

ASCMEI.T. - AN ONLINE TOOL TO CAPTURE NEW DIGITAL AND TECHNOLOGICAL IDEAS AND FACILITATE THE DEVELOPMENT OF NEW PRODUCTS TO HELP INDIVIDUALS ON THE AUTISTIC SPECTRUM

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ABSTRACT

Our app, ASCMEI.T. encourages people on the autistic spectrum; their parents, carers, teachers and connected professionals, to suggest digital and technical solutions to help people with autism. The app allows people to record and upload videos, demonstrating ideas that could help people with autism in daily life. These videos were collected on a private video channel called VIMEO, with examples shared on the ASCMEI.T. web-site to encourage wider participation with the app. Subsequently, the collated ideas were evaluated by researchers for novelty and potential value for people with autism and it is envisaged that one of the ideas would be suitable for a kick starter fund raising project to run later this year. Currently an analysis of the submissions is being carried out to identify whether or not existing products are actually already available.

CCS Concepts

• **Human Factors** → Collaborative and social computing;

Keywords

Autistic Spectrum; crowd sourcing;

1. INTRODUCTION

Smartphones often include features such as cameras, video cameras, voice recorders, and GPS hardware. It is said, 'a smartphone provides an essential any time, any place portal into the entire world wide web of knowledge' (1). Social media is seen as a new arena for participation and dissolving boundaries. These technologies are a valuable tool for researchers as they allow for user input and feedback to be scaled up to ambitious levels and allow access to new communities, which might be marginalised due to lack of mobility, co-morbidities or geography (2). The Participatory Design (PD) community has already identified the need to work in wider environments that go beyond

the workplace and formal organisations, as well as the need to move beyond the traditional software project and embrace design that is user driven. We wanted to explore whether smart phone apps with video capability and access to private platforms such as VIMEO can provide a suitable infrastructure for crowd-sourced collaborations.

2. METHODS

After a request from the autistic spectrum community to Digital Bubbles (<http://digitalbubbles.org.uk/>), a group of researchers from the Universities of Bath, Southampton and Sussex, interested in how digital technology can best support people on the autism spectrum, the app ASCMEI.T. was developed for android and IOS platforms. The app was designed to be simple to use. Users were asked to press the Let's Do This! button to be taken to the terms and conditions page, explaining how the submission will be stored and used and that the submission can be withdrawn at any time. On the next screen users were also invited to make a one minute film explaining their idea, or alternatively users could submit their ideas by email. Two Research Assistant co-ordinated events to promote the app to schools and leaflets were used to spread awareness about the app and the competitions. In addition, a Facebook and twitter page were created to promote the app to people with autism and their families. Lastly adverts were placed in specialist magazines.

3. RESULTS

In total, over 30 films were uploaded by October 2015 and the app was downloaded over 500 times. The content was wide ranging, from methods to help identify faces, to obtaining help with education. Not all the issues raised were related to typical autistic traits (such as social and communication difficulties), showing that there is a wide range of issues affecting those with autism, and not all relate to their condition. For example, there were a number of submissions that related to specific areas of the curriculum – maths in particular – that users suggested they needed help with. The idea that showed most promise for further development was submitted by a parent of a child with autism. They explained; "If he was in town and got lost, or something went amiss, there could be something on his phone to look at, firstly to calm him down because he very quickly gets himself into a bit of a flap, bit of a state, and so if there were steps on there he could follow because obviously if it is structured then

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sticking to the structure of something he is familiar with would calm him.”

4. DISCUSSION

Given the engagement with the competition by schools, the quality and relevance of the entries, the number of films made and wide reaching nature of the submissions, the ASCMEIT app appears to be a promising tool to provide the infrastructure for crowd-sourced collaborations. In general, participatory design with people with autism has an established history – the COSPATIAL project by Parsons et al), successfully co-developed technology with children with autism. ASCMEIT takes this work forward by putting those with autism as the instigator of the research design process and allows user input to be scaled up to ambitious levels (3). In the future, the app also has the potential to identify where existing products need to be modified. It seems possible that these online social networking initiative like ASCMEIT could be orientated towards promoting existing solutions for those with autism, as well as developing new products where gaps still exist.

5. CONCLUSION

This project has shown that an app can be used to engage with people in order to gain insight into the problems and difficulties

faced each day by those on the autistic spectrum and inspire innovative solutions. With the ASCMEIT crowd sourcing technique, we gain an insight into users, into their true needs and put users in the driving seat of innovation.

6. REFERENCES

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