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Using design thinking and co-creation to re-imagine curriculum

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This paper begins with a discussion of approaches to co-creation and the application of design thinking (Sanders and Stappers, 2008). In this discussion, examples of co-creation approaches include Open Space Technology (Owen, 1997) a model of collaborative, research-informed facilitation and writing mostly used in higher education settings. The discussion reveals aspects of these approaches which enhance co-creation and peer to peer facilitation as well as high quality research-informed writing and curriculum development using the cognitive characteristics of design thinking (Oxman, 1999 & 2004). Significant features of the OST model are assessed to understand relevance for educators and practitioners in design as an anti-hierarchical approach to research-informed writing and curriculum development. The paper goes on to analyse two case studies of different stages in the experience of a group of art and design educators brought together to re-imagine a research-informed curriculum after an institutional merger. The group uses co-creation and OST informed approaches such as World Café and Bar Camps to co-create a blueprint for a research-informed curriculum. This analysis draws on evaluation reports. The paper concludes with suggestions for further development in design Higher Education contexts.

Keywords: Co-creation, design thinking, participation, curriculum design, open space technology

Introduction

Co-creation strategies
It is often the case that the terms co-design and co-creation are conflated or even deemed to be synonymous. Definitions of co-creation and co-design are

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mostly limited to design research publications and only exist as outlines in Wikipedia for example.

Sanders and Stappers (2008) in their article on uses of co-creation and co-design in multiple contexts refer to these activities as;

> *'...any act of collective creativity, i.e. creativity that is shared by two or more people. Co-creation is a very broad term with applications ranging from the physical to the metaphysical and from the material to the spiritual, as can be seen by the output of search engines. By co-design we indicate collective creativity as it is applied across the whole span of a design process(...) Thus, co-design is a specific instance of co-creation. Co-design refers, for some people, to the collective creativity of collaborating designers. We use co-design in a broader sense to refer to the creativity of designers and people not trained in design working together in the design development process.' (Sanders and Stappers, 2008, p 6)*

In the examples I wish to discuss, I have focused on the use of co-creation strategies in an education setting at the *fuzzy front end* of the problem phase of idea generation. The use of such processes is well understood in business and marketing situations as well as in co-creation approaches to participatory design. In design education however, the teacher or researcher is often required to produce course designs (modules, courses, learning outcomes etc) in less than participatory circumstances. How might co-creation be applied to the design of our own education contexts? Or at least in the idea generation phase.

> *'Co-creation practiced at the early front end of the design development process can have an impact with positive, long-range consequences (...) The application of participatory design practices (both at the moment of idea generation and continuing throughout the design process at all key moments of decision) to very large scale problems will change design and may change the world.' (Sanders and Stappers, 2008, p 9)*

In these situations, I have used co-creation strategies as models of facilitation and expression as well as a peer to peer approach which is less hierarchical and enables my role as both an educational manager and thought leader to be included in the participatory design rather than fore fronted. The tools used will be discussed in the next section.

'In generating insights, the researcher supports the 'expert of his/her experience' by providing tools for ideation and expression. The designer and the researcher collaborate on the tools for ideation because design skills are very important in the development of the tools. The designer and researcher may, in fact, be the same person.' (Sanders and Stappers, 2008, p 12)

Design Thinking

In co-creation strategies we can identify the cognitive characteristics of design thinking, a process which uses both visual and conceptual knowledge as well as the dialectic process of design thinking. Schön's process of 'reflection in action' (1987) describes dialectical phenomenon in cognitive design processes.

'The primacy of this unique cognitive characteristic demands cognitive models of design thinking which reflect both the duality of the visual and the conceptual and their dialectical interaction in design thinking.' (Oxman, 1999)

It is therefore entirely appropriate to consider both co-creation strategies and how to develop design thinking in those strategies in order to fully develop the idea generation phase of curriculum design or system design in an educational setting (Oxman, 2003). I shall exemplify this with a later description of open space technology and other approaches used in the case study.

What is Open Space Technology?

Open Space Technology (OST) is essentially a methodology or 'tool', which can be adapted to a range of contexts, for example, meetings, conferences, staff development events. It encourages participants to engage actively and take responsibility for the process, hence drawing comparisons with 'student-centred' and 'deep' approaches to learning (MacDonald, 2007). Feedback and reflection from participants generally references the importance and quality of 'personal learning' as an outcome. OST can be used to address complex and wide ranging issues and achieve meaningful outcomes. It can be particularly successful where the people involved and ideas are diverse, and traditional facilitator-led approaches may be less productive. The focus, assimilating individuals' expert knowledge and experiences creates a greater understanding of issues and realistic practical solutions.

The OST concept in educational settings

I hadn't realised till I attended an OST conference in 2003 that the idea of co-created or participative event is not new. A well established conference in Medical Education has been running for more than twenty years (Wakeford, 1985) and has remained momentum by identifying new themes whilst retaining a 'think-tank', presentation-free format. The significant features of this model are:

1. Choose a topic of high importance.

2. Invite a small, preferably research orientated, group of people knowledgeable about this topic.

3. Add a group of `users'.

4. Supplement them with good facilitation and working conditions.

5. Add a sprinkling of what might be described as `new researchers' or `young blood' in the field, to keep more esoteric delegates' feet on the ground.

6. Set the participants some specific goals. These usually include reviewing the `state of the art' of a particular area (in medical education), commenting on what research might collectively say about these issues, generating further questions for investigation and encouraging the delegates to publish their findings. (Hays, *et al*, 2000, p. 783)

OST demands you structure participation: Case Study of the Graduate School model at Camberwell, Chelsea and Wimbledon Colleges

The Graduate School planning group agreed the principles for the invitation process, we knew we wanted to invite a range of academics, senior managers, researchers, students and other stakeholders (e.g. technicians) with the ability to write, work as part of a team or complete projects was deemed essential. The invitation was clearly targeted and we had a clear aim. The aim was to create a model for a Graduate School at the newly merged Camberwell, Chelsea and Wibledon Colleges of the University of the Arts London. The final plan was to make a collaborative approach to a graduate curriculum for both taught and research postgraduate activity spanning nearly 500 full time equivalent taught masters students and over 80 PhD students.

The participative process began with a project initiation document in January 2008 which basically described the management parameters and purpose of the project. There was a two day 'Purpose and Visions' workshop in February 2008 using OST approaches to co-create the basis for the structure and visions of the school. This was swiftly followed by drafting of a strategy and planning for wider consultations with University stakeholders in March 2008. The final OST sessions were in April 2008 to design an implementation plan.

These workshops identified the CCW Graduate School context, research question, purpose and Vision:

CCW Context: Considering the river; Embracing uncertainty; Our complex network of flows

CCW question: What if we can illuminate the space between knowing and doing?

Purpose: To enable you to enact our futures

Vision: to be the brightest art and design graduate school in the world

The key factors in this mix were determined by the group as:

- Global best people
- Intellectual space
- Communication
- Environment structure
- Unlock potential
- Brilliant courses

A Project Timeline for 2008-09 was then completed which included milestones for further co-creation activities in order to create a communications strategy and budget model. Based on these deliberations, the Graduate School was launched in September of 2009.

The key part of re-imagining the curriculum for the Graduate School was a course portfolio analysis and structure working group which used OST strategies again to come up with ideas to formulate a postgraduate timetable which worked across three colleges and co-ordinated marketing and admissions strategy . This two day OST workshop used the following aims:

- Create a shared understanding of our research and practice
- Potential for collaboration
- Identify interdisciplinary directions
- Visualise new spaces for research
- International dimensions

The groups invited included all researchers and teaching academics as well as technical and support staff. In groups across the college boundaries, they were asked to identify curriculum projects which would exemplify the above aims. These outcomes provided enough activity to sustain development through to the first academic year, one year later, in 2010, the groups were reconfigured to further re-examine the practicalities of further development of a collaborative research-informed curriculum.

Developing the research-informed curriculum: using BarCamps and World Café

As by now my colleagues were becoming comfortable with OST principles, we moved to use other complementary co-creation approaches. We developed a BarCamp session to further contribute to ideas already in progress and designed a framework consisting of sessions proposed by participants.

BarCamps are based on simplified variations of Open Space Technology (OST), building on colleagues passion and responsibility in participation. While loosely structured, there are some rules at BarCamp. Participants are encouraged to present facilitate and contribute to a session. Everyone is also asked to share information and experiences of the event, both live and after the fact, via public web channels including (but not limited to) blogging, wiki-ing, and photo-sharing. BarCamping facilities include; network access i.e. WiFi, food and drink but no sleepovers were planned at this event (although many seasoned BarCamp practitioners stay as long as it takes to develop a project, see for example barcamplondon.org)!

BarCamp rules include the standard OST 'Rule of two feet' where participants can move around to listen and contribute to one or more presentation. All ideas generated can be shared and recorded, whether on post-its, flip chart, laptops or through other digital devices. The BarCamps start with ideas and then make plans to realise those ideas. Each presenter/group has an outline which is roughly 'advertised' to others. They then collaborate to realise those ideas

World Café

The critiquing and refining process was designed by using a World Café format in order to create the conditions for thinking ahead beyond our first year and to consider how we integrated both internally and with external organisations.

World Café uses a cyclical process to Use the outlines and build, enhance, refine the ideas developed collectively. Further sharing and refining occurs as the groups change and rotate through three cycles of World Café discussions. In the first round of discussion the Café table hosts are drawn from the course directors and research leaders and encourage each café table to write, doodle and draw key ideas on their tablecloths or on post-its, flip chart paper etc. Table hosts can photograph for ease of recording, as they are not chairing the conversations. Table hosts can encourage conversation and take note of key ideas on large post-its or index cards. After the First Round one person is asked to remain at the table as the 'keeper of the conversation', while the others serve as travellers or "ambassadors of meaning." The travellers carry key ideas, themes and questions into their new café conversations.

In the Second Round the table host welcomes the new guests and they briefly share the main ideas, themes and questions of the first café conversation. They encourage guests to link and connect ideas coming from their previous table conversations—listening carefully and building on each other's contributions. By providing opportunities for people to move in several rounds of conversation, ideas, questions, and themes begin to link and connect. At the end of the second round, all of the tables in the room will be cross-pollinated with insights from prior café conversations.

In the final and Third Round (in our World Café, several more rounds can occur according to circumstances and outcomes required). People can return to their home (original) tables to synthesize their discoveries, or they may continue travelling to new tables, leaving the same or a new 'conversation keeper' at the table. After these three rounds of conversation, the facilitator will lead a period of sharing discoveries and insights in a whole group conversation where patterns can be identified, collective knowledge can grow, and possibilities for research-informed curriculum emerges. A large whiteboard or several flipcharts may be used to distil the main points from each café table. These insights form the basis for the curriculum plan, a product of collective knowledge production or co-designing. All of the photographs, flip-charts etc. need to be analysed swiftly and can be fed back as a proposal to participants soon after the event.

Evaluation of the experience of OST strategies for re-imagining the curriculum

Often the most important learning we experience is in reflection on our practice, made even more powerful by sharing that experience with others (Schön, 1987). We learnt a lot about the OST process, about working with each other and particularly how our experiences may help others, either in contemplating using OST as a workshop or conference model or in considering social aspects of informal learning.

Do OST models work?

The Graduate School project team concluded that this model could be used by other practitioners (not just in an educational context) with another theme or goal. For the model to prove a success we have also observed that a number of key variables need to be maintained. Some of these follow:

1. **Project Board**. The board contributed to the planning and facilitation of the events, each member leading on different aspects and during the events contributed to facilitation of sessions either in pairs or individually. Together, they represented a range of experience, both within the colleges and in the subject disciplines which was complementary to the collaborative nature of the planning exercise. Each of them brought a high level of professionalism to the project, both in planning and in

execution but also in following up on actions to resolve operational and implementation aspects. Commitment to attend meetings of the group was vital, so a lot of advance planning of meeting schedules was required. A small group could be risky if one person fails to attend, and a larger group may not actually progress tasks efficiently and also becomes more difficult to coordinate and manage.

2. **Plan of events**. As discussed earlier, it had been our intention to maximise process and discussion but to make sure that there were concrete outcomes in time for implementation as courses.

3. **Ethos and guidelines for working**. We talked about the process and overarching ethos of the events right at the beginning, and we talked specifically about how things would be managed. There were a number of non-negotiable rules, for example the objective was to work towards collectively designing the Graduate School model but individuals could move between groups over time. Debate and non-consensus was to be positively encouraged and participation in cross group critiquing was essential. All other aspects were however negotiable including where groups met, size of group, themes to be debated, how and who did the writing, note-taking and reporting.

4. **Participants**. Having a mix of participants from across the Colleges and some from outside was essential. Many different career stages and types were represented, researchers, academics, academic developers and senior staff as well as students (mostly doctoral students) and technicians. This mix was important as was the ability of the invited participants to act as team players with a proven ability to take part in high level debate, write and also finish projects.

The Working Process.

The format for the events received incredibly positive feedback, the few comments to the contrary referred to minor changes to the process in the future.   The 'free and open ethos', as well as the non-hierarchical, collegial nature of the events created an inclusive environment where all participants felt able to contribute to the process and this was recognised. The most frequently remarked upon feature was the opportunity for collaborative activity and teamwork. This came out as the most rewarding aspect for participants. For some it was the opportunity to work with a variety of staff from across the Colleges, from which they felt they learnt a lot. Some colleagues drew comparisons on how this differed from the surface approach they were often required to use to develop curriculum as just one of the many aspects of multi-tasking that made up much of their daily routine.

Conclusion

It has been interesting to reflect on this process, and I believe this approach could be used again in another context or with different themes if the opportunity arose. My reflection has led to my thinking that this process could be used with student groups seeking to build on projects beyond the initial ideation phases or with colleagues when addressing collaborative writing tasks, for example vision and strategy documents. Bearing these future directions in mind, what can we learn which could be transferable to a new situation?

Making sure that plenary or feedback sessions are not all the same in process and format reduces the risk of these being perceived as 'set pieces'. In removing the ritual of reporting back sessions in plenary this avoids overload and running over time for participants and enables reporting to become a peer to peer and group to group imperative, much more can be gained through smaller focused critiquing sessions and through informal social exchange.

I have learnt that this process is paramount and that these processes can be used for collaborative research informed writing in other OST conference settings (Drew, 2008)

OST guidelines say that 'whoever comes is the right people' and I really like that principle. But of course I am aware that it is absolutely vital to invite the right people to attend and participate and those people are they who can contribute to learning, research and curriculum design, together.

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