Co-researching smartphones
Co-creating future smartphone interfaces

Student: Paul Magee
Faculty: CTEHR / IDTU
Supervisory team: Dr Gillian Ward Dr
                Louise Moody
                Dr Annette Roebuck
Co-Researchers: Communicate2u

Today

Better enable user's connected lives
Better experiences for all users

Universal ease of use?

iPhone 6S
Evolution design
Launched in 2015

Latest design
considered
interface

Motorola Startac
Launched 2000?

The future?

Universal 'happyment'

USER EXPERIENCE QUALITY

Nokia 9000i Communicator
Launched 1996

Hard to use

Older design
poor
interface

IBM Simon Personal Comunicator
Regarded as the first smartphone
Launched 1993

Why is co-research important?

When beginning to design a new product, service or system it would be fair to assume that we always ask users what they want their devices to actually do. But what then about users with learning disabilities (LD)? We always try to understand and accomodate these specific needs and frustrations. Right?

Sadly, this does not appear to be so. Typically a new product is defined in response to a new marketing strategy and promoted to reach the widest audience, since wide acceptance and the resulting revenue is a measurable success. It will sometimes incorporate an evolutionary element of hardware and occasionally a step forward in middleware (for example integrated software-driven battery optimisation).

Smartphone interfaces

Interface design evolves more slowly. The adoption of the current range of tablets and smartphones in the Assistive Technology (AT) market highlights that the design and development of products will be expected to go further. There is a large portion of society that is restricted in terms of education, personal development and employment as a result of their disability, when much can be done to improve the experience, delivery and clarity of the available information.

What is co-creation?

It's a tool. Whereas design has tended to operate in secrecy (mostly for reasons of confidentiality), co-creation goes some way to redefining the role that design plays in creating futures and addressing complex needs, the perception of designers and that of the design process.

Better-designed products offer users their independence, the freedom to make an informed choice unimpeded by communication ability and integration with everyday life. Not different, nor labelled differently and importantly not segregated – a removal of social barriers to participation. The Department of Health incorporates a similar philosophy into the Strategy for Learning Disability for the 21st Century, part of which is shown below.

"Based on four key principles: civil rights, independence, choice and inclusion. Valuing People takes a life-long approach, beginning with an integrated approach to services for disabled children and their families and then providing new opportunities for a full and purposeful adult life." Department of Health (2001).

Functional improvements for users with LD's require clarity and an intuitive sense of interaction or communication. Equally, any improvements in operation could benefit any user of a given system, thus becoming a form of universal design that should be of wider benefit to users.

"The next stage in design, which is where we are today, is correcting these problems by developing methods of designing for the needs and capabilities of people. The result is more understandable and pleasurable interactions between people and technology." Don Norman (2014).

A collaboratively designed result could be thought of as truly inclusive. Collaboration is also empowering, since it not only reflects the stated preferences of users, un-constrained by the knowledge of the technology or manufacturing constraint, it requires user contribution and leadership in development at a level fundamental to the process.
This inclusive result can avoid the stigma that is so typical of the Assistive Technology (AT) marketplace (see HDTI, 2015) where solutions are seldom optimised to the greatest potential and the consequent lack of barriers can lead to adoption by a wider audience, resulting in better opportunities for success and continued, contemporary development.

Initial Summary

Use of innovative visual communication methods and creative media will link users with LD's with the outcomes they need, and importantly, **want** from their device. This can be driven by variations of co-creation and facilitated in collabo- rative groups. Paper storyboard methods develop the pattern of use, along with use of functional/mock up hardware reinforces the idealised functionality, supported by digital prototypes of the interface running on an existing device.
Working together with smart phone users to co-design the methodology behind future interfaces that will assist all people, informed by the shared frustrations and experiences of learning disability in an increasingly digital world. And the provision of responsive, intelligent recommendations here will improve user satisfaction and provide an interface that is intuitive and transparent, allowing the user to concentrate on the content not the inadequacies of the device.

How are we going to do this?

Background

1. Research the design of smartphone interfaces for people with learning disabilities

Working together

2. Develop a way to work together with people with learning disabilities to learn about smart phone interface

User needs

3. Make and test a range of interface ideas for a smartphone

Smarter-smartphones

4. List ways to make an easy to use smartphone interface

Sing!

5. As part of the process of working together on a research project, c2u have written a song that describes what we do as co-researchers. Scan the QR code (green box) below to hear it
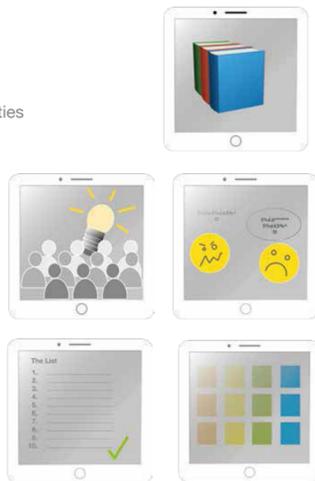
References

1. Department of Health (2001). Valuing People: A New Strategy for Learning Disability for the 21st Century. London: Department of ability of these devices.

2. Don Norman, DesignX: A Future Path for Design,
http://goo.gl/CGUiEj
3. Health Design & Technology Institute (HDTI) (2015),
http://goo.gl/M7Hlwn

communicate2U
in partnership with Coventry University
PWLD creative communicators

Coventry University

The Communicate2u Co-Researchers