New Issues in Teaching HCI: Pinning a Tail on a Moving Donkey

Jonathan Lazar
Dept. of Computer and Information Sciences
Towson University
8000 York Road
Towson, Maryland 21252 USA
+1 410 704 2255
jlazar@towson.edu

Jenny Preece
Dept. of Information Systems
UMBC
1000 Hilltop Circle
Baltimore, Maryland, 21250 USA
+1 410 455 6238
preece@umbc.edu

Jean Gasen
Dean of Information Technology
Capital One Services, Inc. (Attn:12011-0127)
5600 Cox Road
Glen Allen, Virginia 23060 USA
jean.gasen@capitalone.com

Terry Winograd
Dept. of Computer Science
Stanford University
Stanford, California 94305-9035 USA
+1 650 723 2780
winograd@cs.stanford.edu

ABSTRACT
As technology changes, so does the area of human-computer interaction. HCI education must continuously change to meet the new challenges to user interaction. The World Wide Web and other distributed networks, hand-held devices, and embedded computing all present new challenges for user-centered design methods, usability testing, and other forms of evaluation. In addition, as more people use technology, the diversity of users increases, requiring increased attention to concepts such as accessibility and universal usability. This panel will address the challenges of keeping HCI education up-to-date and offer approaches that have been successfully used. The four major topics addressed by the panel will be 1) the challenge of rapidly changing technology, 2) new methods for user-centered design, 3) student involvement with users, and 4) balancing HCI theory and HCI practice.

Keywords
Education, training, curriculum, service-learning, team projects, usability, world wide web, user-centered design

INTRODUCTION
As technology constantly changes, HCI educators struggle to keep their courses relevant and up-to-date. Students may now need to learn not only about HCI as it relates to traditional informational systems or the web, but also to hand-held and wireless devices. For example, while evaluation practices for information systems in general are well tried and tested, criteria against which to evaluate some of these new devices do not exist. Currently there are, for example, no established heuristics for evaluating hand-held devices or wearable computers. Another area where more emphasis needs to be placed is on understanding the social interaction necessary for successful collaboration and social interaction online.

It can sometimes be hard for students to truly grasp the importance of the user interaction issues when technology is changing so rapidly. Faculty frequently tell stories about students who say something along the lines of "because I can use this system with no problems, I think that everyone else can, too!" It is, therefore, important to have students not only learn the theory and practice that underpins usability, but also for them to experience working with users who have different needs and perceptions from themselves. When students work with real users, their notion of what is "common sense" or "obvious" is often challenged and they may experience an "a-ha!" moment when the theory and practice suddenly are connected in their minds, through real-world experiences with users.

The limits of user-centered design are being challenged by collaborative, distributed systems, to extend the concept to include more user participation in design (i.e., participatory design) and notions such as community-centered design.

While established methods are still useful they require a 'make-over' to ensure they are relevant to current design needs. The concept of 'user-centeredness' for students must also be put into practice with combinations of work-place visits, internships and experience of different kinds of

CHI 2002, April 20-25, 2002, Minneapolis, Minnesota, USA.
ACM 1-58113-454-1/02/0004.

usability testing including laboratory testing and user testing in the field. All of these changes are challenging for today's HCI educators who must try to pin the HCI tail on a donkey that is moving constantly.

TOPICS TO BE ADDRESSED

There are four major areas of HCI education that will be addressed by the panel:

1. Rapidly Changing Technology

- Teaching about HCI issues for hand-held and wireless devices

- Keeping up with governmental laws, guidelines, and rulings that affect usability (such as universal usability)

- Appropriate evaluation methods for distributed systems

2. New Design Methodologies

- Adapting established methods of user-centered design and evaluation to new products, many of which are highly distributed, such as web sites, collaborative systems and online communities.

- New approaches for participatory design with populations such as children and seniors

- Understanding the social interaction issues that are very important for successfully implementing networked systems

- Appropriate techniques for students to experience a design process

- Structuring team projects for maximal learning

3. Student Involvement with Users

- Giving students experiences working with real users

- Showing users the challenges that other users face

- Educating students so that they are sensitive to the needs of many different user populations, including users with disabilities

- Service-learning approaches to HCI courses

4. Balance of Theory and Practice

- What different courses should cover in terms of theory and practice (i.e, undergraduate and graduate courses have different needs).

- Addressing the appropriate theories that should be taught.

- The role of practice in different types of courses and how should we try to provide it.

- Given that HCI is a multi-disciplinary subject, the scope of HCI is challenging to define. The subject has developed and expanded considerable since early efforts to define it for education

PANEL FORMAT

The panel will be chaired by Jonathan Lazar and it will take the following format:

1. Jonathan Lazar will briefly introduce each panelist (5 minutes total)

2. The audience will be polled using a "show of hands" approach, to determine the types of courses taught, undergrad/grad level, and the different departmental disciplines.

3. A few minutes of video will be played, where students describe their experiences in HCI-related courses. This video will help provide the "student point of view" on each of the four main areas of issues outlined above and will provide a jumping off point for the panelists to give their viewpoints. Panelists will have seen the video in advance of the conference.

4. The first two panelists will address the topics of rapidly changing technology and new design methodologies. As a part of their talk, they will share their own experiences. This will help provide the "faculty point of view"

5. Audience discussion on the first two topics will last 10-15 minutes and will be in a question-and-answer format.

6. The second two panelists will address the topics of student involvement with users and the balance of theory and practice. As a part of their talk, they will share their own experiences

7. Audience discussion on the second two topics will last 10 – 15 minutes and be in a question-and-answer format.

8. There will then be an open question and discussion period in which the audience can direct their questions at specific panelists or at all the panelists (15- 20 minutes).

TARGETED AUDIENCE

The intended audience is anyone who is involved in teaching HCI-related courses such as Introduction to HCI, Usability Testing Methods, Web Usability, Research Methods in HCI, Internet Culture, etc. This includes both university professors and corporate trainers.