

The UCSC NetTrail: Web-based Instruction for Online Literacy

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Background

The Library seeks to provide not just information, but the resources and assistance needed to help students become life long learners and knowledge seekers. Being able to find, evaluate and effectively use information sources from an increasing variety of formats is key to this process. However, many students arrive without essential basic online or research skills and face the lack of any centralized campus wide resource to aid them.

Instructional Need

There is little disagreement among faculty and librarians that students need to acquire basic skills to begin the research process. It's the method of delivery that has proved to be a major sticking point. The logistics of a de-centralized campus allows for great diversity in a student's first year experience, but it also fragments the instruction process. The majority of first year students participate in a Core Course, an ideal opportunity to make contact with thousands of students struggling to come up to speed in a research oriented environment. The challenge was how to integrate a library component given:

- no centralized organization either across campus or at the individual College Level;

- core courses occur at about the same time at all colleges, presenting the logistical challenge of working with several thousand students at once;

- current models of instruction (large group lectures, individual seminars, workbooks, exercises, etc.) were not working given limitations of library staff with classes so content packed that instructors were unwilling to give up large group lecture time;

- students were facing other courses that made assumptions about their abilities to use online tools, perform research, or use the Internet that did not match their actual skill and knowledge levels.

The UCSC NetTrail

The library was not alone in identifying a need in this area. A systemwide conference on undergraduate education brought together a self selected UCSC coalition of librarians, computer center staff and faculty to develop UCSC's first campuswide online literacy course and work began in the summer of 1997 on "The UCSC NetTrail" (<http://nettrail.ucsc.edu>). The NetTrail was developed to set a basic level of computer literacy on campus which would allow faculty to presume that students are able to make use of online resources without doing explicit instruction in their classes. It is just the

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first step along the information literacy journey. Through a set of four self-paced modules, students are provided an introduction to browsing the World-Wide Web, using E-mail at UCSC, connecting with on-line Library Resources, using Newsgroups, and understanding Netiquette. This course is aimed at users new to the online environment or those with differing starting points in terms of initial computer skills and interests. It is aimed at providing a solid grounding in basic skills as well as an introduction to more specialized applications used locally at UCSC.

Each module is designed with a similar format - self-paced learning materials that introduce and “teach” the topic, and one or more exercises that allow the students to test their knowledge. The NetTrail exercises interact with electronic scripts to provide immediate feedback to the students, as well as record exercise completion information for instructors to track which students have successfully completed specific modules. The exercises require a live connection to the resource presented. In order to complete the exercise, students need to be able to connect, then complete a task and successfully answer questions about the resource. Each module takes about 20 to 30 minutes to complete. They may be taken alone, all at once, or separately in any order .

The diverse team approach to developing this resource worked surprisingly well. The timing of this project could not have been better from a campus perspective. For example, the library was in the midst of beginning work on a similar resource at almost the same time as this project came together. Team members were for the most part self selected. The group was formed by those who worked closely with undergraduates and online resources, had been interested in instructional issues and were willing to develop supporting resources. The diverse opinions and perspectives this brought to our discussions were ultimately key to our success.

Usage

The NetTrail is available on demand as a web site. To ensure that students have help if needed, we advise students and instructors to explore the NetTrail from one of the many campus Instructional Computing Labs where assistance is available from trained support staff. Instructors have the option of having students take the NetTrail on their own, either in a lab or on their own personal computer, or of arranging for group sessions in an Instructional Computing Lab. Instructors register

their courses using a short online form and are then able to query the NetTrail logs for student usage. Reports include summary course reports; detailed course reports, individual student reports and overall summary reports.

The NetTrail has been used as of winter 1998 by over 1,000 students from Core, Writing, Humanities, and Computer Literacy/ Engineering courses. Instructors can assign the tutorials without giving up class time and have been able to send students to labs where help was available. In addition to course integrated instruction, other uses for this tutorial include: on demand reference for students needing an introduction to a set of skills while in pursuit of another topic (e.g. students doing Library research who need an introduction to using the WWW), faculty and staff who may need additional Internet instruction, distance learning for students off-site, and integration into a future UCSC General Education requirement around information literacy.

Evaluation

An initial pilot phase of the NetTrail project included conducting usability tests with a small sample of students and staff. Information received via our evaluation logs and continued usability testing with more students, staff and several faculty members provided additional feedback used to fine tune the modules. Feedback has been consistently positive on content, navigation, look and feel of the NetTrail. The library module has consistently been given the best review, with even experienced users noting its usefulness. In tracking usage statistics, we discovered that students often went through additional modules even when they were only required to do one. Highest used modules are the Library Resources and Web Browsing. As of July 1998, there have been over 2,200 hits on the site with the Library section receiving the highest number of hits.

The faculty and instructors who assigned the tutorials to their students found that the additional online background aided their students in a number of ways. For writing classes, it meant that their library research sessions could move more quickly beyond introducing skills and the concept of the WWW. Instructors could assign the tutorials without giving up class time and were able to send students to labs where help was available. Several instructors took the tutorials themselves and gave their feedback on usability as well.

Continuing Development

No project of this nature is every finished or static. Many initial decisions around development involved areas which had to be deferred to a later date due to time and funding constraints. A smaller Continuing Development group has continued work on refining and updating modules as needed. In 1998, we competed for campus wide Instructional Technology funds and, based in part on the successful initial introduction of The NetTrail, were awarded a \$31,750 grant that has allowed us to revisit deferred items and take development further. During the summer of 1998 some of this money was used to hire an editor to give a consistent voice to all of the NetTrail modules, as they had originally been written by five separate authors.

As a project that is never really finished, it faces some unique challenges. One of these challenges is keeping the interest of a cross campus group together and focused on making sure the NetTrail site is current. Already, some members of the original development group have dropped out, as their own roles or priorities have changed within their own careers. As anyone who has put together a web site before knows, it needs continual maintenance. As an example, the web graphics within one portion of the University of California systemwide library catalog we use to teach library research skills have already changed twice since creating the NetTrail. Each time the graphics change, we must recreate all of the corresponding screen captures and substitute them for the proper ones. We hope to use part of the grant money to assist in hiring part time help to make changes such as these.

Although the NetTrail has received high praise from those who have used it, publicity is time consuming and we would like to increase campuswide usage even further. One strategy we adopted was to present the NetTrail to faculty groups working to change student general education requirements. Currently there is a proposal by an educational policy committee to revise the general

education requirement on our campus to include the ability to use a research library and at least the basics of modern information technology. Members on the committee are aware of the NetTrail and are advocates of using it to address the library research requirement.

Initial Development Team (1997/98):

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Continuing Development Team (1998/99):

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