# Engagability

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## INTRODUCTION

Recent trends in HCI have sought to widen the range of use qualities beyond accessibility and usability. The impetus for this is fourfold. First, some argue that consumer behaviour has become more sophisticated and that people expect products to give them a number of life-style benefits. The benefits that products can give people include functional benefits (the product does something) and suprafunctional benefits (the product expresses something). Engagability is thus important in understanding people's preferences and relationships with products. Second, technological advances offer the possibility of designing experiences that are like those in the real world. Engagability is therefore important in providing an evaluative and exploratory approach to understanding "real" and "virtual" experiences. Third, the experiences that people value (e.g., sports) require voluntary engagement. Thus, engagability is important in designing experiences that require discretionary use. Lastly, the product life cycle suggests the need to look beyond design to engagement. Products change from their initial production, through distribution to consumption. Each phase of this life cycle contains decision-making activities (e.g., purchasing, design, etc.). Engagability is an important research focus in explaining stakeholders' values in making these decisions. As such, engagability research seeks to understand the nature of experience in the real and virtual worlds. The activities that people become engaged with are often complex and social and thus challenge the traditional HCI focus on the single task directed user. Important application areas for this inquiry are learning, health and sport, and games.

## BACKGROUND

Engagability research has primarily come from outside of HCI. It includes research into motivation, education, and understanding human experience. For example, the feeling of being engaged in experience has been investigated by Csikszentmihalyi (1991, p. 71), who describes the qualities of optimal experience and flow:

*A sense that one's skills are adequate to cope with the challenges at hand, in a goal-directed, rule-bound action system that provides clear rules as to how well one is performing. Concentration is so intense that there is no attention left over to think about anything irrelevant, or to worry about problems. Self-consciousness disappears, and the sense of timing becomes distorted.*

Norman's work with Andrew Ortony and William Revelle (Norman, 2003) proposes that people are engaged in compelling experiences at three levels of brain mechanism comprising:

*The automatic, prewired layer called the visceral level; the part that contains the brain processes that control everyday behaviour, known as the behavioural level and the contemplative part of the brain, or the reflective level.* (Norman 2003, p. 6)

Furthermore, *These three components interweave both emotions and cognition.* (Norman 2003, p. 6)

Jordan focuses on hedonic use qualities and states that, "Games are an example of a product type that are designed primarily to promote emotional enjoyment through providing people with a cognitive and physical challenge." He goes on to say that, "well-designed games can engage players in what they are doing. Instead of having the feeling that they are sitting in front of the television controlling animated sprites via a control pad, they may feel that they are playing soccer at Wembley Stadium or trying to escape from a monster in some fantasy world" (Jordan, 2000, p. 45).

Dunne's (1999) "aesthetics of use" and Laurel's concept of engagement (from Aristotle) describe a similar phenomenon: "Engagement … is similar in many ways to the theatrical notion of the "willing suspension of disbelief," a concept introduced by the early nineteenth century critic and poet Samuel Taylor Coleridge" (Laurel, 1991, p. 113).

Engagement in relation to learning is proposed by Quinn (1997). He suggests that engagement comes from two factors—"interactivity" and "embeddedness." Jones, Valdez, Nowakowski, and Rasmussen (1994) describe engaged learning tasks as "challenging, authentic, and multidisciplinary. Such tasks are typically complex and involve sustained amounts of time… and are authentic." Jones, Valdez, Nowakowski, and Rasmussen (1995) go on to suggest six criteria for evaluating educational technology in the context of engaged learning:

1. Access
2. Operability
3. Organisation
4. Engagability
5. Ease of use
6. Functionality

## FUTURE TRENDS

Engagability was first applied to HCI design by Knight and Jefsioutine (2003). The meaning and impact of engagability was explored at the 1st International Design and Engagability Conference in 2004 (Knight & Jefsioutine, 2004). Papers related to design practise and the qualities of engaging experiences. Papers presented examples of engagement in the context of:

1. Community
2. Creativity
3. Design
4. Education
5. Emotion
6. Health
7. Physiology
8. Real and virtual experience
9. Identity
10. Well-being

## CONCLUSION

Many researchers argue for design to go beyond usability and there is a consensus to move to hedonic use qualities. The widening of HCI research and design into the realms of emotion is to be welcomed and engaging products and services offer the promise of richer interactions. However, engagement also requires an ethical as well as aesthetic approach to design. Including human values in design means not only better products but also transformative qualities as well.

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