

This study aims to recreate a scenario in a virtual world that enables a number of children to interact and communicate as they might in the real world. Furthermore the use of this technology will enable access to facial expression and body gestures, though 'easy-click' buttons. This will enable communication channels in which users will be able to interact with one another. The aim of this project is to assess how users with autism interact with virtual worlds, what tools they find useful, and how such technology can be used and integrated within schools.



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THE USE OF VIRTUAL WORLDS IN THE CLASSROOM



PARTICIPANT AND PARENT/GUARDIAN INFORMATION LEAFLET

This study seeks to explore the following: “Facilitating Communication in Children with Autism Through the use of Virtual worlds in the classroom”.

There are several studies that suggest virtual reality and virtual environments can help people on the autism spectrum to understand emotion, develop communication skills, and even generalise these skills to real-world scenarios. However, no study has considered the use of a virtual world in exploring how users with autism use the space and how/why they make certain decisions in-world. In part, this is what this study seeks to answer.

Scholars such as: Parsons et al (2006), Strickland et al (1996), Moore et al (2005), Baron-Cohen et al (2009), Cheng & Fan (2008) have all reported positive outcomes when using virtual spaces to help develop communication and emotional expression. Moreover, they have all reported that the use of such tools can be easily understood by people and children on the spectrum.

ABOUT THE RESEARCHER:

I am a PhD student studying with SMARTlab Research Institute, University College Dublin. SMARTlab, and indeed myself, are committed to producing research that is not only original, but research that can be applied and used in practice. This project seeks to do just this.

THE FINER DETAILS OF THIS PROJECT

It is important to note, that this study has been approved by UCD ethic committee and Linden Bridge School.

In working together we hope that this study can help children communicate and express themselves through ‘avatars’ used in a virtual world. To this end a virtual world will be used in the classroom for a series of sessions to collect data (with a view to validate these claims). This will involve your child accessing a virtual world within a lesson at school. This environment (virtual world) will be set up in such a way it is totally safe and secure *a private island that only permits the students and researcher/teacher will be installed and used.*

PHASE 1

Initially, I will be meeting with teachers and facilitators to help identify what would be helpful in terms of content within a virtual world. From this stage we can decide what elements to include. This might include designing cafes, classrooms, outdoor activities, shops, etc. The aim of designing an environment that resembles the real-world is to allow for a greater level of generalisation.



Some examples of Second Life, OpenSim and OLIVE, all examples of virtual worlds - where avatars can be customised and designed.

PHASE 2

During this stage the virtual world will be set up and running (using an off-the-shelf product) where some students (together in the same ICT class) will be able to design avatars. Avatars are 3-D representations of users in the virtual world. They will then be introduced into the space (the world) and orientated. At this stage some assessment of communication and use of gestures will be developed.



Various buildings and environments can and will be designed - in consultation with students and teachers.

PHASE 3

Having designed avatars and become familiar with the space (environment) the students will have a chance to explore more freely and start to interact with one another to a greater level. All tasks will be designed with the ICT curriculum in mind, and will help to build crucial ICT skills at every step. While the students and teacher are working in-world, I will be observing and taking notes, with a view to build a case study of details to produce some findings.



Access to facial emotions and bodily gestures will provide a channel for the students to communicate with one another.