

DEVELOPING FOR AUTISM SPECTRUM DISORDERS USING USER CENTRED DESIGN



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AIM

1. To develop and evaluate software through User-Centred Design methodologies to assist children with Autism Spectrum Disorders (ASD) in developing their sharing skills.
2. Allow practitioners to observe children interacting with the system and investigate the impact this has on the development and transfer of skills to different situations.

WHY

In the typically developing population, social skills can be developed through modelling the behaviours of others¹. In ASD, typical trajectory of development is compromised, with difficulties in social interaction, communication and a rigidity of behaviour and thought². Current work focuses on the development of social skills but fails to take into account the wider environment, including school staff.

HOW

User Centred Design (UCD) methodologies are particularly important to this research. This includes practitioners involved in developing the pedagogy and children (both with and without ASD) designing the interface to promote engagement. An active research methodology is employed. School staff are involved throughout in order to assess the benefits of the software within the wider context.

PRACTITIONER INVOLVEMENT

Interviews and focus groups with teachers, therapists and parents were vital in ensuring that the software was engaging and suitable for differing developmental and learning needs.

ETHNOGRAPHY

Spending time in situ has allowed participants to become familiar with the researcher helped to understand each participant's abilities and needs.

OBSERVATIONS

Unstructured participant observation has exposed needs within the participant group which have been confirmed in the literature.



DESIGN WORKSHOPS

To increase engagement with the system, children contributed to the design of the system by creating characters and designing "fun places to play". Current methodologies were adapted to provide a structured environment and results analysed using Grounded Theory.

EVALUATION

Evaluation is continuous throughout the development. Final evaluation follows an action research methodology, with the school staff involved in the evaluation sessions and analysing the results. Videos are recorded before and after the evaluation to assess any new skills learned and the transfer of these skills to different environments. Crucially, the benefits to the practitioner of their involvement in the research is considered

REFERENCES

1. Bandura, A. and R. Walters (1963). Social learning and personality development. New York, Holt, Rinehart & Winston.
2. Pimley, L. and M. Bowen (2006). Supporting Pupils with Autistic Spectrum Disorders: A Guide for School Support Staff, Sage Pub. Ltd