Understanding Teen UX:
Building a Bridge to the Future

Dan Fitton
Child Computer Interaction Group, University of Central Lancashire, Preston, UK.
DBFitton@uclan.ac.uk

Beth Bell
Faculty of Health & Life Sciences, York St. John University, York, UK
b.bell@yorksj.ac.uk

Janet C Read
Child Computer Interaction Group, University of Central Lancashire, Preston, UK.
JCRead@uclan.ac.uk

Ole Iversen
Centre of Advanced Visualization and Interaction (CAVI), Aarhus University, Denmark.
oiversen@cs.au.dk

Linda Little
School of Life Sciences, Northumbria University, Newcastle upon Tyne, UK
L.Little@northumbria.ac.uk

Matthew Horton
Child Computer Interaction Group, University of Central Lancashire, Preston, UK.
MPLHorton@uclan.ac.uk

Abstract

UX is a widely explored topic within HCI and has a large practitioners' community. However, the users considered in research and practice, are most often adults – since adults represent the largest technology market share. However teenagers represent a growing market of unique users, and more needs to be understood about this population, from a UX perspective. The theme of this workshop is *Building a Bridge to the Future* and the aim is to gather together academics and UX practitioners, interested in teen users specifically, in order to discuss experiences, understandings, insights and methods that we can use to comprehend teen UX now and explore how this may lead to the creation of better interactive products in the future. The workshop will also foster new collaborations, and define new research agendas to grow the research and literature in this area.

Author Keywords
Methodology, Teenagers, UX, Design, Evaluation

ACM Classification Keywords
H.1.2 User/Machine Systems – Human Factors

General Terms
Human Factors, Theory

Introduction

User eXperience (UX) is widely recognized as a crucial aspect to consider and understand in the creation of interactive technologies. Its increasing prioritization within industry had lead to growing communities of UX practitioners, which complement the already large international academic UX community. To date, UX research and practice has primarily focused on adult users, since adult users represent the largest market for technology-based products. There have also been some attempts to understand UX amongst children [2]. Very little UX research and practice focused on teenage end users, defined in this work as technology-users aged 11-19. Yet the teen technology market is an extremely lucrative one. Teenagers tend to be early adopters of new technologies and are rapidly increasing their technology market-share, due to a number of factors, including increased spending autonomy, increased input in household purchase decisions, and increased pester power [4].

Furthermore, there are reasons to suppose that the teen UX experience may be qualitatively different to that of both adults and children, and that teenagers may have different needs, priorities, wants and desires in relation to UX. From a developmental perspective, the teenage years are characterized by a combination of biological, cognitive, psychological and social changes [6]. In terms of biological and cognitive development, advances in neuroscience have indicated that the teenage brain is functionally different to that of both children and adults. Teenagers display a heightened sensitivity to reward and a greater propensity to engage in risky behavior [7]. Psychologically, teenagers have inert developmental needs to establish autonomy and a sense of individual

identity [6]. Such concerns typically lead to a heightened sensitivity to social influence, with the need for peer approval becoming highly salient at this time [6]. The unique concerns of the teen experience may influence the UX interactions that they have with technology, and furthermore influence the ways that we position teens within UX.

Every generation of teenagers is unique, characterized by their own unique norms, values and culture. Importantly the current generation of teenagers are "digital natives" who have grown up in a technological society. As such, teens inhabit a world that is foreign to adults, and so UX researchers and practitioners may not assume that they understand this population on the basis that they were once part of it.

Related Work

User Experience (UX) concerns all aspects related to the use of a product and is defined in detail as an ISO standard[1] that specifies the need for understanding of user needs and user involvement. UX research within the HCI community has focused on adult user since its inception. Within the Child-Computer Interaction (CCI) community UX has received growing attention (e.g. [1], [7], [11]). However, UX in the context of teenagers has received far less attention and only a small number of examples of published work such [8] and [9] exist. Teenagers in general have received little attention within the HCI and CCI communities, and the need for specialized Teen-Computer Interaction research area has been identified in identified in [3]. Methods for engaging teenagers in interaction design have been explored in [5].

---

[1] ISO 9241-210:2010 Ergonomics of human-system interaction

Workshop Topic

The overarching theme, *building a bridge to the future*, seeks to explore how understanding teen UX now can influence current and future UX research and practice whilst also fostering improved user experience. The workshops take a holistic view of UX as composed of theory, understandings, methods, and practice. The workshop therefore seeks a wide variety of contributions workshop welcomes both practitioners and academics including; work considering relevant theory or frameworks, work bringing new insights and understanding of teenagers as technology user and participants relevant to UX, work proposing new methods or adapting existing methods for working with teenagers in the context of UX, and case studies describing work with teenagers focusing on UX.

Workshop Goals

This workshop has five interrelated goals which aim to fill the gap in knowledge around teenagers and UX. Firstly, it seeks to gain an understanding of what UX means for teen technology users: exploring questions such as what dimensions of UX are important in this context, how these should be prioritized, and how these can be understood. Teenagers inhabit worlds often very foreign to adults with wildly different preferences, priorities, understandings and behavior. Developing insights into these teen worlds is crucial to situate meaningful consideration of UX.

Secondly, this workshop seeks to understand the extent to which existing UX theory, principles and practice can be applied with teen users. It cannot be assumed that understandings of UX developed with adults can be applied to other groups and, as seen within the Child-Computer Interaction community,

specialized consideration of this unique user group is necessary to work effectively with them.

Thirdly, this workshop seeks to understand what UX methods are suitable for use with teen populations. It is likely that existing methods used with adults may have to be adapted in order to be used successful in the context of teenage users, and certain methods may be more or less effective with different teen populations in different situations. Associated with this goal are the often-unforeseen practicalities of exploring with UX with teenagers, such as recruitment, ethics and access.

Fourthly, this workshop seeks to understand what can be learned from gaining insights into teen UX. In other words: are insights into teen UX only applicable to the teen population? Or do insights have wider generalisability? Specifically, it is important to understand the inter-generational aspects of teen UX, establishing the extent to which insights into the current generation of teens may be relevant to future generations, and also the extent to which their experiences will be carried with them into adulthood. The workshop seeks to understand whether insights into teen UX can be extrapolated to adult or child UX.

The final goal of this workshop is to develop a strategy towards a more clear understanding of teenage UX, summarizing the key issues, opportunities and needs for the future of this new research area. It is expected that these will then be explored through collaborations forged within the workshop. A plan will be create for disseminating the knowledge discussed and created within the workshop, in order to promote the important and careful consideration of teen UX in future research and practice.

Issues to be Addressed

The issues to be addressed in this workshop are a set of questions that embody the workshop aims. These issues will inform the course and direction of the workshop, and means of evaluating progress:

- What existing work around teens and UX has been conducted and what can we learn from this?

- What aspects of UX are most important to teenagers?

- What should UX goals be when working with teenagers and how should we measure them?

- How should teenagers be engaged in User Experience Design?

- What new insights, understanding, theories or methods are needed to effectively understand and create positive teen UX?

- What can we learn from teenagers improve UX now and in the future?

References

1. Abeele, V. V., Zaman, B., and De Grooff, D. User eXperience Laddering with preschoolers: unveiling attributes and benefits of cuddly toy interfaces. *Personal Ubiquitous Comput.* 16, 4. 2012. 451-465.

2. Edward, T., Schöning, J., Huber, J., Marentette, L., Beckwith, R., Rogers, Y., and Mühlhäuser, M. "Child computer interaction: workshop on UI technologies and educational pedagogy." Ext. Abstracts CHI 2011, 2011.

3. Fitton, D., Read, J.C. and Horton, M. The challenge of working with teens as participants in interaction design. Ext. Abstracts CHI 2013. 2013. ACM Press, 205-210.

4. Palan, K. M., Gentina, E., and Muratore, I., "Adolescent consumption autonomy: A cross-cultural examination." Journal of Business Research 63. 2010. No. 12. 1342-1348

5. Poole, E.S. and Peyton, T. Interaction design research with adolescents: methodological challenges and best practices. In Proc. IDC 2013. ACM Press (2013), 211-217.

6. Steinberg, L., and Morris, A. S. Adolescent development. Journal of Cognitive Education and Psychology, 2001. 2(1), 55-87.

7. Steinberg, L. A social neuroscience perspective on adolescent risk-taking. Developmental Review. 2008. 28(1), 78-106.

8. Suhonen, K., Väätäjä, H., Virtanen, T., and Raisamo, R. Seriously fun: exploring how to combine promoting health awareness and engaging gameplay. In Proceedings of MindTrek '08. 2008. ACM Press, 18-22.

9. Thin, A, G., and Poole, N. Dance-based exergaming: user experience design implications for maximizing health benefits based on exercise intensity and perceived enjoyment. In Transactions on edutainment, 2010, Vol. 6250. Springer-Verlag, 189-199.

10. Vissers, J., De Bot, L., and Zaman, B. MemoLine: evaluating long-term UX with children. In Proceedings of the 12th International Conference on Interaction Design and Children. 2013. ACM Press, 285-288.

11. Xu, D. Y., Read, J. C., Sim, G., McManus, B., and Qualter, P., Children and 'smart' technologies: can children's experiences be interpreted and coded?. In Proceedings of the 23rd British HCI Group Annual Conference. 2009. British Computer Society, 224-231.