



How innovative technology can help students with learning difficulties



Key points

- The VR application can accommodate students with different abilities to explore scenarios of varying complexities that can be either teacher-guided or student-driven depending on specific needs and objectives
- The application uses imagery captured by a 360° camera and is replayed via an off-the-shelf VR headset
- The supporting web application can run on a low spec laptop
- Different scenarios can be built, exported, and shared with other users

We created a virtual reality (VR) environment as a pro-bono project for Bettridge School - a school for children with Special Educational Needs (SEN).

For most of us, a visit to our local supermarket is an every-day occurrence; for some of the students at Bettridge School it can be a confusing and stressful experience. During the height of the pandemic, the school remained fully open to all students, but some elements could no longer carry on as normal. This included students having the opportunity to take part in everyday experiences and social interactions.

A CGI researcher in our Emerging Technology Lab in Gloucester is married to one of the teachers at Bettridge School and between them they conceived the idea of a web and virtual reality application that would allow students to experience social interactions such as a trip to a supermarket. We recognised the great potential this idea offered and started to collaborate with the school to bring the idea to life.

Our Lab team members embraced the opportunity to apply their skills to a responsible business project. They worked closely with the school to shape the requirements and to develop a solution that could be easily used within the school day. Together they designed and built an application that replays imagery captured by a 360° camera via a VR headset.

The school's local supermarket, Tesco, kindly allowed the CGI team to have out-of-hours access to the store for digital capture. This has enabled the students to safely explore the environment in a way that is realistic, meaningful, and fun. The VR application can accommodate students with different abilities to explore scenarios of varying complexities that can be either teacher-guided or student-driven depending on specific needs and objectives. Bettridge School is now using VR as a safe space for pupils to gain new experiences before progressing into the real-world equivalent.

The suite of software that was developed by the Emerging Technology Lab also includes a facility whereby users can capture and build scenarios that are more relevant to their own geography or use-case. Scenarios that have been built can then be exported and shared with other users.

In addition to developing the application, we are delighted to have provided Bettridge School with all the equipment to fully utilise the application.



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Get in touch to find out how this technology can make a difference.

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Jo Bleasdale,
Headteacher at
Bettridge School
said; "I'm blown-
away by the
technology and
knowing how it
will build pupil's
confidence going
from the virtual
world to reality.
The impact of this
project has been
far beyond what I
imagined."

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