

World Wide Web Project

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Abstract: This report describes the methodology and results of a project designed to help college students understand selected differences and similarities among regions of the world, while discerning the value and use of Web information in the context of a regional study of our planet. Students were asked to 1) use only World Wide Web sources to obtain data and information, 2) illustrate their findings on a map, and 3) describe the findings and their Web experience in a paper. Over a period of two years, the methodology and results varied slightly, but overall the outcomes were as intended.

Introduction

In the past few years, the World Wide Web (WWW), using graphical servers and browsers that run over the Internet, has rapidly expanded its capacity to where it now offers billions of pieces of data to millions of users around the planet. The reliability and use of that data have become controversial in education. Garbage in-garbage out is a phrase oft-repeated by skeptics, while believers constantly tap this resource for everything from Central Intelligence Agency data to the political opinions of a dozen or so Webmasters who maintain sites on East Timor. This project was designed to introduce students to the plethora of Geographic information available on the Web, to allow them to use their personal interests to select the subjects to be investigated, and to help them improve their understanding of Geography by comparing regions of the world. The project also required students to demonstrate some basic map skills by illustrating their data on a world outline map using symbols, colors, or patterns of their choice.

Methodology

Students were given detailed written instructions as well as a complete in-class description, which included information on starting point Web sites. The written instructions included specific details on due date, format of paper, and point distribution for grading. Students were not given specific data categories in the written instructions. Some suggestions were made in the classroom discussion, and will be described in the Results section. The general instructions to students were as follows:

Summary of Instructions to Students

After a preliminary investigation into data and other information available on the World Wide Web, complete a project proposal that includes

the two categories of data to be investigated, the 13 countries on which this data will be reported, and a brief list of Web sites already visited.

Using only the World Wide Web, find two pieces of data from the same two categories for 13 countries, two countries from each of six specified regions and either the United States or Canada. Find additional information on the Web that may give further insight into the reasons for the differences and similarities of that data when compared to the data of other countries and regions investigated.

Illustrate the data on a map.

Write a five to seven page research paper describing the results of the investigation, including possible reasons for the differences and similarities among countries and regions, and include a description of Web crawling problems and/or successes.

Detailed Student Project Guidelines

Getting started... If you have not done so before, the first thing you must do is familiarize yourself with how to access information using the World Wide Web. Web site addresses usually begin with `http://www` followed by a specific set of letters unique to that site, followed by a classification, which is similar to a zip code. Currently, these classifications are as follows:

.gov	Government (e.g. Census Bureau, CIA, Dept. of Education)
.edu	Education (e.g. San Jose State, Stanford, Harvard)
.com	Commercial (business addresses)
.org	Non-profit Organization (e.g. U. N., Population Reference Bureau)
.net	Network (e.g. Pacbell, Netcom)

To find information on the Web without a specific address, you should start with a Search Engine. Examples include Yahoo, Altavista, and Infoseek. These Search Engines allow you to enter key words and phrases and search for appropriate Web sites. If you are unfamiliar with searching for information on the Web, these Search Engines will also give you specific instructions on how to find what you are looking for without spending a lot of time searching through useless (for this project) Web sites.

What you are looking for... The information you are required to find for this project includes two pieces of data from the same two categories for 13 different countries as follows:

Either the United States or Canada and two different countries from

each of the following regions as delimited by your textbook:

Europe (not including countries in the next region listed)

Newly Independent States of the former Soviet Union

Southwest Asia and North Africa

Africa South of the Sahara

Asia (except Southwest) and Oceania

Latin America

You also need to investigate general information related to that data for each country. Look for data and related information about subjects that interest you, that may be related to your major field of study, and/or that could be used for other research projects.

Make notes on your Web experiences, including information about sites that were particularly informative in the context of this assignment, or particularly inaccurate or biased when compared to other sites.

What you will do with the information... Illustrate your data on a political outline map of the world. You do not need to draw your own base map. Blank outline maps are available at the campus bookstores or on the Web. Include a title and legend that explains the patterns, symbols, and/or colors you are using to show the data.

Write a five to seven page paper reporting the results of your investigation. Include information about the data you gathered, general information relating to that data, your view of the meaning of that data and related information in the context of a regional comparison, and an account of your experiences using the Web. Attach a bibliography of Web sites from which you used information for your map and paper, and a separate list of at least 25 Web sites you visited.

Results

This project was assigned for two years to several hundred students at San Jose State University who were enrolled in General Education World Regional Geography classes. Most of these students had no prior formal Geography instruction, and this was the only Geography course they would take during their academic career.

Overall results were generally very positive. Students reported on a variety of data, and wrote very specific comments about Web sites. Many students commented that they spent an inordinate amount of time on the project for various reasons, many of which were related to the amount of data and information that is available on the Web. The quality of the written reports was comparable to that of more traditional assignments.

Samples of student comments included in papers:

"After I had completed my map I sat there and studied it for a while...I wanted to make sure...information was correct...but the other was...it was great to see all the information I had collected in a visual representation."

"Thank you, Mrs. Holstrom. Doing this project opened up a whole new world for me." (from a student who had never used the Web)

"Out of all of the numerous term projects that I have done during my years in high school and this, my first year in college, this term project had to have been the most interesting project that I have ever done."

"I'm sorry, but I'll have to drop this class. I've never used a computer and I'm too old to start now."

The results of the map portion of the project were varyingly interesting, fun, encouraging or appalling. When the project was in its infancy, little instruction was included on the details of illustrating data on a map. That omission proved fortuitous. Most students did not include a title; many demonstrated little knowledge of the purpose and use of symbols, colors and patterns. For example, students would put one color on top another, use two different colors side by side in the same country, or use a different symbol, color, or pattern for every piece of data for every country – defeating the purpose of a regional comparison. Legends were occasionally omitted from the map, or submitted on a separate page. Some students turned in a separate map for each country or region, rather than use a single world map illustrating a regional comparison.

However, many students submitted maps that would be acceptable for a beginning cartography class project. Some used very creative map symbols to represent their data, such as oil wells, tires (for number of automobiles), airplanes, and soft drink bottles. One student used the word "baby" to illustrate the birth rates in four categories, the highest birth rate represented by the entire word and the lowest represented by only the "b". The media used to complete the maps varied from crayons to computer mapping programs, with everything in between. The quality of the maps had little connection with the media used, although the few computer generated maps were generally very neat, but did not necessarily illustrate the data more appropriately.

Conclusion

This project has proved to be very successful with only a few isolated problems. At least 25% of students assigned this project had never used the World Wide Web, and a few had never used a computer. For these students, the learning curve in completing this project may be unfairly steep. However, surely part of our mission as Geography educators is to encourage students to acquire information and skills that will help them in future careers. If they have not yet learned to take advantage of computer technology, and investigate the variety of information sources available through this medium, this project encourages them to begin exploring that capability.

Students investigated only two facts for only 13 countries. This may not have been a fair base from which to do a regional comparison, depending on which countries were chosen. Perhaps the number of countries could be expanded, and more specific guidelines issued on which countries are to be used.

If students were given specific examples of data categories, e.g., birth rates and female life expectancy, a much higher percentage of the reports were on those two categories. Students should be given specific data examples that cannot be used, either because that data is not available worldwide, or simply because they need to choose data that has not been given as an example.

This project required students to view limited data and information about various countries in various regions which, hopefully, aroused their curiosity about other Geographic factors affecting the world and its people. It certainly expanded their concept of the scope and relevance of Geography.