



# Respecting, Facilitating and Recognising Children's Contributions in HCI

Course Submission

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## ABSTRACT

Child Computer Interaction is concerned with the research, design, and evaluation of interactive technologies for children. Working with children in HCI is rewarding and fun but managing that work so that children are kept comfortable and can participate in meaningful ways is not always easy. This course is based on over 20 years' experience of working with children in research, design, and evaluation. It will provide attendees with practical tips to organise sessions with children, with signposts to methods for research, design, and evaluation, and will specifically consider the ethics of children's participation with checklists to support us in doing our most ethical work possible.

## CCS CONCEPTS

• **Human-centered computing** → Interaction design; Interaction design process and methods.

## KEYWORDS

Child Computer Interaction, Evaluation, Design, Research, Ethics, Children, UX research

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## 1 INTRODUCTION

Children are significant users of interactive technology but, while there have been many technologies designed with them in mind, there is still work to be done to make technologies fit for their use [21]. Children are beginning to interact with technology at younger ages [11], and the value of the industry for interactive software for children is huge; but still there are many poorly designed products. In our own work we discovered first hand a plethora of difficulties that children had with mainstream technology [19].

Designers and academics need effective ways to better understand children and their contexts. When conducting research with, or designing technology for, children and families, researchers must take into consideration unique factors, that are less relevant for the

general population. For example, research is needed to understand how children interact with technologies like robots [12], designers need to make products intended for learning more accessible to children who may have special needs [5], and children need to be empowered to give their opinions of, and their ideas towards, new innovations [1].

Engaging directly with children in research, design and evaluation can ensure that products are suited to their needs, but this engagement has consequences and the value of the engagement to children cannot be dismissed. The HCI community listens to the voices of children through participatory practices [2] and through research [7], but in recent times the expanded rights of the children, in terms of their empowerment and agency, has been a major theme ([6], [9], [17], [8]). UNICEF delivers a set of rights to children [26] in terms of their rights to be heard, protected and respected, but it's not always easy to apply these rights in day to day situations which vary according to context – as an example, in one case it may be reasonable to limit a child's freedom to express themselves or have an opinion, but in another instance that could be construed as being oppressive [10]. As an example of a tension, in our own work, children aged 14 were prevented from being allowed to be photographed for a newspaper because their parents had decided they should not be photographed in school – the child's right to choose was taken from them.

Such tensions, and many others, arise in our work with children in HCI. Spiel et al., [25] highlight a set of 'micro ethical' dilemmas that they encountered in their work with children, one example was the difficulty of walking away from children without a solution, this is tough when our rationale for working with children is often to improve their lives some way down the line. The extent to which children can consent, the difficulties around things like deception and the ad hoc selection of children for participation were all flagged up as problematic for a set of students doing HCI research and design with children [4]. In our recent work we have developed a framework for feeding back to children which we will bring to this course [24].

Versions of this course have been delivered at previous CHI conferences and other ACM venues and these have separately covered research, evaluation, and design [22], [16], [18], [15], [23]. The course was presented face to face in New Orleans in 2022 - prior to that it was last presented face to face at CHI in 2016. This current version focusses on techniques that will ensure value to children as they participate in our research and design work. The course has been updated with new content on reporting back and on working with young children.

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## 2 BENEFITS

This course will introduce attendees to core values, methods, and techniques for working with children in CCI and children's UX with the focus being on the participation of children and the deliberate actions that can give them agency. Attendees will be given practical handouts and documentation including – personas, planning sheets, toolkits, and checklists. The course focuses on working with children in research, design and evaluation in ways that empower, and give value to, children.

At the end of the course, it is expected that attendees will:

Better understand the unique characteristics of working with children in research, design, and evaluation, and be enabled and challenged to improve the experiences of the children they work with

Have a clearer understanding of the impact of method choices on children's agency and engagement and on research data, evaluation results and design ideas.

Gain knowledge of techniques for the ethical recruitment of children (including the D4CR guide), the managing of studies and the writing and reporting of work.

Be able to locate and use techniques that will be useful in general Child-Centered Design.

Discover new methods and tools and feel empowered to apply them in their own work.

### 2.1 Intended Audience

This course is ideal for researchers, practitioners and designers who are interested in the research and design of digital environments for children (of all age groups). In past courses, participants included researchers, practitioners, and students.

### 2.2 Prerequisites

It is assumed that those attending have a basic understanding of HCI methods and/or UX research methods; outside of that there are no prerequisites.

## 3 CONTENTS

The course is structured in three parts, designed for delivery over two sessions. We have actively interspersed each session with three or more activities to ensure participant engagement.

Part 1: Children First

We will begin the course with a discussion of how to put children first in our HCI work. We will introduce a set of scenarios that can happen when working with children which will be used to challenge some of our thinking as we go along. The theoretical part of this session will focus on children's rights and the ways that children can participate. We will use case studies and children's narratives to talk about when it might not be appropriate to work with children and on what measures we can take to gain value for children in participation.

Part 2: Methods for Working with Children

This is the main part of the course where we introduce a subset of methods for Research with Children, Design with Children, and Evaluation with Children. We will introduce tools and methods that have been shown to be effective when working with children. Research Methods include the PETT toolkit (in press) which can be

used to describe the expertise of a sample of children. Design Methods that are described include Co-Design, Layered Elaboration [28], and Obstructed Theatre [13] and we will stress the importance of using ideas from children in appropriate ways. Evaluation Methods include the MemoLine [27], This or That [29], and The Fun Toolkit [14] as well as discussion on planning evaluations and on carrying out observational and ethnographic work.

Part 3: Reporting and Ethics

The last session is a discussion of reporting and ethics, which gives ideas for where we can go to learn more. We will specifically consider working with young (<4) children and will discuss the CHECK toolkits for ethical work [20] as well as the Designing for Children's Rights (D4CR) guidelines [3]. Practical advice on the recruitment of children and on reporting [24], both to the scientific community, and also to the children, is included in this section of the course.

### 3.1 Practical Work

A series of exercises is interspersed with the course content as seen in the attached PowerPoint file. Attendees carry out evaluations, plan a design session, and critique research. They additionally complete an ethical checklist and a reporting back checklist.

### 3.2 Resources

The course materials will be made available on the website (<https://www.chici.org/activities>)

Information about the instructors can be found on the ChiCI website ([www.chici.org](http://www.chici.org)).

## 4 INSTRUCTOR BACKGROUND

Janet C Read is a Professor of Child Computer Interaction. Currently researching cross cultural CCI, childlike computing, the ethics of children's participation and visual programming. Prof. Read is the founding editor of the International Journal of Child Computer Interaction, a previous chair (on two occasions) of the ACM Interaction Design and Children (IDC) Conference and a former chair of the ACM Child Computer Interaction Community. She is widely published in CCI and HCI.

Matthew Horton is a Senior Lecturer with over twenty years of experience in working with schools and industry in HCI and CCI. He has published on personas in CCI and on the active involvement of children in CCI work.

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