

MAKING FOR PARTICIPATION

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ABSTRACT

This paper describes a making activity in a stakeholder session, facilitated by industrial design students. The purpose of the activity was to enable the stakeholders to gain insight into a particular issue of their concern. The paper reports on questions that arose from the reflections of both the students and the organisers of the module within which the students conducted their activity. Here, we explore: how can stakeholders be reassured and led in a making activity? And how important is it that stakeholders actually make, or are their verbal contributions just as valuable? The paper focuses in detail on an 18 minute segment of the described making activity that is also analysed by Nevile (2011) in order to facilitate a discussion between our and Nevile's perspective.

INTRODUCTION

This paper reflects on a particular activity of "making" that was part of a participatory design session organised by industrial design master students. The session was the students' core activity in the elective module "Prototyping for Interaction and Participation" (PIP). This module was set up and run for the first time in 2010 by the authors of this paper. The module serves the authors as a research opportunity regarding the effectiveness of design activities as a means for gathering insights into stakeholder perspectives. This paper first presents the motivation and context for the set-up of the module. It then describes one case tackled by the students. The reflection on the

activities pursues questions that are of relevance in understanding design-inclusive stakeholder activities and in improving the module for its next edition. They are: how can stakeholders be reassured and led in a making activity? And how important is it that stakeholders actually make, or are their verbal contributions just as valuable? To investigate these questions, the authors monitored the course activities from an action research perspective (as laid out by e.g. Robson, 1993). The action research activities are described in more detail in Boess et al. (2010). This paper zooms in on an 18-minute segment of making activity that is also being analysed by Nevile (2011). The focus on this segment is intended to

facilitate a discussion between our and Nevile's perspective on the activity.

CONTEXT OF THE FEATURED ACTIVITY

The goal of the module PIP is that the design students learn to reflect on the things they make in terms of how these things behave as actors in a particular situation in which they are inserted. The purpose of this is to enable the students to engage with the new challenges product designers face nowadays: people interact with products, systems and services in new and complex ways. This makes it necessary to prototype such interactions early in design, enabling users and other stakeholders to experience (part of) future situations before design concepts have been developed. This in turn requires a more flexible attitude on the part of designers on how their designs are used, interpreted and changed by users. Designers have to be able to make today's and tomorrow's digital and complex artefacts, services and systems amenable to human interaction and lifestyles (Suchman, 2007; Stolterman, 2008; Davidoff et al, 2007), "encouraging social arrangements that provide for the necessary time and resources needed to incorporate unfamiliar artefacts effectively into relevant forms of practice", as Suchman (2007, p. 182) advocates. While design is often promoted as good for innovation and hence new business opportunities, it can also

contribute to more participation in societal developments (e.g. Krippendorff, 2006). Designers are (supposedly) good at observing, analysing and manipulating the qualities of things, be they physical or virtual, because these skills are important elements of design education. However, designers are not necessarily good at describing and interpreting how people then interact with the things the designers have created. Although usage observation is in some form incorporated in most design courses, the in-depth analysis of such observation is not so widespread. Engaging designers more in such in-depth analysis may have benefits. It may enable them to develop a better sensitivity for the interactions of people with objects. It may also enable them to recognise more possible avenues for adapting designs to user needs and actions. Finally, it may equip them better to organise stakeholder participation in bringing about future interactions.

So how could educators help design students observe, interpret and reflect better? For a start, the attention should not just be on qualities of the things involved. That would carry the risk of throwing designers back on looking just at the objects, at “the aesthetics of appearance of [what we perceive as] behaviourally passive objects” (Djajadiningrat et al, 2007). Objects and any kinds of expressions should be seen as open to interpretation, as has been advocated in the Scandinavian participatory design tradition (e.g. Mattelmäki et al., 2010). The challenge is to understand that an object can take on different roles in an interaction. Interaction adds a highly variable “material without qualities” (Löwgren and Stoltermann, 2004, p. 3) to objects. An object can influence the dynamics of a situation in various ways, and it can be of more or less influence in a situation. The PIP module described aims to make this variability apparent to the students, by making them engage with it.

THE LEARNING MODULE: PIP

The broad goals we are striving towards are better sensitivity of designers to interaction, and an enhanced ability to adapt designs to needs and to organise stakeholder participation. The module PIP was set up to explore how

these learning goals can be facilitated for design students. In the module, the design students used their design skills to facilitate insights and future directions rather than generating solutions. The 10 week, 3 ects elective module focused on creating insights into the use of prototyping with stakeholders:

- at an overall level, in which the students reflect on their work as a whole: on how effective their chosen design and research techniques are in facilitating insights about, with and for people;
- at a topic level, in which the students generate and communicate insights for the case owners and stakeholders on the views and discoveries of the various stakeholders on possible future interactions.

The students worked on cases in which several stakeholders might have conflicting interests. The students organised a participatory session in which the stakeholders should become aware of each others’ perspectives, needs and concerns by exploring future interactions together. The module has been described in more detail in Boess et al. (2010) and some starting points for it in Pasma and Boess (2010).

STUDENT ACTIVITIES IN THE MODULE

After initial lectures and small exercises, the students started their work in the module with a practice session on a case that was provided, to explore prototypes and prototyping as a tool for gaining insights (Figure 1). As the main activity of the module the students then worked on a case that had been organised for them. They conducted an initial exploratory research



into their particular context, then organised and set up a stakeholder session in the context. After this participatory session, the students reflected on the activities in a structured way and produced two deliverables: a final report and presentation to the case owners, and a research paper about the overall level goal of reflecting on their chosen design and research techniques.

THE STUDENT CASE FEATURED HERE

While the module contained various types of prototyping and artefact making, this paper focuses on a particular excerpt from the making activities of the students. It is from the case “My first toaster”, tackled by a team of three students. Electric household products are increasingly directed at children through child-appealing design, making them attractive to children as young as 2 years old. A well-known example is the Hello Kitty toaster, which has a number of depictions of this popular character integrated into its design. While this toaster thus has a highly toy-like appearance, it is actually a fully functional electrical appliance. The Food and Consumer Product Safety Authority (FCPSA) assesses the risks of products to consumers and advises the government on how to deal with those risks, for example through legislation. The challenge for the PIP student team is to devise a participatory session in which they enquire how parents and other educators deal with the risks their children face in daily life, particularly with regard to the new child-appealing electrical appliances and other appliances. The results of the



Figure 1: The practice topic. Students devise scenarios and prototypes reflecting stakeholder concerns using simple materials, then act out a scenario: a guest designer, asked for creative input by a company, converts their grey ideas into colourful ideas (prototype: turning white sheets into glossy colour sheets) using a magic pen trick (prototype: a movement with a stick in his hand).

(Photos: Mariska Rooth)

students' work should be recommendations to the FCPSA for their policy advice. Stakeholders in this context are the children, parents, other educators, the FCPSA, and the companies that make and market such products. Having researched the perspectives of other relevant stakeholders in advance, the students devised a participatory session for four (separate) parents of young children and one child psychologist. The session consisted of several activities: a meal together during which everyone discussed a fictional catalogue containing children's toys and household appliances, mixed together. A role-playing activity where parents acted out a pre-set scenario corresponding to their daily life with their children, in a real kitchen environment. A discussion on family rules and rituals during which tea lights were presented as props representing dangerous or non-dangerous products with and without child-appealing styling elements, and finally an artefact making session in which a toaster was used as an example and also as an artefact to be modified and redesigned. The artefact making session is discussed in more detail in the following.

THE FEATURED MAKING ACTIVITY

The 'making of an artefact' section of the students' session is an 18-minute segment at the end of the session. The participants were presented with a cardboard version of a toaster and invited to make the product child-safe, while remaining child appealing (Figure 2). A range of tinkering materials was provided, such as clay, paper and markers. A real toaster with child-appealing elements was also present during this making activity as an example of the kinds of products that are already on the market. A lively discus-



Figure 2: the artefact making session with a cardboard toaster. The real toaster is in the foreground.



Figure 3: the manipulated cardboard toaster with stuck-on post-its.

sion ensued, but the participants were reluctant to modify the toaster model. Eventually, the student who led the session resorted to herself noting the comments on post-its and sticking those to the toaster model, as a visual representation and record of the comments (Figure 3).

REFLECTION

Having run the module just once, it is hard to draw conclusions on whether it fosters better sensitivity of designers to product use as well as an enhanced ability to adapt designs to needs and to organise stakeholder participation. The module in its present set up was thus only suitable to assess how much awareness the students gained as a result of participating in it.

How important was it that stakeholders actually made something, or were their verbal contributions just as valuable? The session and particularly this segment provided valuable insights for the students at the topic level. For example, the participants discussed in detail what makes appliances child appealing and how risks can be prevented, for example by designing hot surfaces in such a way that they cannot easily be touched. The students also learned about the parents' efforts to teach their children what is dangerous and what is not, and how child-appealing appliances subverted those efforts. These insights were valuable, and the supplied artefacts certainly helped in provoking those discussions, even though the participants did not manipulate or modify the cardboard model provided as a basis.

How successful were the students in reassuring and leading the stakeholders in the making activity? The students speculated on several possible

reasons for the participants' reluctance to modify artefacts:

- because there was only one model to 'share' among five participants
- because the model was made by the researchers – suggesting ownership
- because the amount of tinkering material provided was overwhelming.

Having only one cardboard toaster hindered the participants' expression in terms of hands-on doing, but facilitated a lively discussion. The students' motivation to provide only one model had been to encourage shared discussion rather than individual silent tinkering. The unexpected effect, the students concluded, was that the five participants were reluctant to make changes to the model that would be irreversible, thereby taking away another participant's opportunity to make other changes they in turn might want to make. Likewise, the participants did not make any adaptations to the actual toaster that was also provided as a reference product. As has been found elsewhere, it seems that here too, this 'finished' thing was seen by the participants as something to discuss, but not to interfere with (e.g. Sleeswijk-Visser, 2009). While the toaster and toaster model were not entirely useful as participation tools in for example Sanders' (2001) sense of co-creation, they did serve as tools for communication, as 'things to think with and talk about'. Both student groups reported that presenting things resulted in lively and insight-giving discussions among the participants. So it seems that there was some sort of barrier in place for the participants to interfering with the things that were provided in the session.

DISCUSSION

An interesting issue that emerged from this first edition of the module is that participatory sessions need careful attention to the way artefacts are presented. The students succeeded well at preparing the stakeholders for engagement in a role-playing activity (not featured in the video segment presented here): they first played a scenario themselves as an example, then provided careful instructions that made it easy to get started. They did not do this to the same extent for the artefact making activity (featured in the video

segment). So, which kinds of preparation and tools are needed to successfully engage non-designers in making activities?

Stakeholders may also have certain ideas in their mind on what these artefacts represent and why they are being presented. Did the participants of the toaster session think they were being asked to explore their perspective on the topic of child appealing products or that they were being asked to redesign a thing? The toaster was partly a representation of a design, and partly a tool for communication, with room for confusion for the participants between these aspects. This needs to be addressed better in future iterations of the module. Types of things need to be paired up with types of interactions and it needs to be explored and tested which work best with which and what kinds of insights each combination produces.

For example, finished things would be used to enact and explore existing interactions, whereas clearly unfinished things could be used for generative exploration of new interactions. Also, finished things might be considered more as 'conversation pieces', facilitating a discussion of the current context, while unfinished things leave much more room for exploring and interpreting future contexts. This means that explicit attention needs to be given in the module to the exploration of various combinations and configurations of [things+interaction]. Which combinations facilitate which kinds of active participation from stakeholders? Students should thus be able to un-

derstand and play with these combinations and accordingly, design the right combinations for either discussion, exploration or communication. This would provide them with multiple means to explore the same issues, thereby enriching the insights into the context at hand, and more specifically, into the point of view of the various stakeholders in this.

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