Children are users too
UK UPA event review by GiGi Demming

The March UK UPA meeting held the 15th of March at Mircrosoft House addressed the expectations, strategies and practical advice for User-Centred Design with children. Ella Tallyn and Jon Pettigrew were the guest speakers who offered their advice and expertise in this specialised arena of Usability. Ella Tallyn is a Senior Research Fellow at Nottingham University's Mixed Reality Lab where she's currently working on an environmental e-science project. Her previous work with children includes the "Paper++" project at Kings College and as a User Experience Consultant at Flow Interactive. John Pettigrew is a yHCI specialist and a Founder and Senior Partner at Maxus. Jon has researched children's internet usage in the context of child protection for the European Commission and OFCOM (Office of Communications) and holds a research post at Loughborough University.

The following is what has been collectively pulled-through as the main points from their respective presentations. These points should serve as introductory guidelines for UCD with children:

Mental Models - "Children are not young adults, but a special user group"

- Phrasing of questions and the introduction of concepts used for adults should not be used for children. Simplification is the key.
- Different age groups within 'children' will have different consequences in terms of data collection and affect:
    - Their ability to verbalise and write at different ages will affect study design – i.e. an 8 yr will interpret and respond to information in a different way to a 12 or 14 yr old
    - Their ability to concentrate (in general the younger they are the less likely they'll be able to concentrate)
    - Their propensity to please or disrupt
- Having grown up in a computer age, do not underestimate how technically savvy children are. For example, it is highly likely a teenager is likely to know more about mobile telephony, and use it in a more sophisticated way, than the researcher.

Methodology & Analysis

Different age groups within 'children' will also factor into which method is best, and the following generally relates to children aged 8-12 yrs old.

- **Ethnography/Naturalistic studies** – children work best in their natural environments. So, for example, conducting research on an e-learning tool is best conducted in a classroom with the supervision of a teacher or at home with their parents. This also allows for the consideration of how social, physical, and organisational constraints may affect interaction. However, this method does take time and lends itself to a very problematic recording environment.
- **Participatory Design** – can be long or short term; benefits are getting direct feedback and a sense of naturalistic behaviours
- **Interviews & surveys** – quick and dirty usability, and for children it is especially hard not to lead them with questions. Younger children will have a desire to please a facilitator and agree with everything they suggest
- **Controlled studies** – best environment to record in and is useful for the development of fragile technology
- **Behavioural analysis** – this is just as, if not more, important than verbal responses. Children often have trouble formally addressing their true feelings and issues with a system or interface. There will often arise conflicts between observed behaviour and answers from interviews. Therefore, it is up to the researcher to keep a vigilant eye in observing their natural reactions.

Practical Information

- Always have a teacher, parent and/or legal guardian present at all times. The Market Research Society an the British Psychology Society both have codes of conduct that would be essential reading material for anyone interested in research with children
- Generate permission forms for parents and legal guardians explaining the nature of the research. It should explicitly address how their child is going to be recorded and what is to be done with the recording (e.g. Is it okay for me to make a video recording of your child? Yes/No; Is it okay to place pictures or recordings of your child on an academic website? Yes/No, etc.)
- Obtain an Enhanced Disclosure Criminal Record. This is not yet mandatory, but nonetheless a very good idea. And increasing number of parents and educators are asking for researchers to present proof of their criminal record before they allow their children to participate in a research project.
- If working in a classroom:
    - Explain the technology used for recording, but make it as inconspicuous as possible (this could be applied as a general rule – whether in a classroom or testing facility). Children are often pre-occupied with not only a new person but new technology, especially cameras and wires. Use of a tie-clip microphone, a small DV recorder (with tripod and clamp), and gaffer tape to cover cables is advised
    - Know that you will most likely have limited space to record in, often inhibiting the wide of the angle for video recording. Also, noise levels (e.g. form simultaneous conversations) will interfere with recording so try to place the microphone as close to the children without it getting in the way.
    - Show up early to set-up so that you are not unnecessarily disruptive to the classroom environment and needlessly draw attention to yourself
    - Morning visits to classrooms are best as this seems to be the time of day when children are most focused
    - In lieu of money, good incentives for children are games, gift vouchers, toys, etc. (anything they can play with or more readily prefer to cash). For teachers, an excellent incentive is designing a lesson plan for them. Teachers are often overworked stressed; helping them cut out a half a day's work by designing a day's lesson plan, even around your project, will win you a lot of brownie points.
    - And with any study, it's imperative that children become accustomed to the researchers presence, so having 2 or 3 introductory sessions before data collection commences is advised
- Expect the unexpected. Children are often fidgety with short attention spans, so nothing rarely goes as planned. Learn to work around this. It may be possible to extrapolate data from seemingly divergent behaviour

Further reading

If interested in pursuing this topic and finding out more information, the following is a list of references mentioned during the meeting that should be of use:

British Psychological Society – code of conduct:
http://www.bps.org.uk/about/rules5.cfm

The Market Research Society code of conduct:
http://www.marketresearch.org.uk/standards/codeconduct.htm

Criminal Records Bureau – information on how to obtain an Enhanced Criminal Record Disclosure:
http://www.disclosure.gov.uk/

British Educational Communications and Technology Agency (BECTA) - the governments leading agency in ICT and education:
http://www.becta.org.uk

University of Maryland Human-Computer Interaction Lab: Digital Libraries for Children – covers the university's HCI lab and how they research and develop an international digital library for children, plus discussion of current projects:
http://www.cs.umd.edu/hcil/kiddesign/searchkids.shtml

NESTA Futurelab – using emerging technology to develop interesting and innovate learning resources:
http://www.nestafuturelab.org

Qualifications and Curriculum Authority(QCA) – best resource for guidelines for those who want to develop classroom lesson plans as an incentive:
http://www.qca.org.uk/

OFCOM – regulator for the UK communications industry including the web and telecommunications:
http://www.ofcom.org.uk/

Kidzone: County Kildare Resources for Parents - a website that allows children to see the usefulness of the web and exchange pictures and information in a safe environment:
http://kildare.ie/kidzone/

Net Consumers: European Research into Consumer Affairs (ERICA) – useful source of information on child safety on the internet:
http://www.net-consumers.org/erica/indexs.htm