Producing Human-Centered, Usability-Sensitive, and HCI-Competent Managers, CIOs, and CEOs

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Abstract
Taking a collaborative and multi-disciplinary perspective, we discuss issues and opportunities in college education so that our future managers, CIOs, and CEOs are inherently and intrinsically human-centered, usability-sensitive, and HCI-competent.

Keywords
Education, Management, Future managers, CIOs, CEOs

ACM Classification Keywords
H5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous, K.6. Management of computer and information systems, K.3.2 Computer and Information Science Education

Introduction
Human-Computer Interaction (HCI) professionals often play a marginal role in systems development efforts [6]. This is largely because human-centeredness, HCI and usability have not been a focus of middle and top management during systems development and deployment. Much effort has been devoted by scholars from various communities to improve this situation. For example the Management Community at CHI06 "will explore the reasons that HCI has little influence (as a rule) among decision makers responsible for internal
systems design." [6]. Similar effort has been made in early CHI conferences and other venues to raise HCI’s importance in systems development and use [2, 3, 7].

In addition to trying to influence management from the outside, we must also consider ways of making changes from the inside. That is, managers, CIOs, and CEOs should be “automatically or naturally” in tune with human-centeredness and HCI while making systems development and deployment decisions. This is done by educating and exposing future business leaders while they are still in college. We as educators should produce future managers and executives who are aware of these important and critical elements.

The problem of HCI being peripheral to non-existent in management practice is a concern for scholars and practitioners in many disciplines who are involved in technology development, use, and management, such as business, information, computer science, psychology, and HCI. The impact of this problem is so broad that virtually all users worldwide are affected. Therefore, we should act collectively (academia and industry) to solve the problem together.

Fixing the current neglect of HCI will not be easy or quick. A strategic and long term view will enable us to find effective and efficient solutions. We hope that our proposal is a starting point to bring human-centeredness and usability to the forefront of decision makers’ attention, and ultimately influence their entire approach to design and management.

As stated in the Education Community call for participation, “HCI is now established in the curricula of many countries across the world at undergraduate, masters and doctoral levels.” [4]. Evidence to support this statement is the addition of standalone HCI courses and inclusion of HCI material in other established courses in new model curricula sponsored by ACM and AIS [5]. These developments suggest a coming of age for the HCI community to play an important role in educating our future work force.

Building on this momentum, it is time to consider some fundamental and critical issues that influence our fields, organizations, societies, and individuals, from a long-term perspective. In this meeting, we hope to gather scholars and practitioners to explore issues and solutions for educating our future managers and executives. We represent not only academics from many relevant fields but current managers and executives from various software-related industries.

**Discussion Questions**

The following are sample questions we plan to use to stimulate discussion, debate, and reflection.

**Q1.** What do we want or hope to achieve in our future CIOs, CEOs, Managers, and designers regarding HCI and usability, in 5 or 10 years?

Articulating our goals would help to identify our highest-priority opportunities and challenges.

**Q2.** What fundamental assumptions in management education should we challenge or suggest that would lead our future managers to be more human-centric?

One such assumption could be the currently-dominant “decision attitude” in management practice and education that assumes and accepts existing alternatives,
overlooking potential opportunities for improvement over existing products, services, or processes. A challenge to the decision attitude is a “design attitude,” with which managers would approach problems with a sensibility to think more broadly, shaping, inspiring, and energizing designs for products, services, and processes that are both profitable and satisfying [1].

Q3. What can we (as educators, designers, practitioners, managers) do, strategically and tactically, to achieve what we envision?

We will gather ideas and wisdom from educators and practitioners to explore various possibilities and solutions.

Q4. What are innovative ways of teaching HCI in various programs/schools so that human-centeredness is implanted into the hearts and minds of students?

One of our team members, Dr. Jinwoo Kim, uses science fiction movies in his business HCI course to illustrate design principles. As a result, students become more creative in designing their projects.

Q5. What can we learn from each other’s disciplines and ways of thinking to benefit the education of future managers and executives?

The “design attitude” drew its inspiration from architecture design practice [1]. Such inspiration can only occur if there is effective interaction among various disciplines.

Q6. How should we collectively cover HCI courses, materials and spirit in different programs?

HCI courses and materials are covered in many different programs/disciplines. Programs have varying constraints and opportunities. Discussion and brainstorming can shed new light on ways of creating strategic and tactical plans. The following are possible sub-questions to address.

Q6.1. How should we teach leadership and innovation in non-business school HCI courses?

Q6.2. How should we revise various MBA and MIS programs to integrate the human-centric view?

Each of us will present our perspectives on these questions. We will actively involve the audience to discover additional issues and solutions.

Going Forward
We are planning to publish summary papers from the meeting. The targeted outlets include, but are not limited to, the Communications of the Association for Information Systems (mainly MIS audience), ACM Interactions (mainly HCI audience), and American Society for Information Science and Technology Bulletin (mainly Information audience). We also plan to continue the discussion at future conferences.

Citations


Participants
We would like to see a large group of people at this SIG and in future dialogues on this topic. The following individuals have already committed to join in the conversation:

Ping Zhang, Associate Professor, School of Information Studies, Syracuse University
Misha Vaughan, Manager, Applications User Interfaces, Oracle Corporation
Joe Valacich, Professor, College of Business and Economics, Washington State University

Judy Olson, Professor, School of Information, Business School and Department of Psychology, University of Michigan
Scott McCoy, Assistant Professor, School of Business, College of William and Mary
Jinwoo Kim, Professor, School of Business Administration, HCI Lab, Yonsei University
Harold Hambrose, Chief Executive Officer, Electronic Ink
Jonathan Grudin, Senior Researcher, Adaptive Systems and Interaction Group, Microsoft Research
Dennis Galletta, Professor, Katz Graduate School of Business, University of Pittsburgh
Andrew Dillon, Dean and Professor, School of Information, The University of Texas at Austin
Mark Detweiler, Director, User Experience design and Research Methodology, SAP Labs
Catherine Courage, Usability Program Manager, Salesforce.com
Fred Collopy, Professor, Weatherhead School of Management, Case Western Reserve University
Jane Carey, Associate Professor, School of Global Management and Leadership, Arizona State University
Kelly Braun, Senior Manager, PayPal User Experience Research, eBay, Inc.
Jeremy Ashley, VP, Applications User Experience, Oracle Corporation