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# Developing a Community of Practice to Support Global HCI Education

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**Abstract**

ACM SIGCHI has been supporting research in HCI education for many years, most actively from 2011-2014. At CHI2014, a workshop on developing a new HCI living curriculum was held, building on three years of research and collaboration. We believe the time is right to develop and implement the suggested HCI living curriculum. We propose a hands-on workshop to develop a concrete active community of practice of HCI scholars and educators, sharing and collaborating to develop course outlines, curricula, and teaching materials. The workshop will define the conceptual framework and user experience of the HCI living curriculum, develop its information architecture and infrastructure, and evaluate how existing platforms do and do not fulfill the proposed needs. Post-workshop initiatives will aim to move towards implementing the first iteration of the living curriculum.

**Author Keywords**

HCI curriculum; education; information architecture; community of practice.

**ACM Classification Keywords**

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

## Background

From 2011-2014, the ACM SIGCHI Executive Committee sponsored a project to investigate the present and future of Human-Computer Interaction (HCI) education [1]. Research consisted of 52 interviews conducted with SIGCHI community members, as well as 616 surveys completed in English, 156 in Brazilian Portuguese, 52 in Mandarin Chinese, and 48 in Chilean Spanish. Questions focused on what educators, practitioners, and students considered to be top priorities for the field of HCI. Additionally, educational resources were compiled, and discussions were hosted at the annual CHI conferences, including discussion lunches, HCI education workshops, and SIGCHI Town Hall meeting discussions [1].

A recurring theme that emerged throughout the project was participants' desire for a collection of online resources shared among HCI educators. The goal is to create a community of practice (CoP) of HCI scholars and educators, sharing and collaborating to develop course outlines, curricula, and teaching material, known as a *living curriculum* [2].

A CoP is a group "of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis" [3]. CoPs are viewed as an inventive way to combine working, learning, and innovating [4]. Learning and knowledge creation occur through socialization, and members of the community often develop a set of shared resources to engage more effectively [5]. A growing number of Open Educational Resources (OER) are being shared, reused, and republished, supporting collaborative teaching and learning [6, 7].

There are currently very few CoPs related to HCI Education. The HCI Bibliography: Education in HCI webpage [8] contains a collection of resources for students and educators interested in HCI. However, it is not considered a CoP in which HCI educators can share content related to HCI curricula. Similarly, the current infrastructure of the SIGCHI HCI Education Community [9] does not support the envisioned communication and sharing of resources of a CoP of HCI Educators. Therefore, before the living curriculum can become a reality, there is a need to investigate outside community platforms or methods of extending the current infrastructure.

A workshop on developing the HCI living curriculum was held at the CHI2014 conference [10]. Several visions of what this new curriculum could be were presented. More recently, a qualitative study consisting of a series of individual semi-structured interviews with HCI educators was conducted at the CHI2017 Conference in Denver, Colorado, May 6-11, 2017 [11]. The aim of the study was to investigate the preliminary framework of a HCI living curriculum CoP. In particular, the authors were interested in the following three research questions:

1. How do stakeholders envision a HCI living curriculum?
2. What are the requirements for a HCI living curriculum?
3. What are the barriers to a HCI living curriculum?

The paper presents preliminary ideas, use cases, and design requirements for a HCI living curriculum, based on data collected from HCI scholars and educators [11]. However, to this day, the proposed CoP has not been designed nor implemented.

This workshop focuses on developing the conceptual framework for the HCI living curriculum CoP. Participants will be asked to produce a position paper outlining their vision of the CoP and living curriculum. Through collaborative brainstorming and ideation exercises, participants will also articulate the information architecture and infrastructure of the CoP as well as its long-term viability. Post-workshop initiatives will aim to move toward implementing a live version of the CoP for further iterations.

While this workshop is targeting participants with research interests in the area of HCI education, its scope is much broader. Indeed, we will make an effort to recruit participants who are interested in the design of collaborative UIs and/or applying a User-Centered Design (UCD) approach to the design of CoPs.

The goals of the workshop are:

- To develop the conceptual framework and user experience of the HCI living curriculum;
- To assess what tools, platforms and services may already be available and to assess their long-term viability and value to the HCI community;
- To articulate the information architecture and infrastructure for a CoP of HCI educators;
- To create working groups to implement the first iteration of the HCI living curriculum post-workshop.

## **Organizers**

All of the organizers are active HCI educators and researchers and play key roles in promoting the development of the HCI living curriculum. Additionally, three of the organizers are lead authors on previous research articles on HCI education referenced in the Background section [1,2].

**Olivier St-Cyr** is an Assistant Professor, Teaching Stream in the Faculty of Information – iSchool at the University of Toronto, in Toronto Canada. He is the liaison for the iSchool User Experience Design (UXD) concentration. His research interests lie in the areas of HCI/UX education and HCI/UX curriculum development. Prior to joining the University of Toronto, he spent eight years working in industry on HCI related projects.

**Craig M. MacDonald** is an Associate Professor in the School of Information at Pratt Institute where he developed and coordinates the Master of Science in Information Experience Design and User Experience advanced certificate programs. He holds a Ph.D. in Information Studies and Human-Computer Interaction from Drexel University and his research interests cover three broad themes: (1) understanding UX practices in different domains; (2) improving HCI/UX evaluation methodologies; and (3) strengthening HCI/UX education.

**Elizabeth F. Churchill** is a Director of User Experience at Google focused on designer and developer tools for the connected ecosystems of the Social Web and Internet of Things. Elizabeth has been a research leader at well-known corporate R&D organizations including Fuji Xerox's research lab in Silicon Valley (FXPAL), the Palo Alto Research Center (PARC), eBay Research Labs

in San Jose, and Yahoo! in Santa Clara, California. A Distinguished Scientist and Speaker of the Association for Computing Machinery (ACM) and a member of the CHI Academy, Elizabeth is the current Secretary/Treasurer of the ACM.

**Jennifer J. Preece** is a Fellow of the ACM SIGCHI Academy and a Professor at the College of Information Studies – Maryland's iSchool, where she was Dean (2005-2015). She is co-author of the most widely-used textbook in HCI, *Interaction Design: Beyond Human Computer Interaction* (4th Edition, John Wiley & Sons, 2015). She is author, coauthor, or editor of seven other books including one of the first texts in HCI, *Human-Computer Interaction* (1994), as well as numerous journal and conference papers. Her heavily cited research covers online and networked communities, citizen science, informal environmental education, HCI design, data sharing, HCI education, and cross-cultural participation.

**Anne Bowser** is an Innovation Specialist at the Woodrow Wilson International Center for Scholars. Between 2011 and 2014 she worked as a Student Researcher with the SIGCHI Project on HCI Education while earning her PhD from the University of Maryland's iSchool. At the Wilson Center, Anne seeks to understand how technologies and research practices can be developed to best maximize benefits and minimize risks for a range of actors including the general public. Building off her earlier work with the SIGCHI Project on HCI Education, Anne continues to build and seed communities in and beyond the federal government.

## **Website**

The workshop website is available at <https://hcieducation.wordpress.com/>. The website will contain background information about the HCI living curriculum project and our motivations for holding the workshop, details about the workshop organizers, the workshop agenda, and downloadable copies of all accepted position papers. After the workshop, we will update the website with a summary of workshop activities and we will provide periodic updates about developments related to the HCI living curriculum project.

## **Pre-Workshop Plans**

We will distribute the call for participation on relevant academic mailing lists and through social media, specifically through the HCI Education Facebook group (151 members, as of 13 December), the @HCI\_Education Twitter account (49 followers as of 13 December) the SIGCHI HCI Education Community (53 members, as of 13 December), and the CHI-Educators ACM mailing list. We will also actively solicit submissions from individuals who have expressed an interest in HCI education issues, either through their involvement in previous HCI education workshops or through published research about education-related topics. Our goal is to solicit submissions from a broad and diverse range of HCI educators, recruited from all regions of the world (e.g., Africa, Asia, Europe, North America, etc.), from different disciplinary perspectives (e.g., design, computer science, CSCW, information science, psychology, etc.), institutional perspectives (public/private, graduate/undergraduate), and with a variety of cultural viewpoints. We aim to recruit 15 to 25 participants.

Potential workshop participants will be asked to submit a 2-4-page paper, in CHI Extended Abstracts format, describing their background, why they are interested in the HCI living curriculum, and how they would contribute to the development of its conceptual framework, in particular, but not limited to, issues related to ownership, hosting, content management, individuals' contributions, information architecture, platforms and services already available, etc. Participants will be selected based on their experience, perspective, and potential contribution to achieving the workshop goals.

Following a successful acceptance, selected participants will be asked to prepare one design artifact or prop that will be used to generate discussion and stimulate design ideas during the workshop. Artifacts may take any form, including, but not limited to: personas, scenarios, use cases, storyboards, sketches, wireframes, experience maps, content models, user/task flows, task analyses, metadata taxonomies, competitive reviews, etc. All accepted submissions, including design artifacts, will be posted on the workshop website prior to the workshop.

### **Workshop Structure**

The workshop will be a one-day hands-on event in which participants will be an integral part to help develop the vision and shape of the HCI living curriculum CoP. Each participant will come to the workshop with design artifacts or props demonstrating their proposed conceptual framework for the HCI living curriculum. At the beginning of the workshop, participants will be given five (5) minutes to present their position paper and explain their artifact. Following

all presentations, the workshop will be divided in two parts.

In the first part (concluding at lunch time), subgroups will engage in a collaborative brainstorming exercise. The goal of this exercise will be to define the conceptual framework of the living curriculum as a CoP. This will be an opportunity for all participants to discuss, amongst other aspects, practical issues related to individuals' contributions, content management, hosting, and services already available. Each group will be tasked to produce a draft conceptual framework. Towards the end of part one, groups will present their framework and a list of practical considerations will be established by way of consensus with all participants.

In the second part, subgroups will engage in ideation exercises to help define the user experience of the living curriculum CoP. The goal of this second part is to brainstorm ideas to help articulate the information architecture and infrastructure for the HCI living curriculum as well as its long-term viability. Using the artifacts produced pre-workshop, participants will generate information architecture models, while keeping in mind the conceptual framework and practical considerations established in the first part. Following this ideation phase, models will be presented to all participants. Ideas generated through these exercises will be discussed and participants will be asked to reach a consensus on an information architecture model and infrastructure that could constitute the first iteration of the HCI living curriculum CoP.

Below is a proposed workshop schedule

09:00 – 09:15 Welcome, goals, and agenda  
09:15 – 10:15 Introductions and presentation of each position papers  
10:15 – 10:30 Coffee break  
10:30 – 11:30 Conceptual framework brainstorming session (in groups)  
11:30 – 12:00 Conceptual framework presentations and discussions  
12:00 – 13:00 Lunch  
13:00 – 14:30 Ideation exercises Part I (in groups)  
14:30 – 14:45 Coffee break  
14:45 – 15:30 Ideation exercises Part II (in groups)  
15:30 – 17:00 Groups presentations; discussions; path forward; and conclusion  
EVENING Information dinner for networking

### **Post-Workshop Plans**

The core goal of this workshop is to develop a CoP to support the creation a HCI living curriculum. The outcomes of this workshop will serve several aspects of this goal, following a three-step strategy. First, we plan on publishing the work generated during the workshop to demonstrate the concept of a living HCI curriculum CoP to the SIGCHI community. This will complement articles already published on this topic (see background section). Second, we will use the work produced in this workshop to write a proposal to the SIGCHI Executive Board to get funding to continue our work. The proposal will outline necessary steps as well as a hosting strategy required to implement the CoP. Third, the conceptual frameworks and information architecture models generated in the workshop will be implemented into a live design, forming the first instance of the new HCI living curriculum CoP. This live

implementation will be available to the public for further iterations (for example, through usability testing), hence promoting the main idea of a live curriculum.

To accomplish the strategy outlined above, three informal working groups (composed of the workshop participants) will be formed to continue the work post-workshop. One group will be responsible for the implementation and funding segment, one group for the design and platform development, and one group for the content creation. Finally, we will also keep the HCI education community aware of our progress through our Facebook HCI Education group and our twitter account (@HCI\_Education).

### **Call for Participation**

From 2011-2014, the ACM SIGCHI Executive Committee sponsored a project on HCI education. A workshop on developing a HCI living curriculum was held at CHI2014, but the proposed curriculum does not yet exist. This CHI2018 workshop will build on these efforts by moving toward implementing the living curriculum, a community of practice (CoP) of HCI scholars and educators, sharing and collaborating to develop course outlines, curricula, and teaching materials. We seek to bring together designers, researchers, and educators to (1) define the conceptual framework and user experience of a living curriculum; (2) assess tools, platforms and services that may already exist and assess their long-term viability and value; (3) articulate the information architecture and infrastructure for the CoP; and (4) create working groups to implement the HCI living curriculum post-workshop.

Interested applicants should apply by sending the following to [hcieducation.chi2018@gmail.com](mailto:hcieducation.chi2018@gmail.com) by 2 February 2018: a 2-4-page paper (in CHI Extended Abstracts format) describing their background, their interests in the HCI living curriculum, and how they would contribute to the development of its conceptual framework and information architecture. Applicants will be selected based on their experience, perspective, and potential contribution to achieving the workshop goals. Successful applicants will be asked to prepare one design artifact or prop that will be used during the workshop. All accepted submissions and artifacts will be posted on the workshop website at <https://hcieducation.wordpress.com/>. At least one author of each accepted paper must register for the workshop and at least one day of the conference.

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