

Customising an interactive narrative intervention to improve prosocial sharing behaviours in children aged 5-7 years with Asperger Syndrome



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ECHOOES

Echoes II aims to develop an adventurous technology-enhanced learning environment in which both typically developing children and children with Asperger Syndrome (AS) between ages 5-7 can explore and improve social interaction and collaboration skills. The environment will also serve as a tool for researchers, teachers, parents and practitioners to investigate problems that children may encounter in specific social contexts and the ways in which those problems may be addressed.

The PhD research aims to develop a tool for the customisation of the interactive narrative used in the Echoes environment. The focus of the narrative will be prosocial behaviour, in particular sharing, which lends itself to a focus of joint attention and application in real-life scenarios. It is expected that through the implementation of this environment, participants who were previously socially isolated will be more capable of becoming socially networked as individuals. Through the use of a user-centred design methodology, the customisation will be automated using Artificial Intelligence (Natural Language Generation).

Background

Individuals with Asperger Syndrome show severe and sustained impairments in social interaction (APA, 1994). These difficulties typically manifest as problems with non-verbal communication and a failure to understand the thoughts, feelings and desires of others (Baron-Cohen, 2006)

Current Interventions

These are based on explicit teaching of how to “read” specific social situations and how to unearth “hidden” (non-verbal) aspects of communication, e.g. Social Stories (Gray & Garand, 1993).

Aspects of Current Interventions

Highly individualised in nature.

Focus on one scenario but the pace of the intervention guided by adult leading therapy.

Non-interactive, e.g. Paper-based or PowerPoint presentations.

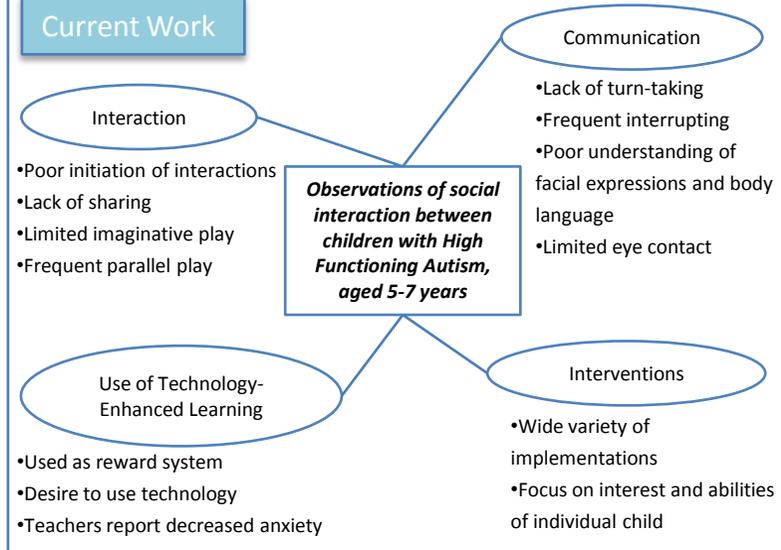
Research Focus

Automate customisation to provide intervention suited for each individual child.

Exploration around environment based on learning objectives. Control given to child. Exploration scaffolded by prompts and guidance.

Interactive scenes using new technology leads to increased motivation. Interaction is more realistic so may improve generalisation across scenarios.

Current Work



References

APA (1994). *Diagnostic and Statistical Manual of Mental Disorder*. Washington D.C., American Psychological Association.

Baron-Cohen, S. (2006). "Two New Theories Of Autism: Hyper-Systemising and Assortive Mating." *Archives of Disease in Childhood* 91: 2-5.

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Partners

