

Web-Based Tutorials for a Vital Statistics Course: Innovations in Teaching Technology (Part 1 of 4)

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Introduction

Technology in education is the current "hot" topic for exploration both, in practice and research. New terminology such as multimedia instruction, computer-assisted learning and training, and Web-based instruction has surfaced, bringing a hi-tech dimension to teaching and learning. The dynamic nature and increasing scope and range of the Internet has added to the complexity of this new pedagogical system. Experiments in multimedia instruction abound and numerous applications of different computer-based media now exist to assist students and teachers in their individual processes of discovery.

As we fast approach the end of the millennium, universities compete to train their students in the newest that technology has to offer, with the purpose of preparing them for the coming technological era. A unique exercise in Web-based teaching was conducted at Southern Illinois University, Carbondale. Through a series of articles, we will trace the development of this exercise, from its inception to its application.

This article, the first in the series, addresses the idea of creating Web-based tutorials for the students of a Vital Statistics course, a course in the graduate program in health education at SIUC. An important component of the course is learning how to tap into the information superhighway, process and organize the data obtained from it. In the past, such a course involved the allocation of large chunks of class-time to providing computer training to students, thus reducing the amount of class time discussing the concepts associated with vital statistics. By creating Web-based tutorials, it would become possible for students to download data from the Internet, collect and analyze it, and finally incorporate it in professional-looking presentations. Above all, such computer and technical skills could be learned by the students at their own pace and on their own time.

In the Spring of 1998, a Technology Fellowship from the SIUC Provost's Office was received to develop a series of Web-based tutorials for a Vital Statistics course. The tutorials outlined the basic steps involved in the process of downloading, importing, exporting and presenting data. This would supplement previous tutorials on using electronic mail and how to use a particular statistics program.

The Web-based tutorials for the Vital Statistics course were divided into three main parts: the first dealt with the intricacies of searching for and obtaining data from the websites of the Census Bureau and the Centers for Disease Control and Prevention. The second set of six tutorials was designed to lead students step-by-step through the process of importing data obtained from the Census Bureau and CDC into a spreadsheet program. The tutorials also showed how data, once it was downloaded, could be graphed for presentation purposes. Finally, the third set of three tutorials were designed to instruct students on how to use *Microsoft Powerpoint*, a presentation program and put together a sophisticated audio-visual presentation.

The decisions to use *Microsoft Powerpoint* was based on a number of factors. First, it is becoming one of the most popular presentation programs, and will continue to be available for many people in the future; second, it allows the incorporation of both audio and video clips to enhance the presentation. Third, it is possible to learn the basics of *Powerpoint* within a relatively short time period. Fourth, there was an effort by the authors to use a software program that can easily be used by instructors. Other programs such as *Authorware* require enormous amount of preparation as well as hardware to develop and distribute. Finally, *Powerpoint* was selected because of its ability to be converted into hypertext format for placement upon the web. Again, other programs can be placed on the web, but often at the expense of requiring a large amount of time to download. The web-based tutorials operate at the regular speed of whatever your browser and connection can allow. In addition to having web-based tutorials, the actual *Powerpoint* program is available for people to download. Thus, if the person has *Powerpoint 97* on their system, they can view the actual *Powerpoint* presentation. Although the web-based tutorials are available, there is a loss of integrity in the pictures. Thus, the actual *Powerpoint* presentation can be downloaded for best viewing.

The tutorials were ready for use at the beginning of the Fall 1998 semester and were available for downloading from the author's website (<http://www.kittle.siu.edu/course/tutorial.htm>). The subsequent articles will describe the tutorials in greater detail.