Role Play with Mock-Ups as a Communication Tool in Design Practice

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Introduction

This research has investigated a participatory design method for designers to allow users to express their aspirations. In my observation, I discovered that there were problems in getting the users to explain their ideas through verbal explanations. Users did not have the right techniques and tools to express their ideas. From there I started to explore mock-ups as tools to communicate and engage with the respondents in my investigation. In my research, I had used a promising participatory design approach, role-play with mock-ups.

This method sought to build the techniques previously used by Mitchell (1995) and Lemons et al. (2010). Firstly, I identified the importance of understanding the needs and aspirations of users in developing new product/furniture and any design artefact. Then, using participatory design role-play with mock-ups, this enabled all respondents and participants to reveal their current problems, needs and aspirations. They started to create useful design ideas and opportunities for designers in developing new workplace designs. From here, it became evident that this technique was useful, workable and quickly accessible for Malaysian designers in actual design practice without having proper design evaluation training. In relation to this, it created a social interaction technique to inspire and enhance active participation.

The mock-ups helped the respondents to overcome their ignorance in design. It also helped the participants and respondents to overcome their low awareness of 'design language' and start to share their concerns. These were not always practical design ideas but they provided distinct information which would be very helpful in developing and identifying design concepts.

Knowledge contribution in this research could be divided into three parts: 1) contribution for design practice 2) contribution for design research and 3) contribution for design education. The study revealed, by using role-play with mock-ups directly with the users, it allowed the designers to quickly become aware of arising issues without the need to do a potentially time-consuming, normative and tedious observational study.

In this paper SERPION CHAIR was used as example of how participatory design role-play with mock-ups, tools and method can be implemented in design practice in a Malaysian design scenario.

Participatory Design (PD)

Participatory design is a design approach that involves the designer and stakeholder (e.g user, employees, customer, etc.) in the design process in order to produce a usable design that meets the user needs and requirements. The approach has been used in several fields of research such as planning, architecture, software design, urban and landscape, graphic and even medical products. It focuses on the design processes and methods of design to produce a better and higher quality artefact.

One of the key intentions of participatory

research is to find ways for people to get involved in research and design activities that may impact them. This allows them to define goals, contribute on their own terms in an emancipated manner, and take ownership of decision making processes. (Foth and Axup, 2006:93)

Furthermore, Forth and Axup in their research regarding participatory design found that the practical advantages of following a participatory approach have led to a whole range of new research methods which were becoming increasingly accepted outside their organisational, cultural and disciplinary boundaries. Establishing the connection between researchers and respondents was one of the most challenging tasks that required a creative approach and an individual strategy for some research settings.

Fisher and Ostwald (2002:135), in their research in participatory design, revealed that knowledge is no longer handed down from above either from designer or manager in design, but is constructed collaboratively with users.

A product may be suitable to a current, but not to a new user who has been experiencing different situations. Fresh data collection have to be carried out to explore and understand the needs and requirements that are more closely synchronised with existing practices (Figure 1).

Figure 1: An early Brainstorming. An example of idea between user and designer (Serpion Chair)

According to Visser et al. (2007), these techniques produce data and insights that address functional, personal and social aspects of the experience. The user statements convey a number of different aspects about speaker experiences.

(PD) methods are a technique that helps a designer to connect with the potential users and to understand their needs, especially during the creative phase of the design process.

Role Play With Mock-Ups
Due to the differences in level of knowledge and design experiences between users and designers, sometimes, if they were unable to effectively communicate between them it was highly recommended to use mock-ups (three dimensional full scale mock-ups) as an alternative tool (Ehn & Kyng (1991)).

Other similar research suggested the use of scale mock-ups, as in the approach used by Mitchell (1995). They used mock-ups to explore users' needs and an effective design language that made sense to the respondents. The participatory design method allowed the users to be involved in the process of design development at an early stage (Figure 2).

Figure 2: Mock-ups Vol 1 as tools for visual communication to seek for mutual agreement and design ideas
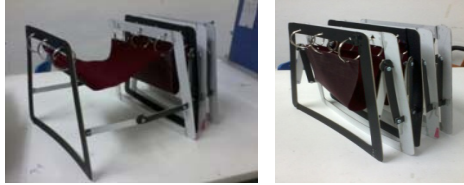
Figure 3 : Mock-ups Vol 2. The participatory design + mock-ups method allowed the users to be involved in the process of design development.

According to Whyte et al. (1991:20), in a participatory design approach, people participate actively with researchers throughout the research from the initial design to the final presentation of results and discussion of implication of their actions (Figure 3).

The aims of the role play are:
I) To provide instruments/tools to support my design work.
II)To explore how people perform their daily activities at their workplace.
III)To explore new ideas in developing office workplace.

Figure 4: Final design. Reveal from participatory design role-play with mock-ups between user-designer.

An indirect result of the role-play approach was the design work that had contributed to the design development in this research.

According to Ehn and Kyng, (1991), Mitchell (1995), Lemons et. al. (2010) and Yazid (2010), 3D models during role play design task, help us to generate and evaluate ideas and give better visualisation of our ideas. Thus, the conceptual design work also challenged the users to generate their own ideas and needs in order for them to reveal their own design concept (Figure 4-5).

Figure 5: Serpion Chair final prototype

Knowledge Contribution
Contribution to Design Practice
Participatory techniques with mock-ups were able to support this, for example by giving users a tool to explore and explain their experience and needs. It is advisable for designers in this setting to equip themselves with research skills as explained below.

My analysis of the student's work provided this guidance for designers/professionals who are interested in adopting this approach in their work. This was established through a triangulated observation of successful outcomes in actual circumstances and commentaries made by the participant.

i.Develop users knowledge-engagement through experience in order to familiarise themselves with the context under study.

This would allow the designer/researcher to approach users more easily and understand real situation of the subject under discussion.

ii.Establishing a good rapport between users and designers in the early stage of the design work was necessary to allow users engagement in role-play with mock-ups sessions.

iii.Seeking ways to reduce the gap between designers and users. This would make the users feel attached in the research project and feel comfortable to communicate with the researcher.

iv.The use of role-play with mock-ups directly with the user allow designers in design practice to quickly become aware of arising issues without the need to do a complex observational study.

Contribution to Design Research
The method of this research was similar to Mitchell's (1995) role-play with mock-ups as tools in main data collection and the work by Rahman (2010), on the interaction between users, product and environment in design process in Malaysian context. This research combined and developed these two approaches in generating design ideas and opportunities that may add to current understanding of design research methodology:
i.Mock-ups provided tools of communication for designers and users in this context.
ii.Combination of methods and designing approaches and practical work revealed the users insight creative thinking.
iii.Implementing role-play with mock-ups in design activities as tools for designers/researchers to explore new design opportunities for future design work.
iv.More channels of communication were introduced into design process. (e.g. role-play with mock-ups, design workshops and interviews)

Contribution to Design Education
Lemons (2010) explained that understanding the design process is important in order to understand and implement effective teaching of design course. This approach could be interesting for lecturers/educators who want to introduce it to their design students. As a lecturer in one of the Malaysian universities, I found that many students (especially students in year one and two) had difficulties in designing their projects especially when they needed to do field work that involved end users. Role-play with mock-ups would facilitate design students to;

i.Learn about the process of research along with certain research practices.
ii.Apply research methods to their design problems.
iii.Execute and express their ideas.
iv.Visualize predict the design problem.
v.Predict the product in real situations.
vi.As a tool to investigates the user needs according to the specific environment.
vii.Gaining data without having complex research training.

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