

A Laboratory Experience for Teaching Participatory Design in a Human-Computer Interaction Course

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OVERVIEW

Designing software products that provide the functionality to perform the intended use while fitting the user's conceptual understanding of how things work presents many challenges for the software designer.

This poster focuses on the development of a curriculum for a Human-Computer Interaction (HCI) course that uses a practical learning environment for this important aspect of design.

In particular, we describe the inclusion of a long-term design project with volunteer users and the creation of a low cost lab to support team design activities and user interaction in the HCI course.

HCI COURSE

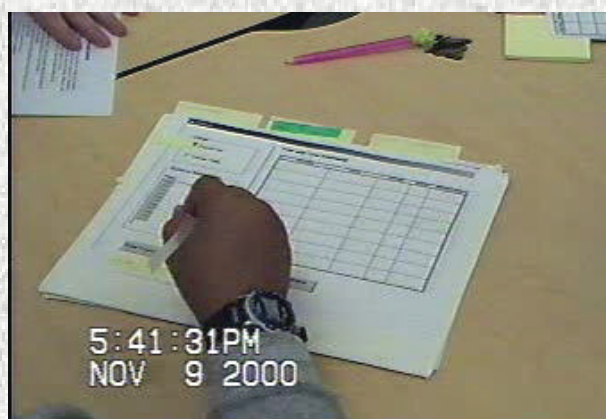
The HCI course at Southern Illinois University Edwardsville is a required course. The prerequisite to the course is "Interaction Programming." Students typically take the course in their junior year just prior to the Senior Project Capstone Course. Course enrollment is usually between 15 and 30 students.

The course is structured around the steps in the Contextual Design approach. The course curriculum includes practice with ethnographic techniques, such as interviewing and observation and a term-long design project. HCI students work in teams. Students in introductory computer science courses volunteer as potential users of the product being designed by the teams.

CONTEXTUAL DESIGN

Contextual Design is an approach to designing products directly from an understanding of how the customer works. The HCI course is structured around the steps in the Contextual Design approach:

- User interviewing & observation
- Data modeling & model consolidation
- Brainstorming
- Paper prototyping
- Usability testing (high fidelity prototyping)



ETHNOGRAPHY

Ethnography is a method of research that involves gathering data within the context of the natural setting. Through out the Contextual Design process, members of a design team engage in the same skills used by ethnographic research.

Two aspects of the redesigned curriculum for the HCI course have focused on students' development of ethnographic skills. First, materials and exercises that focus on observation, interview and data interpretation are part of the course. Second, students in the course have the opportunity to use these skills with real potential users of their term-long design project.

SUMMARY

The revised HCI curriculum with the inclusion of ethnographic techniques, term-long software design project using volunteer users, and the use of the HCI laboratory has increased students' understanding and appreciation of participatory design. In particular, the approach taken in the revised HCI course is particularly successful in raising student awareness of the importance of the user as a partner in the design process. Several students reported that the HCI course "made me look at my job in new ways."

Over the four semesters of this study, each group completed all stages of the conceptual design process to successfully design a product based on user input.

REFERENCES AND MATERIALS

Course textbook:

Beyer, H., and Holtzblatt, K. (1997) *Contextual Design: A customer-centered approach to systems design*, Morgan Kaufman Publishers, San Francisco, CA.

Course website (with teaching materials):

www.cs.siu.edu/hci

Video Available on Request:

Paper Prototyping and Card Sorting

ADDITIONAL INFORMATION

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