



Meaningful learning and creativity in virtual worlds

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ABSTRACT

Virtual worlds open new possibilities for learners, prompting a reconsideration of how learning takes place, and setting education in a context of playfulness, delight and creativity. They provide environments in which it is not only possible but also necessary to generate and try out ideas. They therefore offer opportunities to explore new possibilities related to teaching and learning about creativity and to challenge assumptions about the creative capabilities of young learners. The research reported here focuses on a group of teenaged learners who worked together online in the virtual world of Second Life®, as well as using other online tools. It applies thematic analysis to a 120-post forum discussion carried out over two weeks, in which 19 learners and educators debated how to develop their virtual island, and sets this discussion in the context of ongoing interaction within this group. Their focus widened from building plans to cover the creation and maintenance of a community, creatively synthesising considerations relating to environment, ethics, governance, aesthetics and purpose. The teenagers' creativity when dealing with this authentic problem extended well beyond the elements identified by England's National Curriculum, and was supported by staff's active and supportive engagement in the debate.

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1. Introduction

There is a growing recognition that creativity is an important skill that can and should be developed at school. In England, the indicators of creativity identified by the National Curriculum are that pupils 'generate ideas and explore possibilities; ask questions to extend their thinking; connect their own and others' ideas and experiences in inventive ways; question their own and others' assumptions; try out alternatives or new solutions and follow ideas through; adapt ideas as circumstances change' (Qualifications and Curriculum Development Agency, 2010). These criteria are useful as indicators that can help teachers to assess creativity in its various forms as it appears in a classroom. However, they appear limited when put alongside Vygotsky's detailed consideration of imagination and creativity in childhood. His view were that 'creativity is present, in actuality, not only when great historical works are born but also whenever a person imagines, combines, alters, and creates something new, no matter how small' (Vygotsky, 2004, p. 11) and that creativity is strongly associated with emotions, fantasy, individual experience and social experience.

Since the 1980s, research into the development of creativity has engaged with its social elements, moving away from an earlier focus on individual experience towards an exploration of relevant social and environmental factors (Ryhammar & Brodin, 1999). It is increasingly clear that creativity is not simply an individual attribute but that it exists in collaborative processes such as blending and reconfiguring ideas, working on problems with others, communicating and 'interthinking' (Leach, 2001; Mercer, 2000).

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Creative learning has been found to flourish in environments that foster innovation, ownership, control and relevance for both learners and teachers (Craft, 2005). Within such environments people are challenged by their goals and tasks, they feel free to take initiatives and to collect information and interact, they have the confidence to put forward ideas and to take risks (Ryhammar & Brodin, 1999). The ethos of such environments is also important, learners are more likely to be creative when those around them are encouraging and supportive, surprising rather than predictable, posing questions and offering ambiguity, offering different patterns and environments, stimulating social as well as private learning (Lucas, 2001).

There is also evidence that creativity flourishes when learning is meaningful, linking new experiences with information stored in long-term memory (Clough & Ferguson, 2010; Grabe & Grabe, 1998). Meaningful learning is active and constructive, taking place when people develop knowledge in response to their environment, reflecting on activity and articulating what they have learned. It is authentic and intentional, situated in a meaningful context in which learners are motivated by working towards a goal. It is also cooperative, relying on socially negotiated understanding and the shared construction of knowledge (Jonassen, Howland, Moore, & Marra, 2003).

To provide these social and environmental factors for all learners will require a shift in current teaching and learning practices. Craft (2008) argues that

Educational futures which both manifest and foster creativity are likely to involve systemic transformation, being designed for flexibility, to foster creativity and collaboration, to encourage interaction between varied age groups and to meet learners' preferences about how, where, when, they learn

It is not easy to extend these opportunities within formal education with its current focus on individual assessment, particularly 'in a policy climate which at times appears to treat teachers like technicians rather than artists' (Craft, 2005, p. 77).

Such systemic change is difficult in the real world, but could it be possible in a virtual world? Virtual worlds are collaborative online environments, usually accessed using a computer interface which provide an illusion of three-dimensional space, avatars that serve as the visual representation of the user, and interactive chat that allows users to communicate synchronously (Sheehy, Ferguson, & Clough, 2007). These features mean that such worlds to support extended social interaction, and within many of them it is possible to build communities that share knowledge of what it means to be a member, work to solve issues arising from the allocation of power, where members benefit from each other by engaging in trade, and create a collective heritage that is related to art, buildings and events (McMillan, 1996). Many educators have made use of these virtual environments; by early 2008 around three-quarters of UK universities were actively developing in or using the virtual world of Second Life (Kirriemuir, 2008).

Such worlds appear to offer possibilities for the emotions, fantasy, individual experience and social experience that Vygotsky (2004) associated so strongly with the development of creativity. They are also flexible enough to investigate possibilities for teaching and learning within new and varied environments where the accustomed constraints and ethos of a conventional classroom may be relaxed, reshaped or removed.

This article therefore asks: How can a virtual world be used to support and extend the teaching and learning of creativity?

2. Method

2.1. Data collection

In order to answer this question, this research draws on data from Scheme (Twining, 2010), 'a new form of educational system designed to overcome the problems associated with current education systems in order to meet the needs of society and individuals in the 21st century' (Sheehy et al., 2007). In 2007, the project opened the Scheme Park Programme in the virtual world of Teen Second Life™; in part to investigate the extent to which a group of 150 school students across the UK would develop knowledge-age skills, including creativity, within this environment (Scheme Community, 2007). Participants also made use of the collaboratively authored Scheme wiki and forum to organise their community, to develop their environment and their curriculum, to impose order, to discuss their identity, to share expertise and to agree rewards and sanctions (Ferguson & Sheehy, 2010).

The Scheme Park Programme took place over more than 13 months, with its virtual island generally open 24/7, and generated a massive dataset including virtual artefacts, media assets, records of in-world chat and a variety of online resources. In order to focus analysis on the implications of this project for the teaching and learning of creativity, one forum thread was selected as a focus for analysis and as an exemplar of practice.

This forum thread, 'Scheme Park 2.0 - what do we need?', is described in Table 1. It was written by members of the Scheme Park Programme at the end of Phase 1 of the project, when the virtual island Scheme Park was closed for redevelopment, and all activity was therefore concentrated in the forum and wiki and focused on creating the next phase of the programme. Many forum threads and wiki pages were created as part of this creative process; this forum thread was selected because it includes the majority of issues that were key at the time for the teenage participants (Ferguson & Sheehy, 2010), was popular with readers and writers, and represents two weeks of an extensive creative process.

Nineteen members of the community actively authored this thread: four staff (one female and three male) and 15 teenagers aged between 13 and 17 (five presenting as female and ten presenting as male). The staff members had all met face to face, though they met most often in online environments. The teenagers came from different parts of England and

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