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Pilot evaluation of 'Bubbles'

An interactive holocaust education tool

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ABOUT THE AUTHORS

Dr Lindsey Cameron



Dr Lindsey Cameron is the Principal Investigator for this project 'Evaluating Bubbles'. She is a Reader in the School of Psychology and a member of the Centre for Group Processes. She started her research career in 2001 working on theory-based school interventions to promote integration and diverse friendship groups in schools. Her experience includes leading large scale research council grants, having strategic input into a number of equality education charities (e.g. Researcher in Residence at the Schools Linking Network, collaboration with One Globe Kids, Chair of WEDG). Her research area is social development, with expertise in equality, diversity, gender stereotypes, and how children learn about social groups through books and TV. She is especially interested in diverse friendships, and the predictors and outcomes of these important relationships, and how children recognise and respond to inequality and unfairness.

Hugo Bowles



Hugo Bowles is a Postgraduate researcher in the School of Psychology at the University of Kent. His research interests are diversity, gender stereotypes, child developmental psychology and intergroup processes. Before joining academia he has worked as a tutor, an assistant in a nursery and has also enjoyed some brief work experience at the Museum of the Home. Alongside his studies he has worked on a research project exploring children's perceptions of their parent's gender roles and another focusing on diverse friendships amongst pupils in London schools.

Dr Lazaros Gonidis



Dr Lazaros Gonidis is a Lecturer in Psychological Methods and Statistics. His research interests include investigating the effects of attention, arousal, and memory load in how non-substance addiction affects our time perception. Specifically, he is interested in Facebook/Internet addiction, Computer Games addiction, and Gambling addiction. He is also interested in similar effects that computer games could have. Furthermore, he is interested in researching novel teaching approaches that enhance learning and promote engagement.

Alex Lam



Alex Lam is a postgraduate researcher at the University of Kent. His research interests include pro-social behaviour, diversity in friendship groups, motivation, group dynamics and bias in academia. He is particularly interested in the educational setting of schools, having gained experience working as an outreach tutor, mentor and a teacher overseas prior to joining the research team. Through his research, he hopes to discover what makes a school environment conducive to student learning and friendship formation.

Executive Summary

This evaluation examines the impact and effectiveness of *Bubbles*, an interactive virtual learning platform developed by the National Holocaust Centre and Museum (NHCM) in partnership with the University of Nottingham Mixed Reality Lab. The programme recreates a virtual Holocaust exhibition space where participants can interact with historical artefacts, survivor testimonies, and one another in real time. The evaluation explored the platform's usability, educational value, emotional impact, and potential to foster understanding, empathy, and social connection across a range of users including teachers, pupils, university students, and community groups.

Overall, the findings demonstrate that *Bubbles* is a highly innovative and engaging educational tool with considerable strengths in immersive learning, empathy development, emotional engagement, and Holocaust education. Participants consistently described the programme as memorable, emotionally powerful, and highly effective at encouraging perspective-taking and reflection. At the same time, the evaluation identifies several practical and pedagogical considerations that will be important for future development and implementation.

Key Findings

1. The immersive nature of Bubbles creates highly engaging learning experiences

One of the strongest and most consistent findings across the evaluation was the value of immersion. Teachers and pupils reported that the virtual environment created a stronger emotional and cognitive connection to the learning experience than traditional classroom methods. The ability to “move through” the space, interact with objects, and experience the environment collaboratively increased engagement and attention throughout sessions. Teachers described the platform as innovative and uniquely memorable compared with more conventional teaching approaches.

2. Interactive features successfully maintain attention and participation

Participants consistently identified interactivity as a key strength of the programme. The ability to explore artefacts, trigger audio content, zoom into objects, and actively navigate the environment encouraged sustained participation and curiosity. Teachers believed that the interactive elements helped pupils remain focused and emotionally invested in the content for longer periods than would typically occur during standard lessons.

3. Survivor testimonies create emotional connection and humanise Holocaust education

Survivor testimonies were repeatedly highlighted as one of the most impactful aspects of the programme. Teachers and participants felt that hearing directly from survivors enabled pupils to move beyond abstract statistics and historical facts to connect emotionally with individual human experiences. These testimonies were viewed as essential for fostering compassion, emotional understanding, and meaningful reflection on the realities of the Holocaust.

4. Everyday objects provide an accessible and relatable entry point into difficult history

The use of everyday household objects emerged as another major strength. Teachers explained that familiar items helped pupils connect more personally with the experiences of Jewish families living in Nazi-era Germany. These artefacts created a “way in” for pupils to understand the ordinary lives disrupted by persecution, making historical events feel more tangible, relatable, and emotionally resonant.

5. Bubbles effectively promotes empathy and perspective-taking

The programme was widely recognised for its ability to build empathy and encourage pupils to consider perspectives different from their own. Teachers believed the immersive and personal nature of the platform enabled pupils to develop a deeper emotional understanding of the experiences of German Jews during the Holocaust. Participants frequently described feeling emotionally connected to the families and stories presented within the virtual environment.

6. The Kristallnacht feature creates a powerful and memorable emotional impact

The Kristallnacht component was described as the “linchpin” of the programme and one of its most emotionally impactful features. Teachers reported that this section evoked particularly strong emotional responses from pupils and created a memorable learning experience that remained with participants after the session ended. This emotional engagement was viewed as an important mechanism for deepening understanding and reflection.

7. Teachers view Bubbles as stronger than many traditional teaching approaches

The majority of teachers believed that Bubbles offered advantages over more traditional methods of teaching Holocaust education. Around two-thirds of teachers rated the platform as “better” or “much better” than standard approaches, particularly because of its immersive qualities, emotional engagement, and innovative use of technology. Teachers reported that no directly comparable educational product currently exists.

8. Bubbles has strong potential to support discussion, reflection, and social understanding

Although the programme's primary value was seen as educational rather than relational, teachers believed Bubbles could successfully facilitate meaningful discussions within groups and classrooms. The platform was viewed as particularly useful for supporting conversations about prejudice, discrimination, equality, and social understanding when carefully structured and guided by educators. Participants felt the programme had potential to challenge stereotypes and encourage thoughtful dialogue.

Area for Development

Greater structure, guidance, and educational scaffolding are needed

The most significant area for development identified by teachers was the need for more structured educational support within the platform. Participants consistently argued that pupils required clearer learning objectives, guided tasks, discussion prompts, and reflective questions to maintain focus and maximise learning retention. Teachers expressed concern that without sufficient structure, pupils could engage with Bubbles more as a game or technological experience than as a serious educational tool. There was also a strong call for additional teaching resources to support discussion and deeper reflection before and after sessions.

In addition, the evaluation identified logistical and technological challenges associated with pairing schools together within the platform. Teachers viewed cross-school interaction as difficult to coordinate and potentially unrealistic without substantial technological improvements and support.

Recommendations

The evaluation findings suggest that Bubbles has significant potential as an innovative educational platform that combines immersive technology with emotionally powerful learning experiences. To strengthen future delivery and maximise impact, the following recommendations are proposed:

1. Continue developing the immersive and interactive aspects of the platform, as these are central to engagement and emotional connection.
2. Expand the use of survivor testimonies and everyday objects, which were consistently identified as the programme's most powerful features.
3. Introduce more structured educational scaffolding, including learning objectives, guided activities, reflective tasks, and discussion prompts.
4. Provide teachers with additional classroom resources to support preparation, facilitation, and post-session reflection.

5. Prioritise the use of Bubbles within single classrooms or established groups before attempting more complex cross-school linking models.
6. Develop further opportunities for facilitated discussion around prejudice, discrimination, and equality to strengthen social learning outcomes.
7. Explore scalable implementation models that maintain educational quality while increasing accessibility for schools and community organisations.

Overall, the evaluation provides compelling evidence that Bubbles is a highly engaging and emotionally impactful educational tool with particular strengths in Holocaust education, empathy development, and immersive learning. While further refinement is needed around structure and implementation, the programme demonstrates substantial promise for supporting meaningful learning experiences and encouraging deeper understanding of history, identity, and human experience.