Usability and User Experience: What Should We Care About?

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ABSTRACT

Human – Computer Interaction (HCI) should be a basic part of the formative process of all Computer Science (CS) professionals. Usability and User Experience (UX) were (re)defined by many authors and well recognized standards. UX is usually considered as an extension of usability. To move from usability to UX seems to be a tendency lately. The lack of generally agreed formal definitions of HCI/usability/UX may have consequences on their development and recognition among CS communities, especially in regions where HCI is poorly developed, as Latin America. Practical activities are fundamental in complementing the theoretical foundations of HCI/usability/UX. The practice is usually more appealing and persuasive than the theory. The gap between HCI/usability/UX research and practice may be reduced by applied research, problem – oriented, or at least based on real case studies.

Keywords: Human – Centered Design, Human – Computer Interaction, Usability Engineering, Usability, User – Centered Design, User Experience Design, User Experience

1. INTRODUCTION

The Joint Task Force on Computing Curricula of Association for Computing Machinery (ACM) and IEEE Computer Society establishes Human – Computer Interaction (HCI) as part of the Body of Knowledge in their Computer Science (CS) curricula proposal (CS2013, 2013). HCI relevance in CS curricula is formally acknowledged by both associations and is included into the set of 18 CS knowledge areas. CS2013 (as well as the previous CS2008 and CC2001 proposals) recommends that any CS curricula should cover at least 8 HCI core hours. CS2013 explicitly includes usability as a compulsory core HCI topic. One of the expected learning outcomes is to “Create and conduct a simple usability test for an existing software application”. Moreover, usability is also recommended as elective topic. User Experience (UX) is not explicitly incorporated as a core HCI topic; however it is implicitly considered in other core and elective topics. It seems that the usability concept is widely accepted not
only by the HCI community, but also by the CS community in general. Based on the CS2013 proposal, it seems that the UX concept is not yet commonly endorsed by the CS community.

Over more than three decades usability was (re)defined by many authors. Usability definitions were also provided by well recognized standards. Probably one of the best known and widely used definitions is the one proposed by ISO 9241 (ISO 9241-11, 1998): the extent to which a system, product or service can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use. Later ISO standards still refer to the ISO 9241 usability definition. But new interaction paradigms, new technologies and new kind of software systems are compelling arguments for reviewing the usability concept.

The UX concept was also referred by ISO 9241 (ISO 9241-210, 2010): a person’s perceptions and responses that result from the use or anticipated use of a product, system or service. Some authors consider UX as an extension of the usability concept. Others use the terms usability and UX indistinctly. Along with usability, the UX concept is still under review. The “User Experience White Paper” (Roto, Law, Vermeeren & Hoonhout, 2011) aims to “bring clarity to the concept”.

To move from usability to UX seems to be a tendency lately. Even the former “Usability Professionals Association” (UPA) redefined itself as “User Experience Professionals Association” (UXPA).

Including HCI in the CS curricula is still a challenge in most Latin American (LA) countries (Collazos, Granollers & Rusu, 2011). However, when HCI is present usability seems to be a major topic in both teaching and researching. The number of companies that offer consultancy in usability is increasing. Many professionals are introducing themselves as UX (designers) experts. Some of them are former usability professionals, some others are newcomers. The co-existence and the indiscriminate use of the usability and UX concepts may be confusing for the CS community.

Section 2 reviews the usability and UX notions as HCI topics, based on the CS2013 curricula proposal. Section 3 analyses the concepts of usability and UX and their relationship. Section 4 gives a (subjective) perspective on usability/UX theory and practice in Latin America. Conclusions are resumed in Section 5.

### 2. USABILITY AND USER EXPERIENCE AS HUMAN: COMPUTER INTERACTION TOPICS

The Special Interest Group on Computer-Human Interaction (SIGCHI) of the ACM defines HCI as the discipline concerned with the design, evaluation and implementation of interactive computing systems for human use, and with the study of major phenomena surrounding them (ACM SIGCHI, 2009). There is no agreement upon a definition of (the range of topics that form) the area of HCI and the above mentioned description is proposed only as a “working definition”. The lack of formal definition of HCI area is probably due to the many disciplines that it involves. The fact may have consequences on its advance and recognition among CS communities, especially in regions where HCI is poorly developed.

The importance of HCI education for software professionals should be evident and well understood, when designing CS programs, at all levels. Nevertheless it is common for CS professors to consider HCI as a secondary topic, or even a non-CS area (Rusu, Rusu & Roncagliolo, 2008).

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CS2013 considers HCI as concerned with designing interactions between human activities and the computational systems that support
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