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This paper outlines the practices used to facilitate knowledge exchange and creative collaboration in the research network, Transforming Thresholds, funded by the Arts and Humanities Research Council (AHRC). We focus on the principles used to design the Creative Charette, a novel collaborative event which brought together an interdisciplinary team of academics with a range of museums and commercial partners to generate new knowledge about thresholds and to design, create, test, install and evaluate solutions to improve visitors' first, on-site engagement with the museum. The experimental nature of the Charette allowed us to address the practical research question: What methods, media and principles best help facilitate collaborative knowledge exchange between diverse academic and non-HEI partners? We argue that rather than focusing on specific media or interactive formats, the scaffolding of knowledge exchange practices needs to attend to three key factors: choice of language, flexibility of media and environment, and choice of participants. The specific resources used to realise each scaffolding factor can vary according to context (e.g. how events are labelled, which media might be used or how teams can be composed), but as a transferable principle, each factor needs to balance innovation and familiarity in order to create common ground and draw together diverse expertise in productive ways.

Keywords (3 max): knowledge exchange, charette, media

Introduction

This paper outlines the practices used to facilitate knowledge exchange and creative collaboration in the research network, Transforming Thresholds, funded by the Arts and Humanities Research Council (AHRC). In November 2012, the Transforming Thresholds network commenced a series of five events designed to investigate the critical but underexploited space of the museum foyer and the media used in it. The project has brought together an international team of academics with expertise in the textual, visual, spatial, curatorial and interpersonal uses of digital media, along with non-HEI partners from retail, theatre, gaming, education and museums. Our commercial partners range from SMEs to global corporations with expertise in architecture, screen design, mobile technologies and learning spaces. Together, this ensemble has worked to generate new knowledge about thresholds and to design, create, test, install and evaluate solutions to improve visitors' first, on-site engagement with the museum.

Foyers are significant, liminal spaces. However, they can place complex orientation demands on visitors, giving rise, it has been suggested, to ‘threshold anxiety’ (Heumann Gurian, 2005). Little is as yet known about the initial, intellectual scaffolding (Wood, Bruner and Ross, 1976) needed to address such anxiety. The network thus addresses the key research question: How can museums best support visitors’ experience during the initial phase of their on-site visits?

The different types of intellectual scaffolding required by visitors and the varying forms of threshold spaces explored by the network suggest that a single solution to this question is unlikely. Instead, the network has adopted a practice-based approach which exploits the diverse range of disciplines and sectors represented by its participants. A core objective of the project has been to test how far it is possible to use both traditional and digitally-informed models of orientation and engagement from e-learning, performing arts, retail and gaming to transform our understanding of (and so help redesign) museum foyer spaces.

The models of engagement from the four key sectors (education, performance, gaming and retail) have also informed the methods used to facilitate the network activities, including the use of game mechanics, performance encounters and social constructivist models of active learning. Unlike other networks which have structured their knowledge exchange activities around single models of engagement (such as the Festival Performance network (O’Grady and Kill, 2013)), this network has...
exploited the transdisciplinary diversity of the project to test the potential of integrating components from different models of engagement to enhance creative collaboration. The creative practices employed the network have been to some extent experimental and address a second, practical research question:

*What methods, media and principles best help facilitate collaborative knowledge exchange between diverse academic and non-HEI partners?*

This paper outlines our response to this second question, and suggests some transferable principles to guide future collaborative knowledge exchange activities.

**The Creative Charette: Frameworks for collaboration**

The Creative Charette was the second of the five events run by Transforming Thresholds network. The network events began with the **Roundtable** in December 2012, when 30 academics and practitioners met to share existing fieldwork about visitor behaviour in foyers, identify key visitor needs, explore engagement models from our four key sectors, and formulate the teams and projects which would go forward for further development at the **Creative Charette**. The Charette took place in March 2013, where for two days, 20 participants designed, created and ‘rehearsed’ two interventions intended to improve visitor orientation in threshold spaces. These designs will be installed in two museums (Petrie Museum of Egyptian Archeology, London, and New Walk Museum and Art Gallery, Leicester) in the summer of 2013. A further project generated by the Roundtable, to be installed at Chatsworth House, will be developed under a separate AHRC-funded project – ‘Collaborative Arts Triple Helix’ (CATH).1 The visitor evaluation of each installation will use a variety of eliciting and observation techniques, and form the basis of the fourth network event: the **evaluative workshop** scheduled for December 2013. The network culminates in a multi-sited **Festival** in April 2014 which will disseminate the findings of the network to academics, museum practitioners, visitors and commercial partners.

The network takes a social constructivist approach to knowledge exchange: that is, participants generate knowledge through active social learning (Vygotsky, 1978). The particular challenge in the case of this network was how to facilitate active learning in a way that would bridge the gaps between highly disparate disciplines and practice sectors, and to extend that knowledge exchange in relation to a practical but open-ended task (in this case, creating, testing and installing solutions to the multi-faceted problems encountered by visitors in museum foyers). In order to bridge those gaps, three aspects of the network’s blended approaches have been important.

A key decision was to design an event which used framing language from outside the specialist knowledge of most of the participants: the creative charette. In so doing, the event defamiliarized the collaborative process in a way that ‘levelled the playing field’ and simultaneously **created a new, shared language for collaboration**. A charette is an intensive effort to solve a design problem within a limited time. Traditionally the term is used in architecture and refers to the rapid prototyping, rehearsing and construction of design projects. In this case, we were not intending to create an architectural solution to the problem of the foyer (which was beyond the scope of the network), but rather to draw metaphorically on similar elements of intense creativity, rehearsal, lateral thinking and collaboration.

The model of engagement characterized by the charette is situated within the broader evolution of collaborative practices in the arts and humanities which has moved from earlier experiences which polarized knowledge exchange as either decontextualized, academically oriented discussions or highly contextualized, practice-based tasks. For example, academic models of sharing such as “seminars” and “workshops” have been replaced by elements of practice and experimentation in “sandpit” style events.2 But while sandpits are apt environments which generate

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1 The CATH project is a partnership, running 2012-2013, between the University of Birmingham and University of Leicester supporting the development of digital prototypes through 16 ‘triplet’ collaborations of academics, commercial companies and small cultural organisations, supported by a series of £4,000 vouchers.

2 Members of the project team had successfully convened “sandpits” as part of the AHRC-funded LIVE!Museum research network pilot scheme with BT. In 2010 the “LIVE!Museum” network provided a series of two-day events for small groups of designers, digital developers, curators and academics to rapidly grow, in 48 hours, strategically intelligent research proposals in the area of digital heritage, through a series of hands-on structured activities.
new ideas and initiate collaboration, our aim was to introduce three further key elements which are particularly important for knowledge exchange:

- The capacity to create designs and prototypes in real time
- A safe environment in which to rehearse solutions
- A balance between goal-based activities and ‘bottom-up’ collaboration

The charette thus incorporated other elements found in time-bound, open, participatory events like “hackathons” (events focused on collaborative creative production, usually found in programming or technology-related spheres, though recently adapted for use in cultural contexts). We asked the participants to work in teams to generate designs in response to pitches offered by the museum partners in the network, which were reviewed in a formative “crit room” style evaluation by a panel of experts. But unlike practice-based collaborations like the Museomix series (Dixon 2013), the charette functioned as a rehearsal space used to test out the collaborative designs and processes rather than requiring full, on-site installation in the same time frame.

In museological terms, the charette was highly novel. Many museum studies courses across the world support learners (both entering the sector and as in-service practitioners) to develop media, exhibits and interpretive interventions over a longer period of time – such as a teaching module. Likewise, there are examples of museums using spaces to ‘mock up’ exhibitions under design, but again over much longer periods of project development. The novelty here, of the Transforming Thresholds charette was to combine some of the structuring and sequencing of ‘sandpits’, and the time parameters of ‘hacks’, with these spatial and physical dimensions of museum studies teaching and professional exhibition design processes – into, in essence, a live, curatorial hack.

The distinctive characteristic of a charette is its focus on working collaboratively to create a tangible artifact. In order to explore the affordances of digital and non-digital media in facilitating collaborative work, we provided a range of materials and stimuli that the participants could use to create a copy of their design. These included paper, card, pencils, plasticine, printed copies of the museum floor plans, mocked up floor plans to scale taped on the floor, projectors, 3D simulations of each museum’s entrance spaces, digital images of the museums and of key exhibits and archive material provided by each museum displayed on touch screens, 3D models of museum artifacts, sound files, speakers, laptops and tablets. The teams were free to use any or all of the materials as they wished.

The charette took place in the Digital Prototyping Hall of the Digital and Cultural Heritage Hub, University of Birmingham. The open design of this space was particularly helpful as a flexible canvas upon which the teams could sketch their ideas using the palette of media resources we had provided. In one area of the hall, the team working on the design for New Walk created an animated projection to draw visitors’ attention to the flight of stairs that lead to the upper galleries of museum. They rehearsed the projection using the floor plans, and created silhouettes of animated figures on the blank wall of the hall space.

![Designing the projection for the New Walk Museum and Art Gallery.](image)
In another part of the hall, the team working on the design for the Petrie museum created a hand-drawn storyboard, inspired by the digital images of Petrie manipulated on a touch screen, while others created a soundscape mixing music samples and sound effects from an architectural dig. Both teams used virtual spaces to simulate their designs, and both used physical spaces to simulate their designs, refine their ideas and create a workplan to be presented to the museums for review. The flexible environment and the range of media enabled participants to draw on multiple practices simultaneously, for example seamlessly blending the architectural modeling with a film-maker’s storyboard techniques, or drawing from performance art and storytelling to create engaging animations through simple projections on a wall.

The mixture of academic, museum and commercial expertise within each group led to surprising and creative directions which would not have occurred within each sector alone. Taking a lead from the education and gaming sectors, where a mixture of the ‘familiar’ and ‘surprise’ was found to encourage lengthy engagement, each of the two groups was carefully populated with ‘familiar’ and ‘surprise’ expertise from the various sectors within the network. New Walk Museum’s museum expertise was mixed with a performance artist, a lecturer in multimedia, an educational designer, a games designer and a digital technologist for example. This mixture meant that when the idea of projecting moving visitors on a wall was proposed, the museum decided on the aim and direction (visitor flow); the performance artist was able to turn the moving visitors into a short, playful scene (visitors unfurling a map, puzzled, then striding off purposefully as dinosaurs scampered underfoot); the games designer added the idea of different objects rolling down the stairs for children to count/compare; and the digital technologist was able to say what would and wouldn’t work, and mock up a projection on the wall.
Evaluation

Formative feedback gathered through semi-structured interviews suggests that the integrated practices used in the Charette have allowed the network to harness diversity productively, as demonstrated through comments from the network’s commercial, academic and museum partners.

“It’s great to have a group of like-minded individuals, but where the knowledge set is very wide and diverse” (Mark Howells, Forth Digital)

“We all have a synergy in the way we think about flow and user engagement, but that’s about the extent of it. The language we use to analyse and evaluate those spaces is very different and that’s been particularly interesting and useful” (Tracy Harwood, Retail Lab, De Montfort University)

“It’s fantastic to see what happens in other sectors … innovations and ways of measuring how things are working.” (Chloe Roberts, Chatsworth Trust)

The key principles used to orchestrate the work of our critical ensemble emphasise the need to create common ground through the careful scaffolding of events and their contexts. Each aspect of the scaffolding used in our knowledge exchange activities (choice of language, flexibility of environment, range of participants), provided a balance between the novel and the familiar, bottom-up collaboration underpinned by strategic top-down designs of open-ended activities. We argue that sensitivity to these foundational aspects outweigh the affordances of particular medial resources or interactive formats and can be applied widely to other knowledge exchange contexts.

References


