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Simone Taffe

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Who’s in charge? End-users challenge graphic designers’ intuition through visual verbal co-design

Simone Taffe
Swinburne University of Technology, School of Design, Melbourne, Australia
*Corresponding author e-mail: staffe@swin.edu.au

Abstract: This paper aims to understand how co-design influences the design process, by presenting a case study where graphic designers and end-users co-designed asthma information. Three co-design activities are presented, as part of a larger project, revealing insights for the next generation of graphic designers. The co-design activities built a trusting, enjoyable environment, while posing the question are designers still in charge of the process? A visual verbal game dissolved participant status barriers, a persona scenario activity uncovered the real brief and a mix and match card game suspended participant politics. The findings suggest that co-designing with end-users, challenges graphic designers’ use of intuition, as new ways of categorizing asthma information material were revealed that previous design-led processes had overlooked. This study confirms the rich contribution of end-users’ creativity, when designers relinquish creative control, ultimately revealing co-design as a valuable approach for graphic designers engaging in bottom-up design processes.

Keywords: Co-design, Graphic design, Communication design, Case study, Participatory design

1. Introduction

The importance of including end-user and stakeholder views for the acceptability of design projects is now acknowledged. Co-design includes end-users in the design process with the aim of harnessing their contextual knowledge and creative ideas. Authors claim that the success of design outcomes depends on a bottom-up design process that includes public consultation and the views of end-users and other stakeholders (Choi & Choi 2016; Frascara, 2004; Sanders, 2002). The idea that end-user participation benefits commercial success affords some power to end-users over designers and clients, but leaves aside co-design’s original democratic ideals of a bottom-up approach to design in favour of corporations’ desire for more marketable and profitable products. Authors argue that it is easy to justify investment in end-user research on the basis of high commercial returns (Lockwood, Bachman, Oldach, & Rutter, 2001). The co-design literature considers the capacity of end-user

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participation to enhance design outcomes in many fields such as; workplace design, information technology, human-computer interaction, product design, and urban planning. There is little evidence of its use in graphic design, despite co-design emerging as a field of practice and research in the early 1970s. This leaves graphic designers with a lack of knowledge about how to facilitate end-user creativity in the design process.

This paper studies the influence of co-design on the graphic design process through a case study of designing asthma information. The study focuses on three visual verbal activities where the designers relinquish creative control by facilitating the creative ideas of end-users. Tensions between participants and standard creative solutions were expected. Given the exploratory nature of this under-researched topic, case study workshops were used to allow for a rich exploration of the proceedings. Conclusions are drawn based on an investigation of what happens when creative control is shared by designers and end-users, suggesting co-design is a valuable foundation for the next generation of graphic designers wanting to dissolve barriers and suspend politics with end-users, and uncover the real client brief.

2. The shifting roles of designers and end-users

The shift from user-centred to participatory to co-design has seen participants’ roles in the design process change. In design, someone has to decide on design outcomes, raising issues of who owns design outcomes. Some see end-users as the main players in the co-design process, supported by designers (Sanders & Stappers, 2008). Others argue designers need to remain in charge, taking responsibility for synthesis and execution of design ideas (Hanington, 2007). When end-users are central to the design process, designers can feel excluded, their resultant lack of ownership of a project jeopardising its continuation. If the views of designers dominate, end-users may not be represented in decision-making.

Co-design represents a break with conventional design approaches in recognising end-users as active participants in the design process. In co-design, the roles of end-users and designers are fused. End-users are positioned as experts of their experience, working alongside designers in co-design (Sanders & Stappers, 2008). Figure 1 represents the standard graphic design practice where designers take charge of the process, responding intuitively to briefs in the absence of any contact with end-users. The designer creates with an imagined end-user in mind and delivers a designed artefact to this imagined end-user. Figure 2 represents the influence of co-design on the participants in graphic design, showing, the barriers dissolving between end-users and designers. The source material in Figure 1 and 2 is original and conceived by the author (Author, 2015).

![Figure 1](source_material1.png)

*Figure 1. Graphic designers in charge, using intuition to design for an imagined end-user.*
Who’s in charge? End-users challenge graphic designers’ intuition through visual verbal co-design

The co-design literature is alert to paying lip service to the inclusion of end-users in design, while discussing the problems of excluding end-users from the design process. Criticisms are made when end-users are included to make suggestions rather than decisions, where designers extract end-user preferences rather than working inclusively (Bravo, 1993; Macdonald, 2015). Others attribute the proliferation of “user-unfit” design to the fact that end-users’ needs are not seriously considered, urging designers to see their role as facilitators who enable end-users to participate in design (Sui, 2003). Authors argue that how and when end-users become involved in the design process is as important as the nature of a final design, motivated stakeholders being essential to successful design implementation (Lockwood, Bachman, Oldach, & Rutter, 2001). Such discussions can be found throughout the more than three decades of writing on user-centred, participatory and co-design, revealing the field’s tendency to continually identify and reinforce the value of co-design rather than moving onto its wholesale application and studies into its real-world efficacy. The debate about the politics of end-user participation is ongoing with suggestions that the role of the designer is changing to accommodate the difficulties. In light of these shifting roles of designers and end-users, this study aims to further understand how various co-design activities influence the graphic design process.

3. Method

This paper reports a co-design case study for the Asthma Foundation of Victoria, Australia in which designers and Foundation staff responsible for public education participated in co-design workshops, to conceive possible new approaches to asthma information design. Twelve Foundation staff and five postgraduate graphic design students participated in the study, with the author acting as facilitator. The Asthma case was chosen for its non-commercial nature, allowing for a long engagement. Preliminary site visits were undertaken to establish a trusting, working relationship with the staff and for the designers to become familiar with the context for the eventual design proposals, revealing a mass of printed information developed over time, divided by demographic or asthma trigger categories.

Case study method was chosen, as co-design applied to graphic design is a new area of design research, thereby suggesting a method which allows the whole context of a phenomenon to be explored and a rich understanding of the factors involved to emerge. Case study is one method within the constructivist gamut, being recommended for contemporary issues where accepted principles and constructs are yet to be established (Lincoln & Guba, 1985; Perry, 1998). The techniques of notetaking and photography were used to record the proceedings of the workshops. Among the data sources used were: existing information brochures, workshop photographs, notetakers’ notes, email correspondence and design concepts. For analysis, all the data sources were combined, reorganised chronologically under issue headings. Following are the findings of various co-design activities trialled, aiming to shed light on a new foundation of sharing creative control in a bottom-up design process.
4. Findings

4.1 Visual verbal game: Dissolving participant barriers

This study trialled visual verbal activities and games based on an extensive discussion on the value of design and language games that promote interchange between end-user and designer knowledge (Ehn, 1993; Johansson, 2006; Tomes, Oates, & Armstrong, 1998; Ulusoy, 1999; Zender & Crutcher, 2007). Here, the field of co-design has been influenced by theories of language games and related communicative actions from ethnography and post-structural philosophy. The idea that playing games to transfer tacit knowledge of people and leads to common understand can be traced back to Plato’s adage that, “You can learn more about a person in an hour of play than in a year of conversation” (Quoted in Lancefield, 2006, p. 1). Ivey and Sanders (2006) describe the use of storytelling games in co-design “as an effective method of prompting social interaction by generating acquaintance” (p.26). Workshop One included a game based on Ehn’s (1993) recommendation that the use of playful games where everyone has fun are effective icebreakers. The game sought to generate discussion about the design task and ideally breakdown some inherent barriers between the participants.

In this activity the facilitator asked all participants to brainstorm words about information where words such as “power”, “information” and “consistency” were itemised on a whiteboard. Then all participants chose a word to write on a card. Each participant then passed the card to the person on his or her right whose task was to draw an image of the word. The card was then passed to a third participant, who the facilitator asked to guess at the meaning of the drawing and the original word. Several staff chose the word “consistency” to write on their card and others drew similar images when required to illustrate the word (see figure 3). In discussion, the staff members highlighted the need for consistency in asthma information where deviation from the facts could have serious consequences, the designers picked up on the sense that the staff were very much “on the same wavelength”.

The introduction of drawing into the co-design workshops at the beginning of the process aided in repositioning the role of the participants in relation to each other. One reluctant drawer complained, “But I cannot draw”. Another commented, “I won a prize for drawing in primary school”. Another joked, “I failed kindergarten drawing three times”. Participants teased each other that the quality of their drawings made guessing the original word impossible. One participant commented that the workshop was like being in a “remedial drawing class”. There were comments asking other
participants not to be too critical when interpreting drawings, suggesting a desire for the formation of a collective ethics in the group, although the overall need to draw was met with good humour. The icebreaker visual verbal game seemed to work in dissolving barriers of unfamiliarity and differing expertise between the participants.

The Foundation staff saw that the designers had superior drawing skills, but everyone found that this did not always lead to ready interpretation of an image, challenging the priority of both visual metaphor and intuition in graphic design. For example, one designer drew a joey kangaroo in its mother’s pouch in response to the word “quick access”. The staff member interpreting the drawing confused the kangaroo with a rabbit and was unable to guess the meaning of the image. Tomes, Oates and Armstrong (1998) argue that visual verbal games offer designers an insight into the tacit knowledge of end-users, offering a repertoire of acceptable conceptual forms that negotiate the gap between the visual and verbal. The misinterpretation of the kangaroo drawing exposed the potential ineffectiveness of both literal and metaphorical strategies in graphic design when seeking to convey particular meanings. The visual verbal games leveled the statuses between the participants, highlighting the challenge of graphic designers to develop understandable concept designs. It was an important point in the co-design process, prompting the staff to consider for the first time how their current information might be perceived by end-users. For the designers, it suggested the importance of checking design concepts with audiences before proceeding.

4.2 Personas scenarios activity: Uncovering the real brief

The second workshop used text and image to test the effectiveness of a personas scenarios activity, motivated by Jansen, Croonen and de Stadler’s (2005) research aiming to make a persona as real as possible. This activity explored personas and scenarios of typical people who use asthma information. At the end of the activity the facilitator asked participants to summarise their persona, clarifying the person’s name, age, a description and drawing of the person’s scenario. This activity incorporated image and text, expanding on the success of the previous visual verbal game. Where the Foundation staff were initially reluctant to draw in the previous visual verbal game, the majority of participants visualised their ideas without hesitation in this persona scenario activity. Figure 4 shows two summary pages created by the Foundation staff where lengthy amounts of text were written to begin with, but when asked to summarise the information on one page, drawings with few words were produced. One explanation for this is that the Foundation staff were becoming comfortable with the idea of drawing after the experience of the first visual verbal game.

Figure 4. Examples of persona scenario summary pages with written and visual information.
Designers are challenged to understand the actual context for information delivery when involved in co-design. One of the project aims for was to reduce the number of pieces of asthma information, as the site visits identified information duplication. At first, this activity sought to develop appropriate personas for the Foundation to continue to categorise the information by age and gender. At the beginning of the persona scenario activity, the group was asked to brainstorm all the Foundation’s end-users and ways to categorise asthma information. The following categories were identified: carers for people with asthma; schools; health professionals; children services; sporting industry; zoos and children with asthma. There was also a discussion about the importance of asthma triggers to information categorisation, for example, pollen, exercise or smoking. This information was predictable. This persona scenario activity aimed to see what patterns emerged to enable streamlining of asthma information.

The idea of categorising asthma information around emotional triggers was discovered through an analysis of the patterns that emerged in this persona scenario activity. This activity showed that the emotional state of people with asthma was more important than their age or gender when deciding how to categorise asthma information. The staff repeatedly spoke about personas such as; the helpless child, the embarrassed teenager, the panicky student, the distressed mother and the frightened senior. One Foundation staff described a helpless child persona as Dhillon, aged 3 who needs to carry a bum bag with his reliever and action plan. A teenager persona “David”, aged 16 was developed, who is too embarrassed to carry a puffer, needs an attractive small puffer not resembling a medical device. One Foundation staff was concerned about an elderly man persona he called “Fred” who is 83 and is frightened when he coughs and can’t breathe. The identification of the emotional response of fear to asthma, especially in elderly people gave the designers an insight to an appropriate direction for information materials in the future.

4.3 Mix and match card game: Suspending participant politics

To further investigate the influence of visual verbal co-design games, a mix and match card game was trialled in the third workshop, involved matching words to symbols on cards to check whether specific asthma trigger symbols conceived by the designers were understandable by the Foundation staff. This game was part of an asthma information folder concept activity. In this game the group readily came to a consensus about which symbols matched which words, such as an image of a cigarette and the word smoking (see figure 5). Before the mix and match card game, the Foundation staff had a strong negative reaction to the design concepts presented by the designers. During the card game the Foundation staff stood up and became physically active in the game indicating a high level of engagement (see figure 5). The staff found the game enjoyable, as there was laughter while playing the game. However, once the game stopped, the staff reverted to being critical of the designers’ ideas. Strong personality barriers were also overcome while playing the card game. This finding is supported by Brandt, Messeter and Binder who argue that, “In the playful dramaturgy of design games politics of negotiation are postponed” (2008, p. 63).
The staff members’ high level of design awareness surprised the designers. The staff commented freely and authoritatively on poor choices of typeface, colour and imagery. They provided information on the usefulness or redundancy of individual pieces of information, validating their presence in the design process. Sanders argues that end-users are not in the habit of using or expressing their creativity, creating a situation where designers think end-users are not creative at all (2002). The Foundation staff made well-informed comments about design such as, “You can hardly read it” and “It is badly designed”. A Foundation staff member reflected that a designer can ‘nail it’ especially if they have a long-standing relationship with the client. Another criticised their designers in the past when “they get caught up in making it ‘look pretty’, instead of focusing on the practicality of the information”. Another commented on the value of the co-design process as, “if designers want to get it right they need more time to get inside our heads”. One Foundation staff said she is a creative person and enjoyed working with the designers as, “their imagination helps to stretch mine even further”, reflecting Cunningham’s (2008) claim that in design, end-users react positively to students as they view them as having fresh creative insights.

On the other hand, the staff expected the designers to be creative. One worker was worried that, “I would not be very creative or have any good ideas” another stated, “I dreaded having to draw”. Sanders argues that for end-users to express their latent creativity designers need to provide activities that facilitate creativity, as she claims everyone is creative (2001). Another worker thought, “The designers would come up with ideas and we would just say yes or no” and “I thought we would have an input, but our ideas would not be taken notice of”. Another wrote, “The final decisions would be with the designers”. This makes apparent the conventional divided roles of designers and end-users.

5. Discussion

The findings indicate that co-design activities offer significant benefits in bridging the worlds of end-user and designer participants, breaking down barriers and enabling learning. The findings also suggest that co-design has the potential to be a new foundation for graphic designers to uncover the real brief, here for example, the idea of categorising asthma information via emotional categories rather than age or gender demographics was discovered. When designers approach design as an intuitive creative act, for Tomes, Oats and Armstrong (1998) it is not surprising there are difficulties in establishing a common understanding. The Foundation staff were divided in their opinion of the value of working with designers. They commented positively on the creativity and fresh insights of graphic designers they had worked with in the past developing information materials, but criticised...
the tendency of designers to ignore important criteria to pursue an individual creative agenda, leading to flawed outcomes such as a fridge magnet describing the key steps in asthma first aid with unreadable type. Intuitive solutions did not work in this case.

The use of sketches is an important part of the design process and one of the main ways that graphic designers access their intuition. Ulusoy (1999) entreats graphic designers to use intuitive drawing to generate ideas, a step represented as simultaneous with decision-making. One of the hurdles in translating design knowledge to end-user participants is the division that lies between visual and verbal skills. One view is that design is a right brain process in that the designer is “a mute genius”, or “a doer not a talker” (Tomes, Oates, & Armstrong, 1998, p. 141.). There is broad agreement in the literature that design is an act of individual creation to which verbalization and logical analysis are seen as only peripherally relevant, but a combination of visual and verbal elements is argued to be preferable (Brandt, 2006; Tomes, Oates, & Armstrong, 1998). For Cross (1999), sketches are half formed ideas that enable the act of discovery, as external expressions of internal mental processes, they exist to be criticised rather than admired (1999). In my research I encouraged sketches to be part of the process to translate the design concepts into understandable ideas.

Visual verbal activities highlighted the challenge of conceptualisation through text and image, an undertaking intrinsic to graphic designers’ work. Overall relationships and negotiations are integral to the design process so the skills of visual verbal translation need to also be recognised as integral to design. The visual verbal games played in my research demonstrated that designer representations and can be misunderstood. The ability to visualise is a core skill and source of pride for designers, where non-designers rely on verbal skills in their daily life, creating a gulf between end-user and designers in co-design. In 2005, Reid and Reed’s study shows, discussion accompanied by freehand sketching was associated with reduced collaboration and shared understanding, where discussion alone saw end-users and facilitators dominate the flow of conversation and exert greater influence on outcomes. My study does not exactly replicate this finding, as the combination of text and image uncovered novel project insights.

Studies of non-hierarchical design teams show it is not the identification of specific design goals, but participant status that influences design outcomes (Johansson & Woodilla, 2008). Walton (2000) argues that managing the perceived status of group members is vital to consensus building and decision making. He argues that the mix of disciplines and expertise in co-design does not matter as much as the perceptions of people’s power in an organisation in suggesting proximity to corporate strategy. In my research the outcomes make apparent the value of visual verbal game in breaking down personality and status barriers. Johansson and Woodilla (2008) claim that if status barriers are overcome then transferring knowledge between participants is more likely to occur. In my study, visual verbal games were a way of dissolving participant status barriers in an enjoyable, relaxed environment. The games challenged the designers’ conventional method of intuitive problem solving demonstrating that end-users can misunderstand design visualizations. The games enabled fast access to expert knowledge in a learning-by-doing activity.

The visual verbal activities in my study demonstrate that conceiving and representing with both text and image is achievable for end-users, independently, in collaboration and alongside designers. For Bielenberg (1997), the profession of graphic design involves ensuring a connection is forged between designed communications and end-users. He contends that, “Conflict occurs when you combine the intoxication of craft, exposure to and interest in cutting-edge design with the engineering of a client-driven message to a client-defined audience” (p.183). The responsibility of the designer is to develop an appropriate and effective visual language given the objectives of the project, meaning that simplistic assessments based on aesthetic preference, a typical method for choosing the
appropriateness of a design direction in graphic design, needs to be replaced with a focus on creating a deep connection with end-users.

6. Conclusion

This study aimed to understand how co-design influences the graphic design process, through a case study where graphic designers and end-users co-designed asthma information ideas. Three co-design activities were reported each based on translating visual and verbal ideas. The first visual verbal game was effective in breaking the ice and dissolving perceived status barriers between all participants, building trust in a fun and lively environment. The mix and match card game suspended participant politics as the end-users enthusiastically played the game of sorting imagery of asthma triggers to the matching word. This game showed the value of co-design to put aside participant differences while sharing ideas. It was in the persona scenario activity where the real brief emerged. This activity showed that co-design aids the discovery of important tacit information which would not have surfaced without end-user creative participation. This activity led to new ways of categorizing asthma information, which had not been identified using conventional graphic design processes. The segmentation of asthma sufferers, according to feelings of anxiety, distress, embarrassment, fear or shock was a new approach for the Asthma Foundation, which previously used divisions, according to age, gender and asthma triggers as a basis for the development of information brochures. This outcome is noteworthy as it challenges the designer’s role as intuitive problem solver, highlighting the value of co-design to make visible appropriate outcomes rather than intuitively guessing end-user preferences.

The next generation of graphic designers may find end-users expecting creative participation in an era of end-user engagement. Will designers still be in charge of the design process? No not entirely. This study suggests that when designers shift their creative control to facilitating end-user creativity through co-design activities, a rich contribution of novel ideas positively influences the project direction. Therefore, graphic designers wishing to engage in bottom-up design can learn from this study that co-design is a valuable approach to dissolve barriers, uncover the real brief and suspend participant politics.

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About the Authors:

Simone Taffe is Associate Professor in Communication Design at Swinburne University of Technology. Simone lectures in the areas of branding and identity design and inclusive and participatory design.
Simone's research addresses co-design and its influence on the communication design process

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