CHECk: A Tool to Inform and Encourage Ethical Practice in Participatory Design with Children

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Abstract

When working with children in participatory design activities ethical questions arise that are not always considered in a standard ethics review. This paper highlights five challenges around the ethics of the value of design and the ethics of the children's participation and presents a new tool, CHECk that deals with three of these challenges by virtue of two checklists that are designed to challenge researchers in CCI and HCI to critically consider the reasons for involving children in design projects and to examine how best to describe design activities in order that children can better consent to participate.

Author Keywords

Ethics, Children, Participatory Design

ACM Classification Keywords

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

General Terms

Design, Human Factors

Introduction

Ever since it was promoted by innovators in HCI ([1] , [2]), including children in the design of new technologies, either as informants or design partners has been highlighted as beneficial in order to better understand users, to gather design ideas and to test out new concepts. These 'design' activities are much less 'research focused' than similar work in psychology and sociology for example and the ethical practices and ethical concerns around such design studies are not well served by traditional ethics approaches where the emphasis tends to be on selection of subjects and protection of personal data rather than, for example, on aspects like ownership of ideas.

This paper describes a tool that is used by the Child Computer Interaction (ChiCI) group at UCLan, UK to ensure that, in their work with children as informants and designers of technology, the children's participation in design is reflectively motivated.   It discusses how prospective design projects are considered, explores the information given to the children, and considers the way in which the children, and their contributions, are treated before any such participatory event.

Background

The ChiCI group has been designing and evaluating technologies with children for around ten years [3]. In the earliest days the work was mainly about positioning children as testers of technologies. In these early studies ethics focused on concerns about the gathering and storing of personal data, the use of photographs, the use of logging equipment and inclusion / consent aspects.

More recently much of the focus of the group has shifted towards greater child participation including design work with children and teenagers and longitudinal studies where the team repeatedly goes back to one group for information and confirmation of ideas [4], [5] . Moving away from traditional 'experimental research studies' the members of the ChiCI group have begun to question the way children are 'used' in design studies. Alongside this questioning, in 2005 the group had produced an early internal document that highlighted Access, Behaviour, Consent and Dissemination as being four core areas for ethical consideration and in 2011 an audit of practice against these headings highlighted that the group had not made an equal effort in all of these aspects and thus, the ethical procedures were considered ready for revision [6]. The remainder of this paper motivates and presents two aspects of this revision that were prompted on these two counts.

Real Project - Real Challenge

The example used in this paper is of a design study that implied the involvement of UK children in the design of a tablet PC based serious game, to teach hand-washing, for children in Africa. The challenge in considering ethics was to go beyond the statutory ethics requirements from the University (in terms of consent forms, data integrity and such) and add another layer of ethical behavior that indicated a personal responsibility to do 'more than'.

The process began with a set of questions relating to the project in question; these were:

- The ethics of making a PC game for Africa – its point – the value of such a thing

- The ethics of having the children in the UK participate in this project

- Ethics around having the children create many ideas only for the design team to not use them all

- Ethics about whether or not the children knew what would happen to their ideas and thus could consent to let us have them

- Ethics about feedback and letting the children know what happened next

These questions suggested a set of challenges for the revision of ethics to the extent that we were seeking a new code or tool that would help the research team to:

- examine critically the appropriateness of the technical solution being proposed

- examine to what extent the UK children could sensibly inform such a design

- determine a fair method for using, and including, children's ideas

- ensure that children were fully aware of what the project was about and what their involvement was

- determine an appropriate method for feedback to the children

The first two of these challenges were determined to be associated with the values surrounding the activity and these were considered to be important to be examined some time ahead of any design activity; the others were more about the event. In the next four sections, this paper provides solutions to the first two, and the fourth of these challenges.

Examining Values

Value centred design explains itself as 'frontloaded ethics' [7, 8] and promotes an early look at the values that are incorporated in design. As written by Friedman [9], '*Human values and ethical considerations no longer stand apart from the HCI community but are fundamentally part of our practice. This shift reflects, at least in part, the increasing impact and visibility that computer technologies have had on human lives*'. Whilst accepting that technology conveys and supports values, designers are also called to be 'value conscious' [10] and to deliberately clarify their ethical objectives in design by considering whose values are being considered. The IDC (Interaction Design and Children) community has begun to take on a discussion around values, albeit in a more techno-centric way with a review paper that examines research values across several years of IDC research which concludes with a call for authors to be more explicit about the values that drive their work [11]. Central to value conscious and value centred design is the need to examine our own values – one of the core values driving IDC research is indeed the inclusion of children in design (and research) activities – the 'community' believes this is good practice, but very few studies examine the worth of participation to the participators [11].

CHECk1

CJECk1 (ChiCI Ethical Checklist 1) is a value checklist for use prior to a design study. Six questions ask:

1. What are we aiming to design and build?

2. Why (this product)?

3. What platform / technologies are we planning to use?

4. Why (this platform / technology)?

5. Which children will we design with?

6. Why (with these children)?

These questions challenge the designer to consider the appropriateness of the technical solution and the appropriateness of children being involved. The WHY questions are designed to generate two answers that look at the value to both the participants (the children) and the research / design team - the first of these we tag the 'excuse for use' - this is the 'good' or the 'worthy' answer - the intention being to frame this in a positive sense the second WHY is about ourselves –the 'honest version' - that would describe the 'guilty' or rather 'less altruistic' explanation for the work.

In the specific case of the design for African children, our answers are given here:

Product = A serious game based on hand washing for children in Africa

- Why? EXCUSE - it is critically important for children to learn about good hand washing

- Why? HONEST - it is easy for UK children to understand and can be broken into a simple learning activity

Platform = Android tablets

- Why? EXCUSE - it will engage children (this would be their first exposure to this technology) and has low power needs

- Why? HONEST - we want to showcase the work of our technology group

Children = UK schoolchildren

- Why? EXCUSE - children in the UK can offer clear insights that will be great for the overseas children and put fun aspects into the design and will learn and benefit from the experience

- Why? HONEST - we want to get a paper on designing serious games with UK children.

Following this process, each of the values around the work would be considered, especially those exposed in the HONEST positions. One key requirement is that the HONEST and EXCUSE positions are not in conflict.

On completing this checklist, the researchers were surprised at their own honesty but also at the extent to which they could come up with 'excuses'. The completion of the questions provoked debate and discussion, which was highly beneficial in understanding motivations for the work.

Examining Participation
The fourth challenge (and to some extent challenges three and five) highlights participation. During a design activity, children need to know what they are doing so they can consent and participate appropriately, intellectual property and the use of the children's ideas (and the traceability of ideas in the event of there being some financial or other reward from the work) needs explanation, and children should be instructed about how their contributions will be disseminated.

Our understanding is that in design studies, children participate at a relatively high level of Hart's ladder of participation [12] and thus are more social actors than simply informants. This encouraged us to take on ethical symmetry as an approach [13] which is where children are not considered as especially different to adults in terms of participation – rather that in ALL participatory work due consideration be given to ethical balances and to informed consent – thus, for this work we were mainly concerned, not with there being parental or school based consent (i.e. consent by

adults), but to there being full consent from the children. In the IDC community, studies have sought to report methods and approaches that ensure participation is informed and valued [14].

CHECk2

Similar to CHECk1, CHECk2 (ChiCI Ethical Checklist 2) has a series of questions – the first of these answers should feed from CHECK1:

1. Why are we doing this project?

2. What do we tell (the children)?

3. Who is funding the project?

4. What do we tell (the children)?

5. What might happen in the long term?

6. What do we tell (the children)?

7. What might we publish?

8. What do we tell (the children)?

In completing this checklist the intention was to look before and beyond the design activity in order to better frame, for the children, the landscape of the work in order that they could better consent to participate. The second aspect of information that had to be conveyed to the children was about the designs the children were contributing. In a participatory design session children typically produce sketches and ideas that are then investigated by the design team and from which ideas are taken and brought together. The bringing together of ideas is not especially studied (there are exceptions like [15]) and it can be hard to always map where an eventual product might come from – thus attribution of credit for ideas is difficult. That said, it seems ethically

wrong not to explore with child participants this facet of participatory design – there is a possibility that their great idea could make a fortune!

In the specific case of the design for African children, the corresponding answers are given here:

1. WHY? Publicity for the group, to promote hand washing in Africa, to provide a platform for future study of IT skills for the children in Africa, to test out serious games design with children, to get publishable research,

2. What to tell? About our student going to Africa, about our belief that children can help design fun things

3. FUNDING? The University

4. What to tell? The University (but we have to explain what a university is)

5. LONG TERM? The game product may potentially make us money it could be sold on, it could save lives

6. What to tell? The product could make money

7. PUBLISH? We might write about the design work, the product or the project

8. What to tell? Universities do research (explain research) part of research is to write about what we learn – if we do this we call that publishing – this work might get published.

In our case study we determined to tell the children as much as possible about the use of their contributions.

In completing this checklist, the researchers found that

every time they trimmed an answer from the first response to the 'what do we tell' response, they were aware that this had to be justified. This prompted the research team to ask why certain aspects were omitted or trimmed and also to seek ways to explain complex aspects to the children.

Conclusions

The process of questioning our own motivations and values has lead us to develop two checklists for design work with children that we believe will have wide use in the HCI and CCI communities. Having used the tools in a design activity we report that CHECk1 pushes us to the extremes of honesty - a necessary first step if we are to be subsequently honest with children, and CHECk2 challenges us to make our research understood to children. In terms of communicating the purpose and practicalities of research to children we consider that CHECk2 ensures that key aspects are covered.

Still to consider, and this is ongoing, is transparency in the process of eliciting 'to use' design ideas from the contributions of children and means to ensure dissemination of results to participating children. The work continues, future work will evaluate the checklists over use and across different contexts by gathering narrative around their use.

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