Designing Mobile Phones for Children: Is there a Difference?

Janet C Read, University of Central Lancashire, UK

ABSTRACT

The mobile phone is one of the most ubiquitous technologies in the developed world. In a market dominated by adults and older teenagers, one group of users that is relatively new to the mobile phone market is children. When children use mobile phones their needs are sometimes complicated by, or conflict with, the needs of their parents or primary care givers. As the laptop is being redesigned to make it accessible to children, it is worthwhile to ask the question 'Do children need a different sort of mobile phone than their parents?' By considering data about the use and usage of mobile phones, research on designing special children's technologies, and research on the needs of children as mobile phone users, this paper presents the argument that the mobile phone needs a design re-think if it is to meet the needs of children. [Article copies are available for purchase from InfoSci-on-Demand.com]

Keywords: Children; Computers and Society; Design; Human-Machine Systems; Mobile phones; Mobile Technology

INTRODUCTION

To assist the reader in parsing this paper, the terms children, young teens, older teens, and adults are used to describe different user groups. These terms are not used exclusively—thus an older teen can also be considered an adult and a younger teen can be considered a child—but in general, the four terms are used to demonstrate an age line in which children are more likely to be under 11, young teens might be 11-14, older teens might be 14-19 and adults would be 18+. As users of mobile technology, these four groups have different approaches, different needs, and different use patterns.

The mobile phone is an example of a mobile technology that is, as described
by Naismith, Lonsdale, Vavoula, & Sharples, (2004) ‘portable, movable, and personal’. In addition, as the mobile phone is networked it also allows information sharing and communication. Because the mobile phone has so many attributes it can theoretically offer the user a chance to work, play or connect in different places, to work, play or connect whilst on the move, and, while doing both these things, the mobile phone allows the user to change his or her behaviour as a result of the features embedded in the technology.

The features embedded in most mobile phones are many and varied and it is not uncommon for users to only interact with a subset of these features. By looking at the use and usage of mobile phones, and focusing down to consider use and usage with children, this paper will make the argument that, contrary to popular belief, the features and functionalities of the mobile phone, although well used by adults and older teens, are not as suited to purpose for use with children as has hitherto been assumed.

This argument is built as follows: in this introductory section of the paper, data from several reports of usage of mobile technologies and mobile phones with children is presented, and then research studies that have looked at children’s use of these technologies are examined. The case is then made that the mobile phone is in need of a design makeover for it to be useful to children and young teenagers. Using evidence from a small focus group with children, mobile phone use in the UK, in 2008, is summarized. Taking a user centered approach to this design problem, I then propose several key features for mobile phones for children.

**THE UPTAKE OF MOBILE PHONES**

In 2004, Prensky suggested there were more than 1.5 billion phones in the world, a figure that is more than three times the number of personal computers in the world at that same time (Prensky, 2004). Four years on, even conservative reports would expect there to be over 2 billion mobile phones worldwide and it is interesting to note that, in discussions of how to breach the digital divide, the mobile phone is lauded as the single most influential piece of technology (Kamssu, 2005).

Whilst the first mobile phones were used only by adults—the car phone was the leader in this domain—as time has moved along, the age of first use of mobile phone technology has dropped. Thus, whilst older teenagers have long been considered primary users of mobile phone technologies, more and more studies report significant uptake of mobile phone technology in younger teens and children.

Children are significant users of mobile technology in all forms. They are primary consumers of mobile games consoles, mobile media players and mobile phones. In the Western world it is common for children as young as six
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