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HCI — Theory or Practice in Education

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The workshop aims at identifying how education programs in Human-Computer Interaction (HCI) can benefit from modern teaching techniques and how collaboration between industry and academia can be improved for a better understanding of the mutual educational needs. Some immediate issues are:

(1) Can we use multimedia technology to implement networks of teaching excellence?
(2) What kind of support do we need for teaching both at undergraduate and postgraduate level?
(3) Which is the role for HCI within e.g. software engineering, psychology and sociology?
(4) What is a PhD in HCI, i.e. what criteria should we impose in a multi-disciplinary subject?

Education in HCI is a task that incorporates many different aspects on the area. Students are to be taught how to apply their knowledge in many different knowledge fields, as well as involve themselves in the traditional software design processes, rapidly producing good interfaces for the software. The clash between practical, easily accessible knowledge, and the theoretical fundaments of the topic areas needs to be addressed in education. This has to be done in a way that is fruitful to both academic institutions and the practitioners in the field.

The role of an HCI expert will in many cases be to know when and why HCI problems may or will occur, and make sure that proper preparations will be made before the problem occurs. Thus, HCI education has to be shaped to produce this kind of experts —as a complement to the HCI practitioners.

Furthermore, HCI, by its title as well as its very nature is an interdisciplinary activity. Involving humans indicates contributions from fields including psychology, sociology, and anthropology. The computer side indicates contributions from at least computer science, software engineering, and artificial intelligence, though it can extend to electrical engineering and industrial design. The interaction side starts involving communication fields including graphic design, writing, ergonomics, and sound in its various incarnations.

This interdisciplinarity requires an integrative approach, and argues for a project-based learning environment. Ideally, students from different disciplines will converge on courses in this area, to be grouped in teams to solve problems. Also ideally, the problems can arise from real industrial needs that can situate and motivate the learning. It is important to scaffold the tasks with rapid prototyping tools, allowing learners to iterate designs quickly.

Interdisciplinarity is an increasing benefit to the learner and the employer, and facilitating these links provides a better framework for learning. In this way, we may arrive at professionals who in their work combine a good theoretical understanding with minute practical skill.