Research Methods for Child Computer Interaction

Janet C Read

ChiCI group

University of Central Lancashire

Preston, PR1 2 HE, UK

jcread@uclan.ac.uk

Shuli Gilutz

Knowledge Technology Lab

Tel-Aviv University

Tel-Aviv, Israel

69978

shulig@tau.ac.il

Abstract

In this course participants will learn about theory and practice of conducting research in children's HCI. The course is divided into two sessions: basic principles and theory, and best practices. The instructors have multiple years of experience designing, conducting, and analyzing children-computer interaction (CCI) studies, in the UK, USA, and Israel.

Author Keywords

CCI, children, research methods, age-appropriate design, user testing, ethnography.

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

Introduction

Research Methods in Child-Computer Interaction (CCI) is a two session course, introducing the theory and practices of conducting HCI research with children. The two sessions are linked together, and will be consecutive (Although theoretically participants could attend just one session). The course includes discussion on planning research with an emphasis on user studies and ethnographic research. [1] The need for good planning is motivated by the presenters giving examples of mistakes they have made and thus this sets the scene for an open critical session.

Programme

User studies are considered by looking at a pseudo CHI-EA paper written by M.Simpson et al. (2014) which is full of problems – the participants are taken through these problems by the presenters and fixes are given. Ethnographic research is considered using video footage that shows children (filmed with full permission) carrying out research work [5]. The participants are then required to gather data from this footage which is then discussed.

In the second session the use of survey methods is explored with the Fun Toolkit [3] being presented as a useful tool. The interpretation of children's responses is discussed using real examples from children (again gathered with full permission). Data that is gathered in research is considered with the focus being on baseline data (as an example to build from) and the CTEQ technology experience questionnaires are introduced [while also several papers with missing data are discussed.

The course wraps up with the ethical questions about research with children focusing on the stages before the study – when the children need to be told what is going on (using the CheCk1 and CheacK2 tools)[4] and then considering what the children should be told after the study about the research findings. Participants go back to the early study by M.Simpson et al. (2014) and present the research findings to the participants. In the wrap up the presenters ask the attendees to commit to do better but also offer their own time to assist in the attendees plans over the next 90 days through the website. The book by Markopoulos and Read will be available to attendees to browse [2].

Background of Attendees

Attendees will mostly be individuals seeking knowledge on how to do great research with children. They can be interested in quantitative or qualitative research, they may have not done any research yet with children and may be seeking to see whether it will suit them, or they may be experienced and looking for some new ideas. It is expected that the course will be especially interesting for PhD students and for individuals doing CCI research in labs where there is little specialist support.

References/Related Publications

[1] Markopoulos, P., Read, J.C., MacFarlane, S., Hoysnieimi, J., (2008) Child-Computer Interaction: Methodological Research. Special Issue of the Cognition Technology and Work journal, Vol 10 (2), April 2008, Springer.

[2] Markopoulos, P., Read, J.C., MacFarlane, S., Hoysniemi, J (2008) Evaluating Children's Interactive Products, Morgan-Kaufmann.

[3] Read, J. C., & MacFarlane, S. (2006, June). Using the fun toolkit and other survey methods to gather opinions in child computer interaction. In *Proceedings of the 2006 conference on Interaction design and children* (pp. 81-88). ACM.

[4] Read, J. C., Horton, M., Sim, G., Gregory, P., Fitton, D., & Cassidy, B. (2013, April). CHECk: a tool to inform and encourage ethical practice in participatory design with children. In *CHI'13 Extended Abstracts on Human Factors in Computing Systems* (pp. 187-192). ACM.

[5] Lester, K., Gilutz, S., & Black, J. (2005, June). Methodology for analyzing Children's understanding of computer Interfaces. In *World Conference on Educational Multimedia, Hypermedia and Telecommunications* (Vol. 2005, No. 1, pp. 1263-1268).