MAPPING CHILDREN'S EXPERIENCES: ADAPTING CONTEXTMAPPING TOOLS TO CHILD PARTICIPANTS

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ABSTRACT

Within the area of user-centered design, Contextmapping is an approach to participatory user experience research that provides designers and user researchers with a clear workflow and hands-on toolkit. It acknowledges the user as the expert of his or her own experiences and aims to deliver rich insights to designers: deep, authentic and inspiring views into the personal lives and experiences of prospective users.

This approach is originally developed for use with adult participants. As it gets applied with child participants, some adaptations are necessary to meet children's skills (both cognitively and social-emotionally) and motivations. We conducted a series of research projects on aspects of Contextmapping and design cases where Contextmapping has been applied in child-centered formats. Some barriers and enablers were identified with which the role of children as informants in a design process can be further enhanced.

KEYWORDS:
design methods, co-design, informant design, children, Contextmapping

INTRODUCTION

One of the challenges for a designer is to understand the place and role of a product-to-be in the lives of its users. Various approaches have been developed for designers and design researchers to incorporate insights on users' experiences, wishes and needs in the design process. Sanders and Stappers (2008) present an overview of contemporary approaches, such as applied ethnography, contextual inquiry, design probes, generative design research, participatory design. Though developed from various sources and in different design domains (ICT, architecture, product design, interaction design), they all aim to inform those who create about those for whom it is created, in order to relate the characteristics of what is created to those for whom it is created. Some of these approaches are meant to be applied by experts in research, others are more open to application by designers within their own workflow.

Within Delft University of Technology, it has been an on-going effort in the last decade to develop and teach a hands-on procedure for design practitioners to collect user insights in the front phase of design. This Contextmapping procedure (Sleeswijk Visser et al., 2005) aims to elicit deep, empathic, inspiring insights on users' experiences, wishes and needs through the use of generative techniques.

As with most other approaches for user research, the main focus is on a mainstream group of adult users. The techniques used in the approach require adult skills, such as understanding of abstract concepts and verbalisation skills. Such skills are less easily applied by children. If children's perspectives are to be included in the research, an adaptation to their characteristics, skills and mind-sets is necessary. This paper explores some barriers and opportunities in this domain, based upon a series of research projects and design cases carried out within our academic educational setting.

CONTEXTMAPPING

Contextmapping is a form of generative research with users, aiming at creating context awareness by eliciting emotional responses from participants, including users´

concerns, memories, feelings and experiences of these explored contexts (Sleeswijk Visser et al., 2005). The pivot of the Contextmapping approach is a 'make and say' session where participants explore their experiences through creative tasks and discussions under guidance of a researcher. A characteristic of the approach is a thorough preparation by the researcher (who develops the exercises to steer the exploration), and by the participant (who is sensitized for the subject through tasks carried out prior to the session). After the session, the collected data are further analysed and processed for application in the design process. The general sequence of the approach is depicted in figure 1.

Figure 1: general Contextmapping sequence (Sleeswijk Visser et al., 2005)

At the core of this research are tasks and materials that facilitate diverse forms of expression: maps to indicate highlights on daily routes, timelines to summarise a day's activities, emoticon-stickers to express feelings about these activities, etc. Figure 2 shows participants working with such materials during a session. Participants create artefacts and subsequently express themselves verbally about it. This 'make and say' principle, together with the diversity of tasks and materials, helps reach deeper reflection, beyond explicit knowledge into the domain of tacit and latent knowledge.

Figure 2: Participant of a Contextmapping session explaining his creative artefact to the group.

CHALLENGES OF CO-DESIGN WITH CHILDREN

Contextmapping fits within the broader domain of co-design, where designers and end-users cooperate within innovation and where information and responsibilities are shared. Several researchers have developed or modified co-design methods for application with child participants, to provide for the needs and skills of children.

Druin (1999, 2010) developed cooperative inquiry, a set of co-design methods for use by children and adults together. This procedure addresses issues of imbalance of verbal skills and power differences between children and parents, as these are important factors to overcome to make such a project successful.

Bekker et al. (2002) propose to motivate child participants for user research tasks by letting them adopt a journalist's role and having adults put their findings within a nicely designed journal paper.

Wyeth et al. (2006) explored the use of technology probes (adapted from cultural probes as presented by Gaver (1999)) with children and point at the relevance of capturing diverse data during the sessions: next to a log of children's actions with probes, also spontaneous utterings and visuals of their interactions during a session should be captured to provide richer data and inspiration.

Vaajakallio, Lee et al. (2009) report that children aged 7 to 9 can use 'make tools', but have challenges in group dynamics and in reflecting everyday experiences into design ideas, and Vaajakallio, Mattelmaki et al. (2010) point at the difficulties children may have at constructive conversations and negotiations within a group, which are prerequisites in co-designing with a group of people.

Van Mechelen et.al. (2013) elaborated on the problematic aspects of group dynamics in co-design with children and reports on process difficulties (dominance, free riding and polarization within the group, teaming up against the assignment) and outcome deficiencies (final results being aggregated, but not integrated clusters of ideas).

As these sources indicate, co-design with children at large is possible though problematic in some aspects. Co-design approaches need to be adapted to children; it is to be expected that this holds true for Contextmapping as well.

SIX CASES OF CONTEXTMAPPING WITH CHILDREN

In 2008, the author of this paper reported on first attempts to adapt Contextmapping to children (Gielen 2008) and listed guidelines and rules of thumb to tailor sessions to children's skills and characteristics. This paper aims to bring more background and depth to this issue, by presenting six research projects and design cases in which Contextmapping with children has been adapted to child participants. Some subjects were addressed in special research projects, others in the research phase of design projects. All but one projects were executed by Industrial Design students at Master-level, mostly in semester-long exam projects, and supervised by the author. In the design cases, insights

were collected through careful planning of Contextmapping sessions and retrospective evaluation of the process and outcomes by the student. In the research projects, a formal research set-up was used. The nature and extent of the projects allowed for qualitative analysis.

Based upon prior experiences and literature on co-design with children presented above, special focus was put on cognitive skills (language and abstract thinking), social-emotional skills (shyness, adopting an open attitude), and children's motivations to participate. We followed a twin approach of building an understanding of what children are able to do while also developing the tools to advance Contextmapping with children. Table 1 shows an overview of cases and topics, names the researchers involved and summarizes the main findings.

1. COGNITIVE SKILLS: LANGUAGE AND ABSTRACTION LEVELS

Though Contextmapping uses a multitude of expression forms to uncover deep knowledge, it heavily relies on verbal expression to explain and exchange this knowledge. With language skills still under development, how can children participate in verbal exchange of abstract concepts like emotions and describe the backgrounds for preferences they have? In this study, it was researched if children can be stimulated to reach higher abstraction levels in their speech; through the influence of more capable peers, through verbal guidance by the researcher, and through providing ambiguous or unambiguous pictures as conversation tools. The researcher also measured if children with higher abstraction level in their verbal expressions share more rich and personal information.

In this research, 28 children participated: 17 five- and six-year olds and 11 eleven-year olds. Their sensitizing materials and group session recordings were analyzed for amount of personal statements. Their language use was scored for abstraction level using micro-thinking levels (Reed Geertsen, 2003) and abstract thinking skills as defined by Blank and Solomon (1967).

The results showed that none of the efforts to stimulate children to use more abstract language had an effect. The richness of information also was not strongly related to abstract thinking level. For younger children there was a small relation between abstraction level and richness of information, but this was probably not a causal relation, rather a by-product of developing general language skills.

Table 1: overview of cases and main findings; all reports can be retrieved in the University's online repository at http://repository.tudelft.nl

case nr, domain	subject	author&year	title	main findings
1. cognitive skills	language and abstraction levels	Evelinde van Dorp, 2010	Contextmapping an abstract future with children	Researchers can't influence the levels of abstract thinking of children during Contextmapping sessions. With abstract topics, they should provide clear language and examples.
2. cognitive skills	abstract thinking versus direct experience	Evita Ooms, 2010	Nature experience of children with physical disabilities	If children lack sufficient abstract thinking skills, bringing a group of children in the concrete circumstances they are to reflect on is an alternative. Group discussion is stimulated through providing them with shared tools for documenting.
3. social-emotional skills	shyness	Kasia Tabeau & Anna Sosinowska, 2010	Involving shy children in Contextmapping research	Shy children can participate in Contexmapping if they can also do some individual assignments. In mixed groups, talkative children can help others overcome their shyness. Shy children want to be able to foresee when they will be asked to speak.
4. social-emotional skills	adopting an open attitude	Mathieu Gielen & Fenne van Doorn, 2011	(as yet unpublished)	Icebreakers help children to understand and adopt an open attitude towards creative exercises. Icebreakers that involve repeated instances of direct spoken exchange of ideas within a group are most effective.
5. motivation	competition and creativity	Asli Deniz Özakar, 2010	Harnessing children's creativity in Contextmapping activities	Especially boys (aged 10-11), who tend to look for competition, are more motivated and produce more creative outcomes when mild competition is included within the Contextmapping task.
6. global exploration of Context-mapping with children	children's fears	Kasia Tabeau, Anna Sosinowska and Enrico Wasch, 2007	Kinderen en hun belevingswereld (in Dutch only; meaning 'Children and their world of experience')	Compared to an online survey, a Contextmapping study enables children do express deeper and richer experiences on their fears. The most personal experiences are shared through talking-while-creating but not expressed in the artefacts they make.

Although children needed to be able to express themselves verbally to participate in Contextmapping sessions, they could handle difficult and abstract topics, as long as the researcher provided concrete and everyday examples. Therefore, in Contextmapping with children, the focus should not be on stimulating higher abstract thinking levels but rather on clarity and concreteness.

2. COGNITIVE SKILLS: ABSTRACT THINKING VERSUS DIRECT EXPERIENCE

Contextmapping aims to stimulate participants to reach memories and experiences that lie within the domain of tacit and latent knowledge and to make those explicit. In some cases however, experiences might be retrieved 'in vivo', by re-entering the direct circumstances where they appear. It is relevant to know if such direct experiences can be captured using Contextmapping techniques. If so, this would also offer opportunities in cases where children are unable to address their memories, e.g. when they are too young to understand the task or have limited cognitive skills.

In one project this topic was studied somewhat by chance. As part of a design project directed at creating a natural playground for children with physical challenges, the researcher carried out a Contextmapping session at a children's rehabilitation and holiday centre. Apart from their physical challenges, most of these children also were lagging in cognitive development or had cognitive challenges. Twelve children, aged seven to thirteen, participated. The researcher cooperated with the center's staff to make the session as accessible as possible, and used only two assignments: the sensitizer task asked the children to draw a loved element of nature on a postcard, the second task was to join the researcher on a group walk through the park, to discuss and make photos of things that were 'nature'. The aim was to use these photos in a subsequent discussion. As the session evolved, it became clear to the researcher that she had still overestimated the cognitive capabilities of the participants. The value of the session was not in discussing afterwards, but in the direct reaction to everything the group encountered and the discussion whether it was or wasn't nature, and why. The idea of 'being on a mission' was motivating for the children. The possession of a photo camera further intensified their attention to the task. As there was only one camera, children needed to reason why a picture needed to be taken; thus, discussions and argumentations were elicited on the spot.

It was concluded that researching a group of child participants within the context that is being explored offers opportunities for capturing more direct reactions to and interactions with that context, and that simple Contextmapping tasks can help to heighten the intensity of that interaction and expressions of it.

3. SOCIAL-EMOTIONAL SKILLS: SHYNESS

For practical reasons, Contextmapping with children is often done in settings where many children are assembled under adult supervision, such as schools and day care centres, sports clubs and the like. Often, adults pre-select the children for the sessions; they choose individuals who can easily skip a lesson, who are cooperative and extravert. Though done with best intentions for the children and the research, this pre-selection causes the risk of missing out on the needs of the introvert.

In a research project, the inclusion of introvert children in Contextmapping was explored. We wanted to find out if shy children can be made to comfortably engage in Contextmapping.

Two types of shyness exist: fearful shyness (fear for strangers) and self-conscious shyness (Buss, 1986). Self-conscious shyness is related to embarrassment and requires self-reflection, it is prevalent from ages eight and up (Crozier and Burnham, 1990). As we wanted to include this form of shyness in the research, we chose participants at the age of eight.

Children are very well able to recognize and describe shy peers. Younger et al. (2008) composed a list of 11 indicators children mention for shyness. In our research, the teacher selected the shy children with the help of this list. We did not want the children to select their shy peers, as this would influence the research.

The research used a sample of 12 children, divided in three different groups: 4 extravert children, 4 shy children and a mixed group of 2 extravert and 2 shy children. Each group was presented with the same session set-up of seven activities, which included individual activities like drawing and group activities like discussing and acting and role-playing with a puppet. The sessions were concluded with an interview of each child in the group of how it felt during the session – a probable cause for extra shyness. Beforehand, the researchers formulated expectations of the levels of fearful and self-conscious shyness that would occur during each activity, based upon the shyness literature.

For the analysis, the behaviour of each child was observed using video and audio recordings. The overall flow of the session parts and instances of shyness were compared to the expectations and evaluated.

The participant sample was too small for statistical analysis, but rich in exposed bahaviour. Clear indications were found of the relation between shyness and participating in the session. The shy children enjoyed the individual tasks more and worked on them with greater concentration than the extravert children. The extravert children tended to talk more, also in individual tasks, and not all the talking concerns the topic they are working on. But they did give more explanations of their individual work, which helps to

understand its meaning. In Contextmapping, these explanations are usually the most informative outcome.

The cooperation of shy and extravert children within one group helped shy children to get over some of their hesitation.

The researchers also found that their own role was of major importance. To successfully include shy children in Contextmapping sessions, they advise to keep an eye on signals of shyness: take time to let the children feel at ease before introducing the actual topic of research, make sure everyone gets a chance to speak but also that every child knows when it is his/her turn so this does not come as a surprise. In a mixed group, the talkative peers can start conversations and then pass the topic on to the less talkative ones.

We had aimed to also explore if the inclusion of shy children adds to the variety of insights gained. Due to circumstances we were not able to carry out that part of the research.

4. SOCIAL-EMOTIONAL SKILLS: ADOPTING AN OPEN ATTITUDE

Adult researchers working with children need to be aware of the influence they have on children and the expectations children may have from the adult. All children, not only the shy ones, may suffer to some extent from fear and self-consciousness when being involved in a research with an unfamiliar adult researcher. Especially in school settings, children who get asked questions often feel they are expected to give the one right answer. In discussions, they may feel the adult ultimately knows best. This has been one of the main points of focus in the development of cooperative inquiry by Druin (1999, 2010). This approach is targeted at design teams working together over longer periods of time, in subsequent sessions. For Contextmapping, usually such a time frame is not available. Yet it is important to overcome children's fear of the adult researcher, fear of embarrassment and thinking in terms of wrong and right answers, as this may impede their open participation and honest contributions to Contextmapping.

Ice-breakers are used as a warming-up task within Contextmapping and other creative group processes. They have the aim to set the mood for the session and make participants aware of the nature of their participation: every contribution is appreciated, there are no wrong answers, they can speak from the heart and are not assessed or tested in any way.

We explored the use of icebreakers at the start of a series of Contextmapping sessions with children aged 7/8 and 10/11. In each age group, five group sessions were conducted and each of those five sessions used a different ice-breaker. Table 2 gives an overview of the characteristics of each exercise. The ice-breaker sessions lasted between 5 and 10 minutes. The ice-breaker exercises differed on:

- individual or joint activity
- pre-structured and coordinated exercise or improvised/random nature
- spoken output, written or drawn
- direct sharing of contributions or at the end of the exercise

The five exercises were:

1 braindrawing: individually drawing one association to a given picture and passing the drawing onto the next child to make a chain of associations, using a drawing sheet with six drawing boxes;
2 individual mindmap on a mindmap template;
3 group mindmap: as a group mentioning associations to a theme and having the researcher writing them down and creating a mindmap from it;
4 individual picture comparison: taking a sheet with two pictures on it, writing one relation between the two pictures (e.g. elephant and cloud: both big, both grey, cloud can be in the shape of an elephant: any answer is acceptable);
5 group picture comparison: pulling two random pictures from a stock and as a group naming any relations.

Table 2 the characteristics of the five different ice-breakers

char-acter-istic	**brain-drawing**	**indivi-dual mind-map**	**group mind-map**	**indivi-dual picture compa-rison**	**group picture compa-rison**
individu al/ group	indivi-dual	indivi-dual	group	indivi-dual	group
struc-ture	-	+	--	++	+
expres-sion	drawing	writing	saying	writing	saying
ex-change	direct	after-wards	direct	after-wards	direct

For the analysis, the two researchers who conducted the research evaluated the exercises on the following aspects:

- making the participants feel comfortable
- inviting to participate and share
- breaking the wrong/right answer doctrine.

It appeared that group exercises were most beneficial. They allowed for many instances of direct feedback from the researcher, reconfirming the notion that every contribution is appreciated. The children also learned from others that speaking out is appreciated and they get stimulated by unexpected contributions. Individual exercises were sometimes perceived as invitations to perform, and children would complain of getting stuck by not having 'good' or 'right' ideas.

Spoken contributions allowed children to react more easily and quickly than written or drawn contributions and helped set an atmosphere of quick, informal associations and playfulness.

The researcher writing down the children's contributions helped to present the researcher as an 'assistant' rather than as an assessor, and made it clear that each contribution was welcomed and collected.

The easiest and funniest assignment was the group pictures comparison – it helped to get a playful, lively energy in the group. The researchers deemed this assignment most useful to let the children experience the intended atmosphere for the whole Contextmapping session.

The sessions then continued with a focus on children's physical outdoor movement and play, and the participation of elderly in it. The sessions were conducted as part of the ProFit project, which is funded by the European Union, under the Interreg IVB North West Europe program.

5. MOTIVATION: COMPETITION WITHIN CONTEXTMAPPING

The quality of the outcomes of Contextmapping sessions depends heavily on the willingness of participants to invest their energy and contribute wholeheartedly. A primary source of motivating the participants can be found in the nature of the approach: as Contextmapping aims to uncover the daily life experiences of participants and acknowledges users as the experts of their own experience, participants feel they have something valuable to contribute and may derive pleasure and motivation from the interest with which their contributions are met.

Sometimes, however, it can be hard to motivate participants. In practicing Contextmapping with children within the design education curriculum at Delft University of Technology, the group that is most often reported as unwilling and difficult to motivate are the boys aged 11-12. As they approach puberty, they may be reluctant to share personal thoughts, or just find the exercises childish at first sight and have more interest in challenging the researcher.

As these boys are often interested in competition (e.g. in computer games and sports activities), the idea was raised to use competition within the Contextmapping set-up. There may however also be effects of competition that are detrimental to the outcomes of the session. Contextmapping uses generative tools (like collage-making, acting out and quick prototyping) to help elicit deeper knowledge, and these tools rely on creativity. Would creativity not be smothered by competition?

In popular speech, children are regarded as very creative. This often refers to their uninhibited engagement in activities like drawing and the expressive quality of their artefacts. Play theorist and psychologist Sutton-Smith (2001) in a televised documentary once called this 'laybility'; the layman's ability to think and perform freely, by lack of notion of the standards, rules or customs that withhold experts (or adults in general). A more in-depth review of children's creativity should also incorporate the originality of the solutions they present in the light of given problems (De Bono, 1972).

Of the many definitions of creativity used in the scientific creativity discourse, Amabile (1983) clearly discerns the elements of task motivation from domain-relevant skills and creativity-relevant skills. Competition may replace the intrinsic motivation of performing a creative task with an intrinsic motivation to compete, which is an extrinsic motivation to be creative (as a means to the end of winning the competition).

The effects of competition on creativity have been widely researched, but researchers still do not agree whether such competition is detrimental or rather stimulating creativity.

A research project was executed to explore the relation between motivation, competition and creativity within generative sessions. The definition used for creativity was "The individual or group process that results in an artefact that is judged as novel and appropriate"; comprising both the element of 'not seen before' and 'fitting to the task given'. For this research, six sessions were held with a total of 24 children. In setting A, four children were divided into two duos that were told to cooperate within the duo to deliver creative outcomes. In setting B, the four children were divided into two duos that were told to cooperate within the duo to compete against the other duo on creativity of the outcomes. In both settings, there were three varieties: boys duos, girls duos and mixed duos.

For the analysis, their behavior was evaluated on instances of competition and cooperation, and the outcomes of their work was rated by 10 independent design students on novelty and appropriateness, the two factors defining creativity.

In figure 3 (next page), a graphic depiction of the findings of the research is given. Overall, it was found that competition is a motivating element and has positive impacts on children's creativity, it increases children's motivation towards the Contextmapping tasks and the outcomes of the sessions are more appropriate to the expectations of the task. One important finding was that as especially boys at this age level are often likely to engage in competition, it is best to have this competition happen within the task rather than to have it disturb the task. This was most clear in session A2 and A3, where competition was not proposed but happened outside the task and distracted the participants from the task. No evidence was found that competition on the task would make children unwilling to experiment and drive them towards safe, uncreative outcomes.

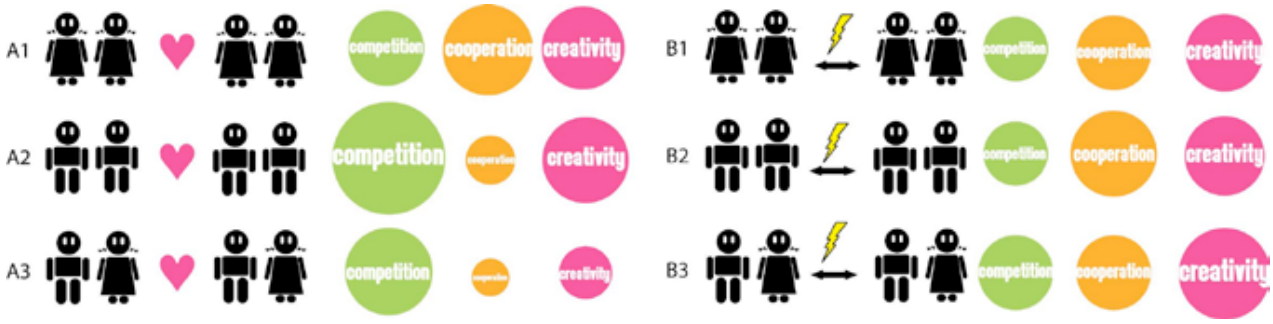

Figure 3: Overview of the competition, cooperation and creativity by groups. The size of the circles represents the degree of occurrence of each. Hearts stand for cooperation, lightning bolts and arrows for competition.

It was concluded that mild competition does function as an extra motivating factor – though motivation to participate should foremost be achieved by making the topic relevant and the tasks rewarding to the participants.

6. UTILITY: CHILDREN'S FEARS

All the above research projects and cases addressed methodological aspects of conducting Contextmapping research with children. To conclude, one research project is described that, next to experimenting with Contextmapping tools that are suitable for children, made a direct comparison to other child research. The methodological focus of this research project has been described shortly before by the author of this paper (Gielen 2007, 2008) but we'd now like to briefly focus on some of the results that were generated.

Unicef Netherlands (2007) published a research report on Dutch children's fears. The research had been undertaken through an online survey with 400 respondents, and the results communicated were that the top-3 of reported fears were spiders, darkness and thunderstorms. Subsequently, in media outings this was compared to what children in less fortunate parts of the world had to fear.

At Delft University of Technology, curiosity arose about what the outcomes would be, had the same question been addressed through Contextmapping with children. In the research, 13 children aged eight to eleven from one school participated in a Contextmapping session that included:

- drawing something/someone that protects me;
- make a collage-map of home, school and other locations and fill them with pictures and words describing amongst others emotions connected to each place;
- after selecting a location related to self-reported fear, filling out a timeline of what happened before, during and after the fearful moment;
- writing a secret letter about the fear.

The results show that children easily report common and stereotypical fears like sharks, 'bad people' in general, rollercoaster rides and indeed spiders. These are the fears that are predominant in the writings and drawings. However, during the Contextmapping sessions the children would also discuss the theme while working on the tasks, and quite different fears were mentioned then, related to their personal experiences: a mother running away from home, the loss of family members, having to perform a dance in front of an audience, being in bed alone after having watched a scary movie. These fears were shared during almost casual conversations first, and only later reported on paper – if at all.

It were insights like these, with the richness of example and the empathic quality of personal reporting, that were deemed most important, informative and deep by the researchers. It strengthened the researchers' confidence that Contextmapping with children, when applied with the right toolbox and an open ear, can elicit insights beyond the domain of readily available explicit knowledge a survey could reach.

DISCUSSION

The body of work described in this paper explored barriers and opportunities for user experience research with children through experimenting with new and adapted tools and methods. It was found that Contextmapping with child participants can yield workable insights if proper adaptations are made to their needs and characteristics.

We explored such adaptations in a combination of classic qualitative research, research through design and what the author would call 'research through design education': generating insights through supervising a number of talented and task-devoted students. It is an uncertain endeavour: we had great insights from failures and promising projects which disappointed, as we were exploring within a new area. In that sense, the paper as a whole presents a case of the experimentations in design that are the core of the Nordes 2013 conference.

The research does not give the complete answer to the question how Contextmapping tools should be applied with children. We don't think there is such a definite answer, as the approach is open-ended and will always need adaptation towards the context of the specific research. Instead, the paper adresses a broad set of aspects to take into account when conducting

Contextmapping research with children. We have developed a more comprehensive picture on what is possible, what difficulties are met and how these can be overcome. New questions have also arisen from this work, giving directions to future research in adapting the tools to children. Three important themes have been summarised below.

ALTERNATIVES TO VERBALIZATION

As the research on abstract thinking levels indicated, outcomes of Contextmapping research are related to language skills of participants. For younger children, but also for those who are gifted in other areas than verbal communication, this is a disadvantage. Future research could study the use of aids and stimulants for verbal expression.

But apart from compensating for under-developed skills, the attention could also go to the talents and characteristics children naturally do have. Research could explore the feasibility of other ways of communication. How much of the drawings, role-playing or prototypes need to be explained through verbal language and what are the alternative channels of communication – between participant and researcher, and later between researcher and design team?

CLOSE CONNECTION TO THE SUBJECT

At the core of Contextmapping is to bring to the surface participants' memories and implicit or tacit knowledge on subjects regarding their daily life context. The sessions often occur in a creative workshop format, within a dedicated room. As the case with the cognitively challenged children demonstrated, there can be advantages in bringing participants closer to the actual context that they are to report about. In this respect, there lies an interesting possibility in involving children as co-researchers. They can perform research tasks within the natural context they share with their peers, as described by van Doorn et al. (2013).

It may also be worthwhile to research whether the model of uncovering tacit and latent knowledge holds true for children. Are their memories stored and retrieved in ways comparable to those of adults? This may not be the case, for instance when time durations and succession are an important part of the experiences a researcher wants to explore.

MOTIVATION

The motivation of adults to participate in Contextmapping research is often taken for granted; otherwise they would not have shown up. With children, this may need further attention. Children are often approached through schools and clubs and the decision to participate is made for them. The goals of the research and relevance of their contribution need to be clear to them to enhance their motivation. In the ice-breaker sessions described in this paper, children came to understand the manner of working through doing. Likewise, communicating the relevance of the research may benefit from an introductory activity rather than explanations – it remains to be explored, what kind of activity that could be.

CONCLUSION

From the series of researches and cases presented in the paper, insight is gained in the possibilities and restraints of performing Contextmapping research with children. It has become clear that Contextmapping with children can be fruitful, as long as the researcher takes good note of the skills of these children and the differences between them, and adapts the Contextmapping tools to these. Flexibility in session set-up and execution is even more important than with adults, to cope with wrongly estimated skills, interest and behaviours of children. Fostering the right motivation to participate needs more conscious effort than with adults.

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