Immersive multisensory environments supporting innovative pedagogies for SENDs in primary education

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Research Partners

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Introduction

Module SEN3004 BA Hons Special Needs & Inclusion:

Approaches to Support Inclusion through Technology

We have developed a technology-enhanced approach to creating a range of immersive multisensory learning environments to support primary-aged children with SENDs. Themes explored include creative arts, music, storytelling, drama, robotics and media.

Background

- multisensory storytelling 'in which stories are not simply told but can be experienced with all our senses': Preece & Zhao (2015, p.1)
- contextualised experiential learning opportunities: Spikol, (2009)
- digital and physical spaces 'orchestrate..an environment in which (Zoe) can interact with the world in new and constructive ways': Pagliano, (2000,p.5)

We share examples from practice of students using technology to design immersive storytelling environments and pupils moving between digital and physical spaces in order to explore narrative through collaboration and control.

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https://youtu.be/-KcYLtJFkbk

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https://youtu.be/_cEnkjmg_ro?t=30

Research Objectives

- To investigate teacher, student and pupil perceptions of technology-enabled multisensory environments for storytelling.
- To gather evidence from teachers and students of multisensory approaches supporting innovative pedagogies.

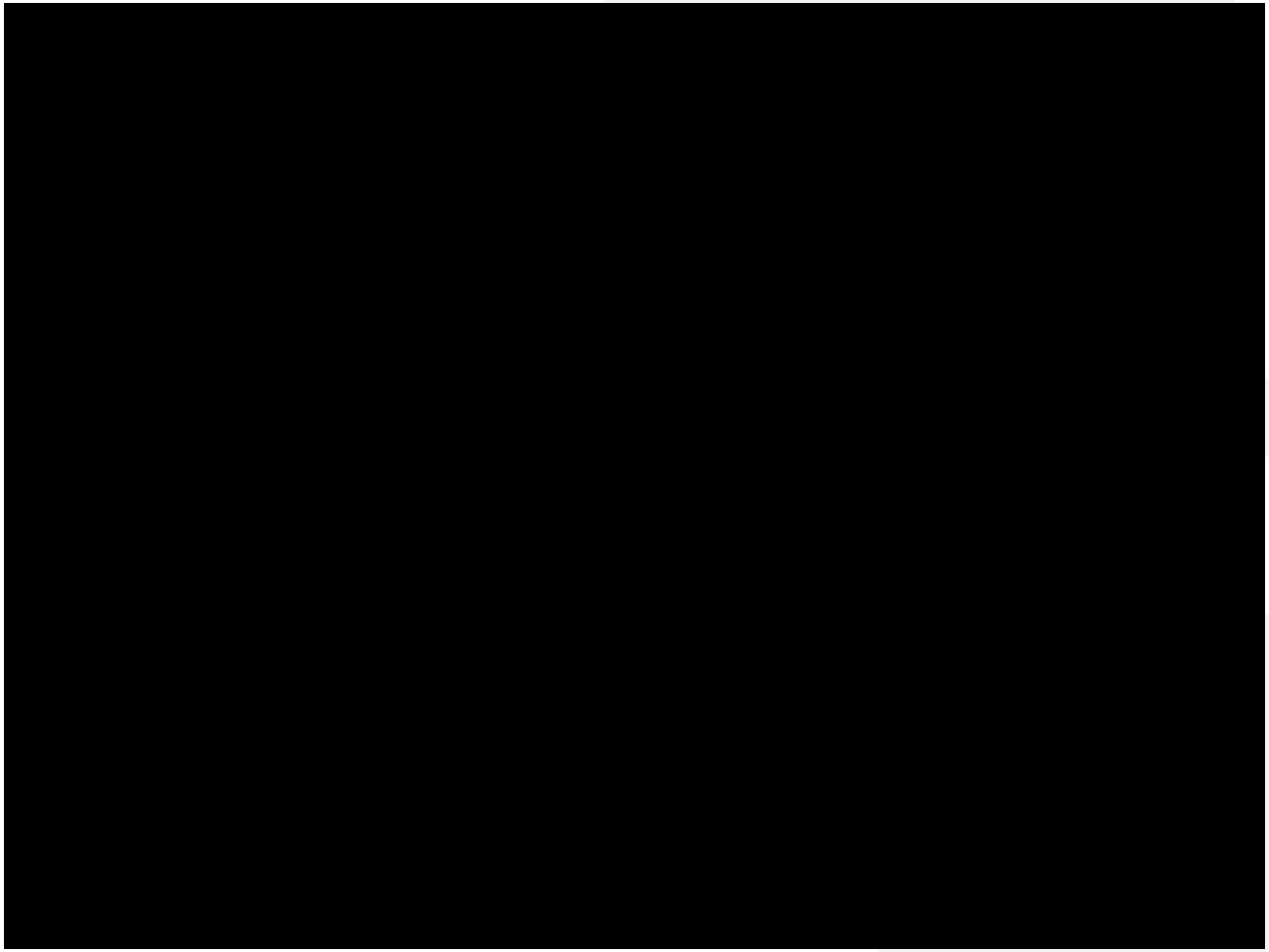
Research Questions

- What is the impact of technology-enabled multisensory environments for storytelling on the engagement of children with SENDs?
- What is teachers' understanding of the principles and practice of using technology-enhanced multisensory approaches to storytelling?
- What are students' perceptions of technology-enabled multisensory environments for storytelling?

Research Methodology

- Semi-structured interviews with teachers and support staff (3 schools)
- Focus group interview with 12 students
- Adobe Voice reflections with 12 students and 12 pupils
- Student questionnaires (10)

Adobe Voice: pupils



https://www.youtube.com/watch?v=3rBK1RjziXU

Adobe Voice: Students

https://www.youtube.com/watch?v=3rBK1RjziXU

Thematic analysis across sources of research evidence

Final coding categories:

Immediacy and immersion

Engagement of pupils and students

Confidence with technology

Emotional responses

Student/pupil interaction

Combining digital and physical

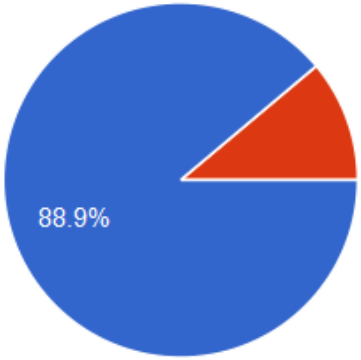
Transfer to practice

Understanding of narrative

Pupil control and independence

Student perceptions

I have a good knowledge of the hardware and software available to support sensory needs.



Strongly agree	**8**	88.9%
Agree	**1**	11.1%
Disagree	**0**	0%
Strongly Disagree	**0**	0%

'I gained valuable first hand experience which I can take into my educational institution.'

Quotes

Student perceptions

'This impacted the children in a positive way as they were able to participate in a fun, interactive activity in which they used sensory equipment to understand the story where the wild things are.'

'For children who when you read them a story haven't got the ability to conjure up the images in their mind.'

Teachers' practice

'We're not talking about it we're doing it… I like to make an environment tell a story through a visual and a sound and some objects.'

'Bringing in the images and the video it meant a lot more to them. It made the understanding come alive.'

Pupil engagement

'I had so much fun. I would like to do 'Room on the Broom'.'

'I remember Jack and the wild trolls, do de do, the wild things.'

Summary

Our experiences so far have demonstrated that technology-enhanced multisensory environments for storytelling can provide *experiential learning opportunities* combining *real world interaction* with the *creation of digital artefacts*.

As a result of this, we acknowledge the need to embed the use of technology in SEND contexts through immersive approaches mixing physical and digital learning spaces.

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References

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