

The Strategic Role of Design in Supporting Knowledge Exchange

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Abstract

Within the last decade design has had a strategic role in tackling escalating environmental, social and economic problems. Through design thinking, creative methods have been applied to problem solving in a process of collaboration and designers working in new territories and knowledge domains. As the designer has moved further afield the method of Knowledge Exchange (KE) has become more recognised as a democratic approach to collaboration with the ethos that everyone has something creative and productive to offer. This paper provides reflections on early stage findings from a strategic design innovation process in which collaborative partnerships between academics, SMEs and designers emerged through KE and suggests that there is value to be had from using design strategically for not only those from a business or academic background but also for those from the design community and points to a need for more training for designers from all disciplines in how to use design strategically.

KEYWORDS: design thinking, knowledge exchange, collaboration.

Introduction & Background

As a society we are facing increasing environment, social and economic challenges, which are global and complex and to date traditional problem solving methods have not been enough to tackle them (Collins, 2013). Design thinking has often been posited as being a strategy which can tackle this through the use of creative problem solving (Kimbell, 2011; Design Council, 2012). However, Nussbaum (2011) an original advocate of design thinking has recently labelled this a “failed experiment”. One reason for this label is that design thinking has often been disassociated from business (Kimbell, 2011), while another is that it not yet clear how this process of design thinking can be independently applied to industry and their ways of working without the on-going support of a designer (Acklin et al., 2013).

One particular aspect of design which businesses have struggled to embrace is the mess and disruption which is inherent to the creative process. The design mantra of “Fail Early, Fail Often” is alien to the success driven nature of business (Koh, 2012). Design consultancies who championed the strategic value of design aimed to promote a culture of collaboration within a diverse group of expertise, which requires a new mindset. However, businesses often expected that their employees would develop the capacity to use design strategically following short workshops and subsequently became disheartened when they did not develop innovative solutions (Koh, 2012).

Challenge

As can be seen from the literature, it is clear that simply teaching those from business about design is not sufficient for them to make use of design thinking within their own work and practice. For this to happen they need to be both supported by a designer and experience a change of mindset (Acklin et al. 2013). It has been argued that this change in mindset could be supported through the use of Knowledge Exchange (KE) in which both business and design learn from one another (Follett & Marra 2012). KE has the potential to assist the UK to develop a competitive edge in new and emerging industries by enabling companies to make best use of external knowledge in order to encourage innovation (Cruickshank et al. 2012). Conducting traditional KE can be challenging (Follett & Marra 2012), however one project which is looking to address these challenges through the use of design as a strategy is Design in Action (DiA). DiA, a four year Arts and Humanities Research Council (AHRC) KE Hub, engages with and supports diverse stakeholders to achieve collaborative innovation through design in the sectors of Wellbeing, Food, Rural Economies, Sport and ICT, all major sectors within the Scottish economy. The AHRC has invested in four hubs to explore KE within the arts and humanities field. DiA seeks to investigate the role of design as a strategy in KE. The KE Design Process created within the DiA project, allows both designers and those from a non-design background to work together to solve complex problems, while also learning from one another’s different practices of working. This design process takes place in KE ideation events known as Chiasma (meaning ideas meeting at the point of creation).

KE Design Model and Case Study

This model has evolved by applying design strategically to support KE between designers, academics and SME’s. The Chiasma events apply the KE Design process, which includes the four stages of inspiration, ideation, conceptualisation and refinement.

This supports the design and development of bespoke tools and methods that are tailored to the scope of the call for participation. These are supported through design facilitation, which differs from traditional practices by incorporating design thinking throughout delivery. While the participants are supported, the designer plays a different role due to their previous experience of applying skillset of visualising, communicating, prototyping to synthesize new ideas. The designers then take on a key role once each group is formed. A sports sector Chiasma was held in September 2013 over the course of two and a half days at an outdoor sports resort on the outskirts of Dundee. This Chiasma looked at solutions to the barriers in participating in outdoor sports, which were faced by specific populations (e.g. older adults,

people from areas of social deprivation and people with disabilities) and was facilitated by researchers from DiA. The design facilitation supported active engagement enabling each and every participant to transition through the complete design process. Through conceptualising the Chiasma model, the research team strategically implemented design and research tools to facilitate KE. This enabled the researchers to observe the process, capture data, reflect and refine.

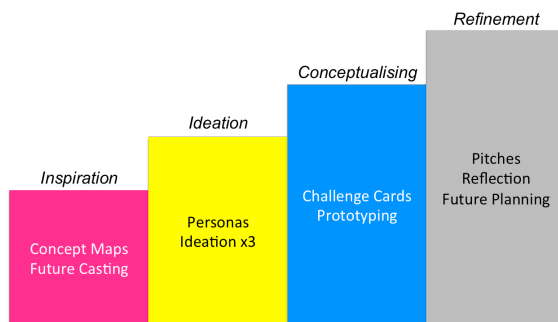


Figure 1 - Sports Chiasma Process

Inspiration: Because the scoping of the issue has taken place prior to a Chiasma, there is less of a necessity for the participant to spend time breaking down the problems. Instead within the Sports Chiasma, the inspiration phase looked at understanding the issues already scoped and the populations affected by the issue (Figure 1). Starting at dinner time on the first evening the first activity was devoted to this understanding, with participants creating concept maps for the four themes previously identified by DiA researchers: Community; Accessibility; Learning; and Safety. Participants used pre-produced fact and provocation cards developed by DiA researchers. This was followed with a future-casting task in which participants were asked to imagine that this problem had been solved and the different changes this had brought to society. During this task the participants were instructed not to imagine *how* the problem would be solved, this pushed the designers out of their comfort zone as their natural response is the problem solve and ideate.

Ideation: On the morning of the first full day, participants quickly moved from the inspiration phase into ideation. The KE Design process allows for three rounds of rapid ideation. Participants formed four groups and spent fifteen minutes in each theme, considering ideas to help people affected by this issue. All participants were encouraged to write their own ideas down on a post-it using one or two words and place this onto a board. The focus in this activity is to enable participants to feel safe within the Chiasma environment and to be comfortable in sharing ideas. The facilitators encouraged participants to think radically in generating ideas, and enforced the rule that at this stage there was to be no critiquing of one another's ideas.

Following this stage, the facilitators clustered the ideas generated, identifying common themes and generating four new headings for the next round of ideation: Community Linking; Integrating Existing Hobbies; Mixing Digital with Physical Activities; and Information Access. In order to introduce the concept that failing is not only acceptable but actually useful, participants were instructed that they were now to push beyond their initial ideas and develop new solutions for the four new themes and told that they could not reuse any of their ideas from the first round, not because those ideas had been judged to be wrong but because there was a need for this phase to be challenging if it was to produce innovative ideas.

Conceptualisation: Following the final round of ideation, the ideas from the previous session were again clustered with the most popular five ideas identified. These ideas were still at a very high level e.g. “Technology Based Feedback on Participation” giving participants plenty of scope to explore how to develop the idea. The participants were given the choice to select their two favourite ideas and were organised into groups based upon these choices. The facilitators helped manage this stage to ensure that groups are balanced and had a mixture of both designer and business participants. To support a feeling of equality, no leader was directly assigned by the facilitator and when meeting with the groups, the facilitators encouraged contributions from all participants. As groups developed their ideas over the following twenty-four hours, they were offered both public and private feedback from their fellow participants and the facilitators. The ideas changed dramatically over this time, demonstrating that the participants were becoming comfortable with accepting that something would not work and with changing their direction.

Refinement: At the end of the event, five teams presented their ideas to a panel of experts drawn from academia, design and industry who offered feedback and advice on where the idea could be improved. Following the Chiasma the teams have six weeks to submit a full funding application for up to £20,000 to take the idea to market. The Sports Chiasma, saw three applications with one company being awarded funding. This idea had been further developed following the feedback from the panel, again demonstrating that the companies had become confident in iterating on their initial ideas and changing direction as required. DiA is currently developing a package of tools to allow participants to continue to make use of these design tools following the end of the Chiasma.

Discussion

DiA is employing the use of design thinking in the development of a range of innovation events designed to support KE. To date this work is still very much in its infancy and so results are limited. However, we have noted that even within this limited time, there has been great value taken from the strategic role of design within the KE design process. A scaffold has been built to support businesses and academics in using design in this way and the role of the designer is key within this both as a facilitator and as a member of a group.

The use of a workshop such as Chiasma to carry out KE is not new, many other organisations and research projects have conducted similar workshops previously (for example hackathon events). However, within Chiasma the aim is not only to conduct creative problem solving but to change the perceptions of those coming from business as to the value that design as a strategy can bring to them and their companies. Participants coming from business are exposed to new methods and ways of working, with designers looking for ways to work around or breakdown existing barriers rather than accepting that these are immovable obstacles. In addition the fact that the problems and challenges are scoped prior to the Chiasma, allows the participants the opportunity to begin using people centred methods, to remove themselves from the situation and to use mindful design processes to consider solutions for other people.

Additionally, in general, the designers that have tackled the problem strategically have been from a service design background which is accustomed to interdisciplinary approaches and working with those from outwith design. The solutions developed in the Chiasma by these designers have on the whole considered touch points, which incorporate experiences and processes to design a product eco system. This has led to designers from more traditional

background also learning new methods of working within the Chiasma and points to a need for them to be able to access training in this new mode of working. Additionally, many of the solutions that have been pitched and been awarded funding have been service orientated or product service systems. This has even been true in those groups who did not have a designer from a service based background, suggesting that in order to solve these complex problems and change existing perceptions there is a need for a service based approach.

Conclusion

Design Thinking has been a controversial term in recent years; with many arguing as to the value it can actually bring to businesses seeking to adopt it. DiA is looking to use design as a strategy alongside Knowledge Exchange to both change business perceptions on design thinking and to also help them experience a change in mind set of how they can adopt design principles within their own business. DiA's Chiasma events have also suggested that the designers best placed to work with business in Knowledge Exchange and to help them experience this change in mindset are those who can use design in a strategic manner with a variety of stakeholders.

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