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## **Seeding, Wonder Rooms and Curatorial Inquiry: New forms of Museum Communication and Learning**

*Mike Sharples*

*Institute of Educational Technology, The Open University, UK*

This paper addresses how to enable innovative forms of learning with museums. Research into the learning sciences has identified attributes of successful learning, including learning through conversation and collaboration, embodied cognition, and metacognitive awareness (Sawyer, 2014). Parallel work has identified new methods of learning in an age of digital and mobile technologies, such as seamless learning, rhizomatic learning and personal inquiry learning (Sharples et al., 2014). These are underpinned by a social constructivist theory of learning whereby people construct shared understanding of the world through active exploration and dialogue, mediated by cognitive tools and supported by expert teachers. How can this new science of learning be aligned with the role and fabric of museums as places to exhibit and interpret collections for public education and entertainment?

One approach has been for museums to extend into the online space of social media and virtual worlds, where knowledge is constructed through a democratised process of contribution, recommendation and commentary (Drotner & Schrøder, 2013). Instead of seeing knowledge construction as the preserve of experts, to be published and consumed through mass media, knowledge is created through a distributed process of continual construction and adjustment. The social learning process of, for example, Wikipedia is based upon a dynamic medium (MediaWiki software system) where knowledge is publically constructed, discussed, and refined. This distributed and visible process of meaning making aligns with social constructivist theories of learning, as well as more innovative approaches such as rhizomatic and connectionist learning. Computer-mediated methods of reputation management can add a layer of expert facilitation, by promoting and rewarding contributors who are valued by the community, (see e.g. StackExchange.com).

The function of social media, to co-create dynamic and undifferentiated knowledge, does not sit well alongside the established role of museums as solid architectural sites for careful curation and display of lasting historic artefacts. Attempts have been made to integrate social knowledge construction into online curated exhibitions, for example with the BBC site for The British Museum's 'A History of the World in 100 Objects'<sup>1</sup>, where other museums, schools and members of the public were encouraged to contribute descriptions and classifications of objects that are both personally and historically meaningful. The exhibition organisers then face the difficult tasks of producing a carefully prescribed and authoritative online catalogue of definitive works, alongside an eclectic mix of personal and local contributions. This is a shift away from presenting *authentic objects*, towards orchestrating a multiplicity of personal and collective *authentic experiences* that create a distributed web of meaning making (Parry, 2013). It is a move from trust presenting to trust building.

Until recently, these activities of experience sharing and trust building have been confined to carefully-managed online spaces that are adumbrations or annotations of museum collections, or they have been conducted outside the control of museums

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<sup>1</sup> [http://www.britishmuseum.org/explore/a\\_history\\_of\\_the\\_world.aspx](http://www.britishmuseum.org/explore/a_history_of_the_world.aspx)

through visitor websites such as TripAdvisor. This paper explores how learning through conversation and sharing of experience can be brought back into the museum in forms that are both empowering and subversive. It draws on the work of Juliet Sprake in 'learning through touring', Matthew McFall in developing a 'wonder curriculum' and Annika Wolff and Paul Mulholland in 'curatorial inquiry'.

### Learning through touring

The premise from Sprake's work is that 'learning through touring' is haptic, such that the learner is a fully physical, cognitive and emotional participant in the process (Sprake, 2012). Visitors together create tours by moving freely around constructed spaces, creating experiences from their interactions with people, locations and objects. These experiences are built up into a shared artefact that both tells a story of the tour (as a guide for other tourers) and also creates a playful response to the physical space.

Sprake proposes three elements of learning through touring: stumbling upon, noticing, and connecting. As they *stumble upon* physical spaces in unexpected ways, meeting other people and talking about the things they find, visitors create narratives of their experiences. They *notice* some parts of the environment in ways that are signed and proposed, and others in ways that create personal meaning. Thus, touring is an act of imaginative association between the given and the found. By viewing an environment from different perspectives, visitors make cognitive and social *connections*.

Tour-enabled sites, such as museums or heritage sites, impose limits on the journey, restricting the making of meaning to what can be seen front-of-stage in the visitors' areas. The un-toured spaces, that are off-limits for visitors, may show the museum as a work in progress, with more uncertainty than is shown to the public. Thus, a tour is a line of tension between a displayed environment and an unfolding story of its fabrication. Sprake has probed this tension by taking children on tours behind the scenes at museums. Her *Transitional Spaces* project involved a group of young people, aged 13-14 years, exploring galleries of the Victoria and Albert Museum (V&A) that were closed to the public while being re-developed for a new exhibition. Through a series of four workshops, run in cooperation with the V&A, the young people recorded their impressions of the work-in-progress and created multimedia guides on mobile devices.

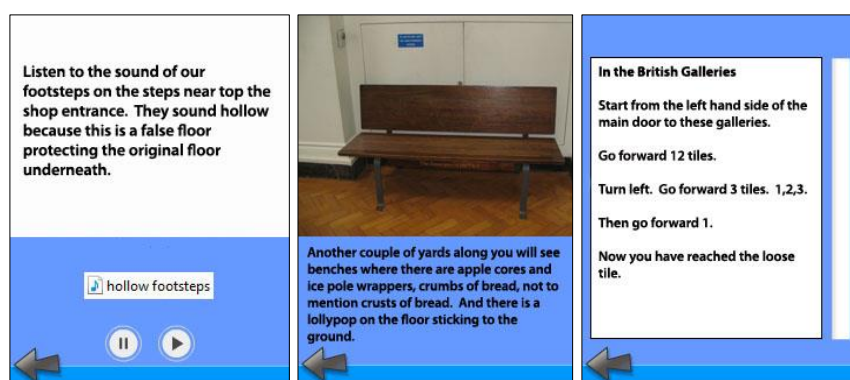


Figure 1. Sample pages from the *Transitional Spaces* multimedia tour produced through workshops with children aged 13-14 years at the Victoria and Albert Museum (Sprake, 2012).

Sprake terms this activity 'seeding': where mobilised visitors collectively create content for handheld technology that invites further incubation, cutting, or development. Both the creation of the guides and the use and extension of them at later times by other visitors are acts of learning through connection and conversation – exploring the fabric of the building, documenting the evolving exhibition, and conversing with others across time. Seeding sees the museum as a site for playful engagement with ideas in flux (Figure 1).

### **Wonder Curriculum**

For his doctoral thesis, McFall investigated wonder as an instigator of learning (McFall, 2014). Wonder is seen as a process of personal exploration characterised by positive affect, questioning and the motivation to find out more. As an experience, wonder progresses through phases of anticipation, wondrous encounter, exploration, and revelation. A wondrous encounter drives exploration forward, by contrast with the similar but less productive experiences of astonishment (immobile), amazement (confounded), awestruck (fearful insignificance), and admiration (subjugation).

Building on the educational theories of Pestalozzi<sup>2</sup> (learning through active exploration of objects) and the art and craft of conjuring, he devised a 'wonder curriculum' for primary schools comprising eight interventions: The Magic Show; Speed Object Lesson; Wonder Hunt; Wonder Tables; The Cabinet; The Quest; Workshops; The Wonder Smash. The final part of this process was for children to create impromptu museum galleries in school classrooms, to display and promote the wondrous objects they had collected.

*"To credit of all concerned a great deal of effort had gone into presenting something resembling a school science fair but whose scope went beyond into intriguing areas of mystery, magic and the natural world. I was invited to examine fossils and crystals, try quizzes, play games, decipher codes, listen to music (and join in)... in short, to do and learn...It must have been a splendid learning experience. (Visitor Report by Denny Plowman, Nottingham City Museum and Galleries)." (McFall, 2014, p. 178)*

Following on from this work, McFall has established a permanent Wonder Room in a Nottingham school where teachers and children can exhibit objects of curiosity and wonder, and has also created a temporary Museum of Wonder within the indoor atrium of a school (Figure 2). Here, the walls are decorated with stimulating puzzles and illusions, and the partitions create a labyrinth furnished with cabinets of curiosity. School students are encouraged to contribute and display their own curios. These installations are being extended to other locations, with the possibility of a Museum of Wonder being installed within a conventional museum as a space to juxtapose curation and happenstance, taxonomy and serendipity.

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<sup>2</sup> See <http://infed.org/mobi/johann-heinrich-pestalozzi-pedagogy-education-and-social-justice/>

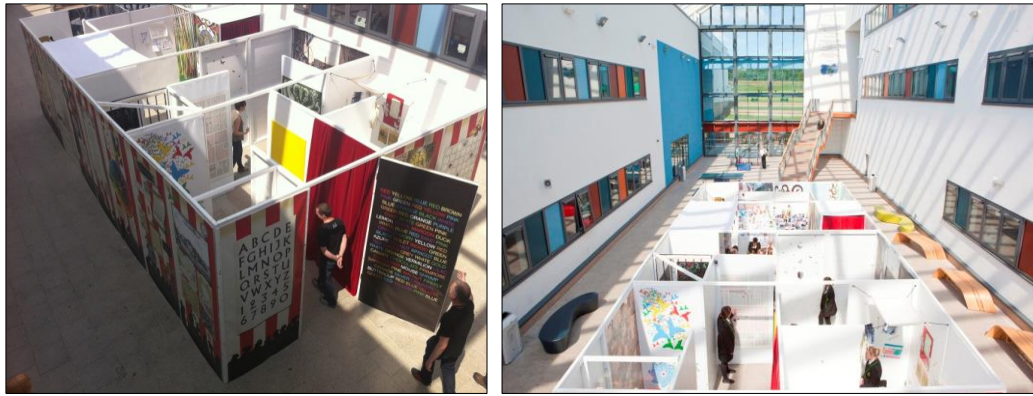


Figure 2. Temporary Museum of Wonder installed by McFall within a school atrium.

### Curatorial Learning

The history of inquiry-based learning can be traced back to the instrumentalism of John Dewey (1910), whereby encounters with objects in the world can become instruments for knowledge forming. Learners are active agents, continually posing questions and seeking answers. Wolff and Mulholland transpose inquiry learning into a museum setting through the concept of curatorial inquiry: by organising and re-presenting museum artefacts in other contexts we come to understand their shared value and meaning. Adapting a cycle of inquiry-based learning, they propose a learning process that involves researching a topic, collecting and selecting museum content, interpreting the items of content and their connections, displaying and presenting the content and reflecting on the process.

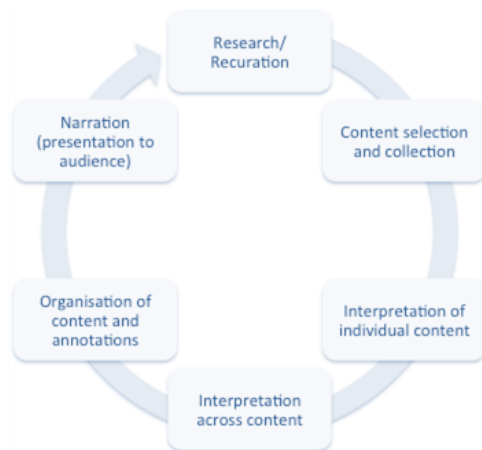


Figure 3. The curatorial inquiry cycle (Wolff & Mulholland, 2013).

### Discussion

The three pedagogies of learning through touring, wonder curriculum and curatorial inquiry are complementary. They do not seek to extend the museum into an online space, but to equip visitors with the means to subvert museum space through bricolage – creative and exploratory play with objects. For Sprake, bricolage comes from taking young people on tours through museum work-in-progress, encouraging them to create playful multimedia guides to content that is located within the museum but not part of its curated display. For McFall, it involves creating and extending miniature museums of wonder within institutional spaces. For Wolff and Mulholland, bricolage comes from a process of acquiring, organising and re-presenting museum

objects out of their normal contexts. Bricolage is a powerful method of learning. It develops sensitivity to the properties and uses of materials, it encourages creativity by re-casting objects in new forms, and it questions the established order of things by re-classifying objects. On a more abstract level, bricolage is a continual testing of constraints and the structures within which learning can occur (Sharples et al, 2014). Too much constraint and creativity is stifled; too little constraint and the activity becomes disorganised. Where museums have become ossified, “too concerned to preserve their curatorial and communicative chastity” (Drotner & Schrøder, 2013), bricolage can “penetrate the exhibition space” (Bitgood et al. 1990, cited in Meecham, 2013) with creative play of materials and ideas. Where museums are in transition, bricolage can offer a means to explore the process of human-centred design and a movement from the primacy of authentic object towards authentic experience.

Lastly, in the same way that digital experiences are becoming more embodied, for example through wearable fitness monitors, so there is a new challenge to reconnect online viewing experiences back to the physical space of the museum and its tangible artefacts. By presenting online versions of the multimedia guides from seeded tours and re-presenting artefacts through curatorial inquiry, by creating web-based museums of wonder, and by connecting learners online to live explorations behind the scenes of museums, we may find new ways to re-mediate museum communication.

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