
Developing a Living HCI Curriculum to Support a Global Community: CHI 2014 Workshop Proposal

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Abstract

ACM SIGCHI supports research to understand the philosophies and practices that inform HCI education in order to support a broad community of students, academics, and industry practitioners around the globe. This workshop builds on 3 years of research and collaboration to engage the HCI community in developing a living curriculum for HCI. This includes selecting the platforms and tools required to support a community, defining the parameters of content generation and community participation, and identifying existing and new collaborators to support this ambitious work.

Author Keywords

Human-computer interaction; education; curriculum development; community; cross-cultural research

ACM Classification Keywords

K.3.0. Computers in Education: General

Topic and Rationale

Human-computer interaction is a discipline concerned with the design, evaluation and implementation of interactive computing systems for human use and with the study of major phenomena surrounding them.

—Thomas T. Hewett et al., 1992

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The above quotation is taken from the SigCHI 1992 Curriculum on Human-Computer Interaction (HCI) Education, a groundbreaking report that provided a blueprint for early courses in HCI [6]. Recognizing the field's diverse perspectives, Hewett and his colleagues provided separate frameworks for programs based in computer science, programs based in management of information systems, and for interdisciplinary programs for HCI. Recognizing the field's constant state of change, Hewett's committee characterized their work as the first step in an iterative process. Indeed, this perspective is codified in a 1996 revision of the curriculum.

But the general premise of a formal, content-based curriculum is contended: some believe that formal HCI education should instead "teach people generic skills that will help them adapt to a world where change is the norm" [9]. In this sense, the role of HCI education may be to create *progressionals*: practitioners, researchers, and educators who keep abreast of technology to master new methods of design and evaluation while maintaining the core values, tenants, and perspectives unique to HCI [3]. Or, to borrow again from Hewitt and his colleagues, the role of HCI education may be to create people who *HCI-Oriented* instead of *HCI-centered* [6].

Moore's law describes the exponential growth of computer hardware. Since the 1992 curriculum, advances in mobile devices, agent-based technologies, and pervasive and ubiquitous computing have been especially inspiring. The HCI community must certainly understand how these new technologies and emerging interfaces are designed, built, and evaluated, but also how these advances support social processes. This

includes an emerging focus on contexts: HCI is studied in organizations, in the collection and organization of informational or educational resources, and in leisure activities. Understanding these new topics, and the questions that they pose, requires the HCI community to look for new perspectives. As HCI becomes increasingly interdisciplinary, knowledge borrowed from the fields of psychology and design become especially integrated with the traditional perspective of computer science and systems engineering [5].

Educational processes, or methods of content delivery, are similarly evolving to new topics and theoretical perspectives. Massively open online communities (MOOCS) receive considerable attention as blended learning courses in which face to face and online are used symbiotically [4]; 3D virtual worlds [12] and alternate reality games [2] are also identified as new teaching tools. Increasingly, YouTube videos are finding their way into the class room, so are a multiplicity of social computing systems (e.g., Facebook, Twitter, Flickr, etc.) that are used for design examples, analyses, the bases for projects across different disciplines: information, computer science, design, sociology, psychology, and more.

Finally *audiences* are diversifying and expanding. These new audiences include younger learners such as high school students [11], and also student and practitioner learners around the globe. Studies that focus on a single country—such as Brazil [10], South Africa [7], and Sweden [8] — provide valuable case studies that elucidate similarities and differences between countries. Researchers also make direct cross-cultural comparisons, like by examining how students at

different universities complete a heuristic evaluation task [1].

In recognition of these important changes to the field, members of the ACM SIGCHI community and the ACM SIGCHI Executive Committee decided to update Hewett et al.'s 1992 curriculum in the form of a "living repository of HCI education ideas and resources." Specifically, our work was funded in 2011 to investigate the philosophies and practices that underpin present and future HCI education. The knowledge that our research supports—including the knowledge collectively produced by Workshop attendees—will be used to help SIGCHI understand how to best support HCI education at conferences, through chapters, and by the provision of online resources.

This workshop builds on three years of data collection and analysis that reflect the diverse perspectives of a growing community. To date, we have analyzed the perspectives of 547 survey respondents and 54 interview participants representing 30 different countries [3]. We involved our community more deeply in our research through roundtables hosted at CHI '12 and '13. With approximately 20 guests attending each, these meetings allowed us to share our data, confirm our emerging analysis with guests, and and solicited suggestions for future work. Our emerging results and analysis are shared with the SIGCHI Executive Committee on a bi-annual basis. Our research has also been used to influence ACM's Computer Science curriculum, and been highlighted as a cover story in *Interactions* magazine [3].

Our data collection is an ongoing process, and we solicit both new information and continued reflection on the

interpretation of our research results. With that said, after 3 years we have sufficient understanding of our community's practices and needs to begin drafting an action plan for a living curriculum. This curriculum does not replace the 1992 work; rather, it is conceived as a collective space for students, academics, and industry practitioners to submit contributions that support the understanding and practice of HCI education worldwide.

Thus, this Workshop has two key tasks. First, we hope to build a shared understanding of emerging content areas, innovations in teaching and learning, and culturally-specific methods and topics in HCI. This knowledge will help us answer the question, "*What are the characteristics of a living HCI curriculum?*" Specific issues to be addressed include:

- What are the key emerging areas in HCI that will continue to shape the field?
- Which innovations in teaching and learning can support these new content areas?
- Which aspects of HCI education are universal, and which aspects are culturally determined?

Once we settle a shared understanding of what a living HCI curriculum will look like, and the types of content it will contain, we can begin to outline how this living resource should be designed. Specific issues to be addressed include:

- Which technological infrastructures can best support a community of students, practitioners, and educators? Is a single, centralized platform a key focal point?

- How can different processes be designed to support content generation? How will content be vetted once its received?
- Who is willing to commit to supporting a living curriculum? How can we best mobilize our community?

By collectively working through these issues, we will be able to present SIGCHI with a more complete picture of the broad HCI community through our ongoing research and analysis. More importantly, this Workshop will help us begin to construction of a living curriculum supported by SIGCHI and defined by the broad community, represented by our Workshop attendees.

A concrete product from this workshop will be a collaboratively authored report that will form the basis of an agreement to develop the living curriculum.

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