

# “Reality Bites” - HCI in industry

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## **ABSTRACT**

HCI has long seen its practitioners come from many different related disciplines rather than providing formal training itself. In order to ensure that graduates have the right skill-set to work effectively in project situations, industry and academia need to co-operate more closely. Industry needs to communicate to academia which skills are required as well as providing input into how these can be taught.

## **INTRODUCTION**

Industry and academia are often at loggerheads as to which skills universities should equip students with for a successful career. Human Computer Interaction (HCI) is widely taught at universities. Yet when examining the proportion of HCI practitioners coming from other academic fields, it is generally higher than those having entered the profession via an explicit HCI degree.

The reasons vary, but one of the most cited is “In HCI, experience counts more than they teach at university.”

This is a challenge that HCI practitioners in industry and academia should shy away from at addressing. In fact, both can learn from each other, as user research in industry and academia are significantly different. While universities should prepare HCI students for the realities of industry by teaching the necessary skills to become successful practitioners; we as industry practitioners should take a more active role in sharing our experiences and positively influence the teaching process.

## **INDUSTRY REALITIES VS. ACADEMIC TEACHING**

Depending on the project setting managers and stakeholders are often not aware of what good user-centred design

(UCD) is. The general assumption is that usability testing is just part of user acceptance testing (UAT). This leads to the view that that usability problems can just get “fixed” with the application already built, when they could have been avoided in the first place with good UCD.

Hence one of the first challenges UE professionals will find is to explain what they do and why it matters. While universities give students a good theoretical and academic understanding of HCI as a discipline, this does not necessarily include important practical skills necessary to carry out the work in an industry setting.

## **PRACTICAL SKILLS VS THEORY**

University should provide students with a solid theoretical grounding in the discipline they study. If however university should also prepare students for industry reality, then academia and industry need to work closer together to find the right balance of theoretical and practical knowledge.

When asked about which skills managers in the UE industry look for, these can be divided roughly into practical and theoretical ones.

## **Theory**

Degrees in HCI or related disciplines are seen as a good basis for a graduate as they should provide their students with a good knowledge of the UCD process. A good overview and understanding of the different methods that can be applied is key to what universities should be teaching students.

This however needs to be complemented with a set of applicable practical skills, which actually bring the theory to life.

## **Practical Skills**

Learning about UCD and evaluation methodology in theory and applying it in practice are two different things.

## **Communication Skills**

The core of UCD is *understanding* the user and what they need to do and achieve. It is therefore vital for a practitioner to be able to understand not only *when* it is

useful to carry out focus groups, interviews and / or observations, but also *how* to carry them out in practice. And that is easier said than done. This can generally not be taught in a formal way, by needs to be *done* or *experienced*. This is why real life scenario based course work is crucial to teaching UCD.

Further, a practitioner needs to not only speak the users' language, but also that of the technical designers. Finding the middle ground between the two is often a considerable challenge.

#### *UCD Skills*

Practitioners will often have to apply different methods to different situations. Some of the most commonly requested UCD skills from UE practitioners are the following:

- Scenarios
- Card Sorting / Reverse Card Sorting
- Focus Groups
- Interviewing
- Questionnaires
- Data Analysis (qualitative & quantitative)
- Story boards
- Heuristic Evaluation / Best Practices
- Lo-fi testing
- Hi-fi testing
- User Acceptance Testing
- User journeys

#### *Technical Skills*

Practitioners will also be required to produce various deliverables to summarise and communicate their findings and designs. These include:

- Information Architecture
- Requirements gathering
- Page layout
- Wireframes

#### *Day to day Skills that will make your life easier*

The practical tools that support a solid theoretical understanding should not be underestimated. These include very basic ones such as:

- MS Office (esp. powerpoint)

- Visio

However there are also more technically specific, but often used ones such as:

- Morae Techsmith
- Photoshop
- Dreamweaver

#### **WHO TEACHES WHAT?**

Universities cannot be expected to produce perfect practitioners that are ready to be thrown into the deep end right from the start. A lot has to be learned and taught on the job as different situations require different skills.

Still the above lists are a good overview of practical skills that an HCI practitioner should have in their inventory to get off to a good start.

Where industry can help academia is by being more involved in exposing students to real life scenarios. To apply the methods that are taught in seminars, industry should provide examples of situations for students to deal with in their course work. To lend those scenarios more authenticity, industry should be involved as fictitious clients to evaluate the work.

#### **HOW DO WE TALK TO EACH OTHER**

Both academia and industry have a lot to gain from more communication. Industry will get recruits that are better prepared for the realities of project work. Academia can make their curriculum more relevant and specific to the challenges students will face in their work life.

Industry should therefore aim to sponsor HCI courses with time from their practitioners, who can represent a "client" in course situations as well as giving guest lectures. Academia should reach out to established HCI practitioners and seek establish formal, long-term relationships.

Ultimately, both should work on producing a more coherent framework to HCI education that meets the goal of providing solid theoretical grounding in the discipline as well as the practical skills needed to work in industry.