisure Studies, and Community Health Sciences departments by presenting a dynamic team athletic activity that implies the idea of working together for common goals (figure 1).

In practical terms, I would suggest that librarians designing Web pages use appropriate images as much as possible without compromising the page loading response time.

The images should be colorful and dynamic so that they demand attention and motivate students to proceed to the individual tutorial lessons that follow. If the images are attractive, students will pay more attention to your message. Simply placing textual instructions on a page is not adequate.

- **Retention.** In order to learn something new, we must be able to remember what we have paid attention to. We store the information we have observed in the form of mental images and verbal descriptions. We can retrieve these images at a later date to solve a similar problem or repeat the learned behavior. When we create Web tutorials, we need to use images that reinforce our message in the best ways possible to help our students recall these tutorial images and thereby learn better.

For example, in the Community Health Sciences tutorial selected from the library research instruction pages cited above,<sup>3</sup> I have used a skydiving graphic throughout the tutorial. The intention is to provide a dynamic back-

ground image that implies group participation and cooperation in a controlled, but risky, environment. While not directly health related in the traditional sense, the graphic is memorable and should help students identify with the people shown and, by association, the tutorial content (figure 2).

- **Reproduction.** Without being able to reproduce the behaviors that are necessary to duplicate a newly learned skill or skill set, we have to allow for practice. Your tutorials must provide direct practice exercises or support-specific course requirements that will reinforce these newly taught skills. Using images that remind students of the skills they have just been taught will go a long way in this process.

In the quizzes that are provided with the Web instruction pages cited above, images have been incorporated to highlight the intent of the exercises and to provide some humor to an otherwise pedestrian procedure<sup>4</sup> (figure 3).

- **Motivation.** Lastly, we need to motivate our students to imitate these new skills in some meaningful

ways. How can we do this? Perhaps we can provide quizzes within the Web tutorials (that are preferably graded) or integrate the tutorials into specific academic courses (whose requirements for term papers and exams in turn require mastery of those library skills we have been trying to teach). If your pages are well constructed with text and complementary images, and they are presented in an attractive and relevant manner, then

*(continued on page 119)*

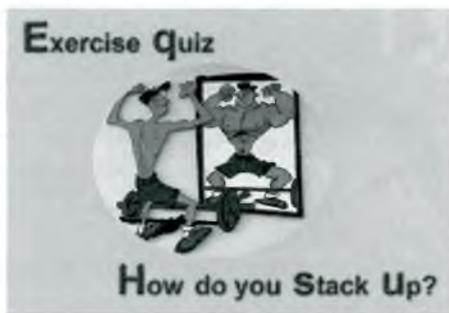


Figure 3. An example of the image used as a header in the exercise quiz that accompanies the generic tutorial for each of the three departments in the Faculty of Applied Health Sciences.



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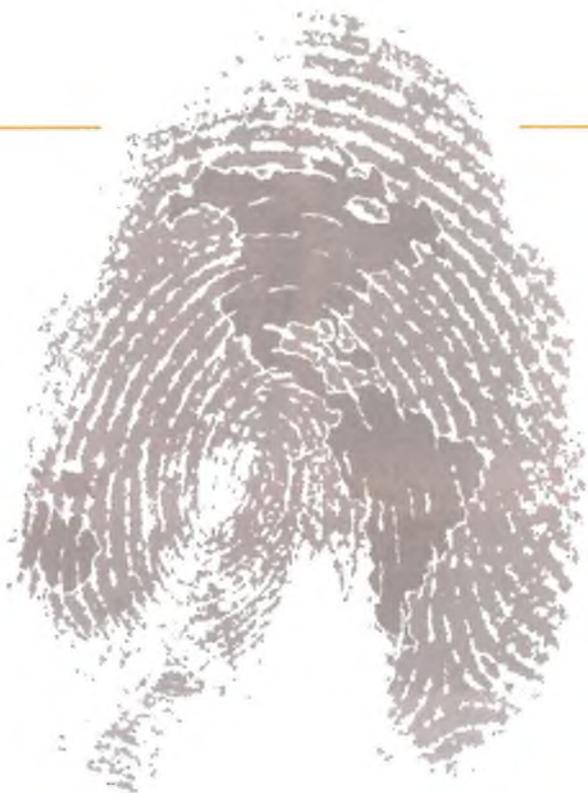
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