A Web-Based Tutorial on Importing and Graphing Vital Statistics: Innovations in Teaching Technology Part III

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Introduction

Once data is downloaded from the Internet, what can be done to manage it and make it comprehensible?

We have reached the final segment of our series. To briefly recapitulate the sequence of events: a series of Web-based tutorials were created to assist students enrolled in a Vital Statistics course at *Southern Illinois University Carbondale* in learning how to download data from the U.S. Census Bureau and the Centers for Disease Control and Prevention (CDC). The premise behind the creation of the tutorials was to provide a resource that students could access, on their own time, to practice or learn the computer skills involved in downloading data from online public data-warehouses set up by the CDC and U.S. Census Bureau. Crucial to the training of a health educator preparing to practice in the 21st century is learning to be proficient with computer technology, learning to tap into the information superhighway and learning to process and analyze data obtained from it.

The two previous articles in the series described the process of downloading data from the CDC and the U.S. Bureau of Census, as delineated in the Web-based tutorials. All the tutorials were created using Microsoft PowerPointTM which allows for the graphic depiction of Internet frames such that the users are precisely guided through the interactive data retrieval systems set up by the U.S Bureau of Census and the CDC. It is not enough to be able to successfully customize a data request and receive it via e-mail, once the data is received, it is important for the user to know how to process it and incorporate it in a graph for presentation purposes. This article in the series deals with a description of the Web-based tutorial that outlines the process of importing data into a spreadsheet program and creating a simple graph. The spreadsheet program of choice was Microsoft ExcelTM.

Once the downloaded data is saved in an ASCII or text-only format, it can easily be imported into Microsoft ExcelTM. A "Text Import Wizard" feature in Microsoft ExcelTM allows the user to tailor the datafile to fit into the spreadsheet columns to the user's precise requirement through a process of three easy steps. As soon as a datafile is selected to be opened into Excel, the Text Import Wizard will pop up. The Text Import Wizard will prompt the user to select the default "Delimited" format, under which, the tutorial instructs, the user must choose the "Other" option of delimiters and place a "." or period in the space provided. The numbers in the data received are usually separated from the text by rows of periods. By selecting the "Other" and period option of delimiters, Excel will eliminate the periods and replace them by columns.

Although the newly imported data is in column format, it is spaced out through the columns. The tutorial further provides instructions on how to "parse" the data or how to arrange the data into two immediate, sequential columns by clicking the right mouse button and performing a series of "cut" and "paste" functions. Once the data is neatly placed in two columns, it is ready to be graphed. The tutorial describes the process of choosing the "Chart Wizard" feature in Microsoft ExcelTM to copy the selected data into a graph. All the user has to do is to select the variables from the columns, click the "Chart Wizard" icon from the tool-bar and proceed through the options it provides. In particular, the "Chart Wizard" will select a default graph type for the data and immediately offer a preview. At this point, the user is able to make changes of color, size and appearance in the graph and add appropriate legends to its axes, if any, and a title to the whole page. A completed graph will appear on the spreadsheet page, ready to be printed!

Through these articles, we have completed the description of three very important processes that students enrolled in Vital Statistics at Southern Illinois University, Carbondale, learn, namely: how to access and download data from the U.S. Census Bureau and the CDC, and finally how to manage and organize the data into a graph. It is the intent of the authors of the series, to excite an interest among health educators and instructors to access the tutorials and use the information in the articles to create similar computer assisted instruction modules for their courses.