

The use of images to elicit user needs for the design of playground equipment

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INTRODUCTION

Images are a powerful resource to convey meanings, particularly emotional values and experiences. Their application can serve as an important tool to communicate values that cannot be expressed easily through words (Garner and McDonagh-Philp, 2000). Eliciting user needs and aspirations often presents a challenge to design researchers. This is partly because users find it difficult to conceptualise and express their ideals and wishes. Design researchers deal with the difficulties of making user data (verbal and visual) comprehensible to product developers.

Designers often find quantitative data formats, as well as verbatim reports, inaccessible as they are not sufficiently inspirational and can be perceived to dampen the creative process. This may be due to the time constraints that designers have typically to deal with, but also because such data formats may not convey user information at an emotional level. Empathy with users cannot only be achieved through knowledge of facts, but requires also an awareness of the user context, experience, dreams and aspirations to support a deeper understanding of underlying motivations that drive user behaviour and values (McDonagh-Philp and Denton, 1999).

Users need to be supported in expressing their needs and aspirations. Product functionality as such is closely interwoven with social and cultural values. Users are not always conscious of their needs or may not regard particular pieces of information as useful. Likewise, users are not always able to verbalise their emotions and reflections. It is important to give users many different channels through which they can express their requirements and ideals.

Images are able to convey less tangible aspects of the users' experience (feeling, mood), thus giving users a medium to express them. Likewise, designers often tend to prefer visual information due to its accessibility. The image can offer the designer and user a shared language – thus aiding the communication.

For example, designers can use moodboards – a technique producing collages of abstract images – to immerse themselves into a particular state of emotions associated with a task or product (Garner and McDonagh-Philp 2001). This technique can be adapted for application by users to aid them in communicating their ideals, aspirations, dreams and wishes to designers.

Where adults have difficulty in conceptualising and verbalising deeper values, it may be even more problematic for children. When attempting to elicit user needs for the design of playground equipment, the use of techniques that make use of images and creative activities becomes imperative.

This paper describes how mood boards and associated techniques have been applied within focus group sessions to retrieve user needs and aspirations for the design of playground equipment. It demonstrates how the techniques can be applied with both children and adults, shows what type of information can be retrieved, and illustrates the usefulness of the techniques through findings and examples.

METHOD

Focus group sessions were used as a vehicle for the user research activities to assist in collecting various types of data. In addition to group discussions, participants carried out a range of different exercises including questionnaires, mood boards, and creative activities. A total of two focus group sessions were conducted on the same day, each lasting three hours. The research aimed at retrieving perspectives from both children and their parents. Hence two sessions were conducted, one involving parents only, and the other one focusing on the children.

Children's session: The session involved six children (five boys and one girl). They were 7 to 9 years old. Table 1 shows a moderator's guide for the session conducted with the children, outlining the activities. Their parents were present in close proximity. They did not observe the children's activities, but carried out their own activities using a booklet that gave instructions to filling in questionnaires and non-verbal creative activities. These included the exercises such as childhood memories of play; what does play mean (expressed through mood boards); evaluating existing playground equipment; imagining the future playground.

Parents' session: The session involved five participants (all female). During the first part, participants were asked to imagine themselves back in the role of 7-year old children. Amongst other activities, parents were asked to remember impressions such as smells and sounds. By creating a mood board, they expressed their memories and ideals of what is play visually. For the second part, they were asked to come back to their role as a parent. This involved activities such as discussion of criteria for playground equipment, and rating of different types of equipment through questionnaires.

FINDINGS

User research activities involving children have very different requirements to those for adults. Adults are often initially reluctant to conduct creative activities such as brainstorming, drawing, and the creation of mood boards – whereas children are still more familiar with such activities.

The focus group setting was important to provide a structure, however the discussion itself was problematic for the children group, since they tried to please, rather than voice their opinions. It had a tendency to turn into a question-and-answer session, since the children behaved according to a classroom environment. Open discussion requires social skills that children of this age have not fully developed. The children varied considerably in their abilities regarding the articulation of abstract thoughts, and the consideration of others. Confidence and maturity can vary significantly within the same age group.

Table 1: Moderator's Guide for Children's session.

| Date: 21.4.01 | Focus Group: Play Areas and Parks (afternoon session) | (total: 3 hours) | |
|--|--|---|--------------|
| | <i>Description</i> | <i>Aids</i> | <i>Start</i> |
| | People arrive, get drinks and snacks | | 1.00 |
| TASK 1 Introduction and warm-up | Game for both the adults and children to help the children settle in, match 2 picture cards. Adults sent to different location to fill in a pre-prepared booklet separately. | booklet for adults; picture cards | 1.15 |
| TASK 2 What is play? What isn't play? (discussion/drawing) | If I was an alien from outer space and had never been to this place before, tell me what I could do to play? What do you do to have a good time and enjoy yourself? Explain in words what is good play/bad play. Explain with a drawing what play means to you. (Prompt with describing favourite toy). | large paper for drawing play ideas | 1.30 |
| TASK 3 Mood board exercise What is play? | Ask children to pick three pictures which remind them of play from images on table; Task: think of something which you enjoy doing, is fun and exciting; then children explain their choices (e.g. what is the best thing about playing?) | mood board | 1.50 |
| TASK 4 Rate and name equipment (rating and discussion) | Giving a name to pieces of play equipment. Write names on sticky labels, and stick onto pictures as a group activity (tick a yellow star on your favourite, exciting and think about why; stick a red triangle by the one which is your least favourite and say why (least fun); green oblong sticker by the one which you think is most fun) What games do you think they would play? Ask what do you think they eat; what do they watch on TV; what music do they listen to; what clothes do you think they would wear? | pictures of equipment | 2.05 |
| BREAK | | | 2.20 |
| TASK 5 Magnet play area What would you like in a play area? (choosing pictures) | Use picture of unattractive urban environment. What would you like to be there? Provide a number of items printed onto sheets to cut and stick (e.g. trees, animals, play equipment, water, sand, seats, benches, textures – ask children to pick out good and bad items before they start sticking. Choose most important item first (6 items so no fighting). Stick magnetic strip on chosen pictures (with help) to stick them on their section in the play area marked on the board. | images, magnets, metal surface, paper sheet | 2.30 |
| TASK 6 Draw your dream play Area | Ask children to draw a dream place to play, using a variety of pens, pencils, crayons, stickers etc.; when they have had enough time ask children to explain their pictures. If you could choose anywhere to play, what would it be like? Make clear that they can draw anything they want. | paper, pens etc. | 3.00 |
| End session | Ask questions to find out what they enjoyed and didn't enjoy. Distribute goodie bags and disposable cameras to record their play 'space' – what they consider to be play (to return it in the envelope provided within a week, include SAE) | evaluation sheet | 3.30 4.00 |

Children have a much shorter attention span than adults. It is important to constantly find ways of maintaining their attention through new tasks. Hence, employment of a range of different activities is vital. Children are easy to motivate through activity and interaction changes. Moreover, most activities took much less time than expected – especially creative activities since children found it much easier to approach them. Hence, it is very important to prepare reserve exercises and alternative activities. Moreover, the moderator has to be very responsive. Dominant children tend to be especially challenging to control – since they feel easily rejected and may withdraw from the interaction. It is vital to convey the impression that moderators enjoy the activities themselves. Exercises such as rating of equipment have to be presented as a game (e.g. Task 4 in Table 1). Simple aspects such as the provision of refreshments can be used as motivators, whilst making sure they are assisting and not distracting the session (see Figure 1).



Figure 1: Children constructing their individual mood boards.



Figure 2: Example of a child's mood board with descriptive terms.

Both adults and children generated their own mood boards in response to the question “What does ‘play’ mean?” For the parents, creating mood boards helped to bring back happy and positive memories of play from their childhood. The exercise of considering what play means to them, based on their childhood experience, was perceived with much enjoyment and gave vital insight into the range of different perspectives that people have on the contents of play.

An important aspect of using the creation of mood boards to understand user needs and aspirations is to retrieve explanations from the choices of images. This can be done through labelling the pictures (see Figure 2), or through a subsequent verbal explanation of the experiences and feelings expressed. Abstract expressions for ‘play’ are shown in Table 2. Comments and pictures chosen for the mood boards showed that the majority of the adults, as children, like to play outside and to be close to nature. The children responded literally, and tended to list activities, whilst adults perceived the question more abstract.

Table 2: Terms expressing ‘play’.

| Adults | Children |
|--|--|
| sun; playing with friends; playing alone; happiness; water; enjoyment; imaginative play; freedom | fun; playing games with friends; going to the park; swimming; going to the cinema; playing on the computer |

Parents were reluctant to return to the parent's role. Although the session assembled a culturally diverse group (e.g. English, Eastern Europe, Africa), they shared the view that the essence of play was perceived as mainly a social activity.

The children clearly conveyed the importance of movement for the design of playground equipment. The favourites were climbing trees or climbing frames. The children also considered the role of the parents. They wanted the adults to be within sight, but far enough away to dissociate from play. They were concerned about the comfort of the parents – but mainly from the perspective of being able to stay longer at the playground!

CONCLUSIONS

User research techniques based on group sessions can be used as a mediation tool between users and designers. It is vital to enable effective communication. Activity sessions provide opportunities for designers to integrate a range of activities and tasks that support the elicitation of user information, experience and dreams in diverse formats, whatever the age of the user. Group work can exploit the synergetic effect created through discussion and activities conducted within a shared environment.

Designers benefit from the breadth of different activities that can be employed, since the choice of exercises can be adapted flexibly. In comparison to written reports, visual data can provide a more immediate format, which is more easily accessible and understandable by designers in a time-constrained working environment. Designers particularly gain from the combination of visual material with spoken word.

Images help create a shared language between the user and the designer. User needs can be expressed in non-verbal ways, through the use of images. Research activities presented as play can provide rich data. The closer designers are involved into the session, the deeper they can immerse themselves into the user's world of thinking and feeling. The immediate availability of inspirational material not only helps the understanding, but exposes one of the most important resources of designing: learning through play.

REFERENCES

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