Including shy children in Contextmapping research

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tutor: Mathieu Gielen
This report documents the research conducted by Kasia Tabeau and Anna Sosinowska for the course ‘research project’ within the Master education of the faculty of Industrial Design Engineering. It was conducted in two phases in 2010. Both phases were supervised by Mathieu Gielen.

**phase 1**
literature research, research set-up and pilot  

**phase 2**
research set-up adaptation, results and conclusions  

The inclusion of shy children in a contextmapping session

Kasia Tabeau  1260332
Ir. M A. Gielen
ID 5502 Research
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1. Introduction
Contextmappings is a method that is developed to map a user’s interaction with a product. This approach aims to inform and inspire design teams by gaining rich and meaningful information through interaction between users (Sleeswijk et al., 2005). This research focuses on contextmapping sessions with children. When contextmappings is done with children, a selection of participants takes place to ensure that rich and meaningful information is gained. This research explores the inclusion of different children in a contextmapping session and the methods that are available to facilitate their participation.

2. Problem definition
When you are using a contextmapping session to gain information for your research or design, the participants should give you a rich image of the subject in question. In contextmappings sessions with children, mostly children that interact easily, are talkative and not shy are because they are expected to cooperate well.
This research explores the possibilities of including shy children in contextmappings research. Also, we want to explore how including shy children in a contextmappings sessions will influence the information gained.

Also, we will explore what kinds of interviewing techniques are available to facilitate the participation of shy children in contextmappings sessions. Interviewing methods will be used because detailed, specific, rich and meaningful information can be gained from the children by the means talking. A previous research on contextmappings with children tells us that talking, especially simultaneously with doing (drawing, writing, etc.) is an important aspect of researching sensitive topics (Sosinowska et al., 2007).
By using interview methods from the field of psychology, enhanced with methods about conducting contextmappings sessions known from industrial design we aim to create a situation for the shy children in which they will be encouraged to interact and share their knowledge.

3. Theory
This chapter presents a literature overview on interview and contextmappings techniques. Literature was reviewed and experts were consulted from the field of psychology because in this research we focus on talking with children. We expect that the field of psychology already has developed different interviewing techniques for not talkative children or for hard to verbalize topics.
The field of industrial design is researched because this field forms the basis of our research: we want to explore the influence of shy children on the information gained from a contextmappings session. Also, we expect that the knowledge from the field of Industrial Design can provide us with useful information about combining talking with doing.
An overview of all these methods (and methods from the field of Industrial Design) is found in appendix 1.

3.1 Guidelines for a good interview from a psychology perspective
Multiple interview methods are found in the field of child psychology that focus on creating a situation in which a child feels free to talk, especially about sensitive topics. All these methods focus on a few aspects that should help to conduct an interview with a shy or traumatized child. In the following overview we will present the aspects that are important, after the overview every aspect will be explained and in section 3.2 some examples will be provide for these aspects.
<table>
<thead>
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<th>Aspect of the interview</th>
<th>How to?</th>
<th>Which source?</th>
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<tr>
<td></td>
<td></td>
<td>(In addition to the primary source: Greig et al. (2007), Freeman and Mathison (2008), Green and Hogan (2009))</td>
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<tr>
<td>Is able to answer children's questions</td>
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<td></td>
<td>Is able to draw correct conclusions</td>
<td>Gunter, M. (2007)</td>
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<td>Is able to react correctly on important information</td>
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<tr>
<td>Reduce the power of the interviewer</td>
<td>Adapt your language to children</td>
<td>Jager and Ryan (2007), Coad (2007)</td>
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<td></td>
<td>Emphasize voluntary participation</td>
<td>Horstman et al., (2008)</td>
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<td></td>
<td>Introduce yourself by name</td>
<td>Horstman et al., (2008)</td>
</tr>
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<td></td>
<td>Communicate clearly what the goal of the research is and how the session will continue</td>
<td>Jager and Ryan (2007), Horstman et al., (2008), Coad (2007)</td>
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<td></td>
<td>Give compensation for participation</td>
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<td>Guarantee that participation is anonymous</td>
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<td></td>
<td>Guarantee that personal boundaries will no be crossed</td>
<td>Horstman et al., (2008)</td>
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<tr>
<td></td>
<td>Let the group work out fights</td>
<td></td>
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<tr>
<td>Enhance the power of the child</td>
<td>Make the child ‘expert’ on the subject</td>
<td>Jager and Ryan (2007)</td>
</tr>
<tr>
<td>Activity</td>
<td>Description</td>
<td>Reference</td>
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<td>----------</td>
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<td>Interviewer asks open questions and gives opportunity to return to a question later</td>
<td></td>
<td>Gunter, M. (2007), Jager and Ryan (2007)</td>
</tr>
<tr>
<td>Use games</td>
<td>Create an inviting environment</td>
<td>Jager and Ryan (2007)</td>
</tr>
<tr>
<td>Create safe atmosphere</td>
<td>Position the recording devices before the arrival of the children</td>
<td></td>
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<tr>
<td>Call the children by name</td>
<td>Explain clearly what will happen during the session</td>
<td>Horstman et al., (2008), Jager and Ryan (2007), Coad (2007)</td>
</tr>
<tr>
<td>Adapt the exercises to the capabilities and knowledge of the children</td>
<td></td>
<td>Gunter, M. (2007), Horstman et al., (2008), Coad (2007)</td>
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<tr>
<td>Do not use a formal setting for the interview</td>
<td>Make sure the children can tap in to the information you need.</td>
<td>Use role-playing</td>
</tr>
<tr>
<td>Make sure the children can tap in to the information you need.</td>
<td>Use theater</td>
<td></td>
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<tr>
<td>Use story writing</td>
<td>Look at movie clips and watch reaction</td>
<td></td>
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<tr>
<td>Use photographs to elicit reaction</td>
<td>Give sentences to finish</td>
<td>Coad (2007)</td>
</tr>
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Table 1: Guidelines for a good interview from a psychology perspective

3.1.1 Explanation of the categories from table 1 ‘Guidelines for a good interview from a psychology perspective’

Interviewer’s capabilities. This aspect refers to the role the interviewer plays. The role of interviewer is difficult because on one hand she has to give control over the interview to the child while on the other hand keep the interview on track. Except these aspects, the interviewer has to be educated to understand the information provided to him by the children: he has to be able to make the right estimation about what is said, and jump in when necessary.

Reduce the power of the interviewer. It has been just said, that the interviewer must keep control over the interview. At the same time, the power of the interviewer has to be reduced. The child must trust the interviewer and consider him somebody who’s on his own level (not like a teacher or parent).
Enhance the power of the child. Giving the child power contributes to the child feeling safe. This empowers the child so it can talk more freely. It is the challenge to make a good balance between the power of the interviewer and the child.

Use an icebreaker. To start of an interview, an icebreaker is often used to make a good atmosphere for the rest of the interview. An icebreaker is a relaxing activity which introduces the subject indirectly.

Create a safe atmosphere. A safe atmosphere will also stimulate the child to talk. Several things can add up to make a safe atmosphere, not only the physical environment. Also the attitude of the researcher and different other measures that are taken to comfort the child play a role.

Make sure the children can tap into the information you need. Using the right materials, making right exercises and adapting the methods to the child are important. When doing this, the child can communicate on is own way.

3.2 Interviewing methods from psychology

Some methods from the field of psychology will be discussed to see how the guidelines mentioned in the previous section are executed in practice. After discussing every technique, the value of this technique for a contextmapping research with shy children will be discussed.

Winnicott’s squiggle game (Gunter, M., 2007)

Winnicott’s squiggle game is a method that uses drawing and conversation to address sensitive topics. The interviewer starts with introducing himself and how the interview will continue. After this he makes a squiggle on a piece of paper, and gives it to the child to finish. Hereafter, the child makes a squiggle and gives it to the interviewer to finish. The process of making squiggles continues through the whole interview. A conversation can be started about the drawings, but the drawing can also be used as something to do while talking.

It is very important that the interviewer first gets to know a child and is trusted by the child. Hereafter and when a drawing gives opportunity to talk about a sensitive topic, the interviewer can decide to do so. The interviewer has to be able to assess whether the child is ready to talk freely about its problems, and when it is time to do so.

This method is often used in the field of psychology to start off an interview or it is used as an icebreaker between interviewer and child. For example, Michael Gunter is a psychologist who used this technique to talk about sensitive topics or problems in the children’s lives. The squiggles reflect what the children are experiencing and their true feelings about the problems in their lives. Also, the squiggles were often used by Gunter as conversation starters.

The interviewer has to make the decision whether to talk about the sensitive topic or not. The interviewer has to have the right skills to make that estimation so he is presumed to be an educated and trained psychologist. In a contextmapping research we don’t want to talk about traumatic problems and bad experiences, but we do want to be able to address sensitive topics, like teasing and secrets. The facilitator of the sessions still has to have the right skills to estimate whether a sensitive topic can be addressed: the results of contextmapping research are not used for therapeutic goals but we have to understand the power of the information gained and respect the child’s boundaries.

Using drawing as a method to communicate with a child gives the child the opportunity to communicate on its own level.

Children’s Thematic Apperception Test (Encyclopedia of mental disorders, 2007)
The Thematic Apperception Test is a test that uses pictures and storytelling to elicit information from the child. The test uses 10 pictures of animal or human figures that are placed in everyday situations, like a situation in which a child is eating supper at a dinner table and a parent is standing behind it. The child has to make a story about the picture and after this the interviewer has to interpret the stories the child tells. This procedure is repeated for every picture. A child’s personality, traits and attitudes are researched by this method.

This method relies mostly on the interviewer’s interpretation, which gives him a lot of power. On the other hand, there is a lot of freedom for the child, because it can tell a story about anything he wants. The interviewing method is adapted to the child: by using pictures the child can tap in to its knowledge and communicate easier.

Draw a story test (Freeman and Mathison, 2008)
The draw a story test is similar to the CAT test, only the child can use two pictures to draw a story. A scale is developed for interpretation. This scale measures to what extent there are extremes in the child’s story. Such a scale is developed for every two pictures. This test is used to screen children for depression.

Contrary to the CAT test, there is less knowledge needed to interpret the data. This test is less interesting for our research, because we are not interested in measuring predetermined situations. We want the children to tell us as much as they want about a certain topic.

The blob tree is a tree with human figures that have different expressions or moods. This tree can be used to pose questions to a child: where are you in the tree, how do you feel at home, how it at school etc. The child then can point out a blob that reflects the answer of the situation. After this a conversation can be started: why does that blob fit into that certain situation? The blob tree can be used as a conversation starter for a longer interview with a child. Also, it can be used to make it easier for a child to answer a question.

This test is a nice conversation starter, but it mostly focuses on the emotional state of the child. It could be difficult to adapt the test to our research. Both the interviewer and the child have some power over the interview: the interviewer asks and decides the questions and the child chooses the blob.

The Expert Show (Jager and Ryan, 2007)
The expert show is an interviewing method that uses role-playing and theater to elicit information from children.
A child is invited to appear on a ‘television show’ as an expert. The child is or was treated by a psychologist and appears at the expert show to tell the viewers about his experiences. The physical setting is constructed to look like a television show set, this contributes to the child feeling like an expert. The interview consists of three parts: the opening, call-in part and the expert interview part.
In the opening the purpose of the interview is explained to the child so the child knows what will happen and feels safe about this. In the call-in part, callers can call in to the studio and ask the expert questions about the topic. The callers are other experienced facilitators of the expert show: they can decide which questions to ask at which moment. In this part, the child has some power over the interview: the child can reject a call, decide to call somebody back or answer the question. Finally, in
the last part, the child is interviewed by the host of the show, who is often the psychologist of the child. In that case, the host knows what questions he can ask, which subjects to talk about and how and when to react on answers.

This method is used in the field of psychology to explore how the child feels about its treatment and to find out what the good and bad sides of the treatment are. For example, a 9 year old girl is interviewed in the expert show about her therapy that followed after her parents divorce.

This method is interesting to us, because multiple measures are taken to make the child feel at ease, in control and talkative. It is clear that the role of the interviewer has two sides: he leaves some of the power to the child when it has to answer the callers’ questions, but in the opening and the expert interview the interviewer clearly has more power. The power of the child is also enhances by the clear structure: the opening gives the child clarity about the procedure, the call-in phase gives most of the power to the child and in the expert interview the child feels valued by his expert status. A safe atmosphere is created by changing the environment to an actual television show set so the child can step out of normal life.

The draw and write technique (Horstman et al. 2008; Coad, 2007)
This technique is quite simple. Children are encouraged to talk about their experiences by making drawings, posters and collages and explaining them to the interviewer. In psychology this method is used as an icebreaker or as a part of the interview. In the latter case, the child uses drawing to explain what it means.
A negative aspect mentioned is that the child doesn't want to participate because ‘it can't draw’. In that case the researcher can stress that it is not important how beautiful the result is but that it’s the meaning of the drawing what counts. Extra time can be spent to talk about the final drawing (or poster, collage) to make sure that what the child wanted to tell is clear and to add extra text or labels to the drawing.

This technique was used by Horstman et al. to evaluate the care children had when staying at an oncology department in a hospital. This technique proved to be very useful because the children found it easier to first draw something, and then tell about the drawing or ad some text. The interviewers could also ask questions about the drawing and ask the child to draw something to elicit more information.

The interviewer can have a leading role by asking children to draw certain things. Also, it is possible to hand over the power to the child by only stating the subject of the interview and letting the child draw whatever it wants.
No clear means of reducing the power of the interviewer is taken. The child does have some power in deciding what to tell, and there is no force on joining the interview which is emphasized by the interviewer.
The benefit of this method is that the child is included in explaining what it has drawn, so the analysis of the drawings is partly done by the children. By doing the analysis the child partly has the power of the interview.

Photo interviews (Capello, 2005; Coad, 2007)
The photo interview uses photos to elicit information from children. Photos are used in psychology as stimulus material to talk about certain topics. These photos can be made by the interviewer, but is
also possible that the child brings his own photos. In the latter case, the children get an assignment to (make and) bring photos about a certain topic.

In the case described by Capello (2005), the interview is used in a classroom situation. In the first phase the interviewer gets to know the children by joining in lessons and he takes pictures of things important to them and lesson materials. In the second part the interviewer gives a camera to the children to make pictures about their writing assignments in class. In the last phase the actual interview takes place where the children can tell the interviewer what their pictures are about. The interviewer also uses his pictures to ask the children questions about certain topics.

Clearly it is important to get to know the children, looking at the first phase. The interviewer gets an idea of what is on the children’s minds in this way. The second phase gives the power to the children because they can decide what they want to make pictures of.

In a photo interview the power is divided between interviewer and child: both the interviewer and child can bring pictures to talk about. Using pictures in an interview makes it easier for a child to communicate because it has stimuli to talk about.

Looking at the case described by Capello (2005), it is also important to get to know the children: the interviewer gets an idea of what is on their mind in this way. In this case the environment of the interview is a classroom or school. The interviewer can come across as a teacher figure though in a classroom setting, so special attention has to be given to the role that he plays.

Mapping (Coad, 2007)

Two types of mapping can be considered: mapping of the environment and mapping by importance. Mapping of the environment can be done to get to know the physical places that the child knows and how important they are for him. Mapping of the environment can be done by drawing a map, pointing important places on a map or just by taking pictures of the environment and talking about them. Mapping of the environment is often done with young children to get to know their environment. For example, a research about “computers in my world” was carried out by Coad et al. The children mapped their school to reveal understanding about networked technologies on educational attainment.

Mapping by importance is done to map topics that concern the child; who the decision makers and important events in the child’s life are. This can be done by making a graph with two axes: the top axis says “what people” and the side axis says “what sort of decisions”. The children can fill in the graph for every decision. Also, a diamond pattern of cards can be made for (for example) the people in the child’s life. The child writes down important people in his live on cards, and after that they have to arrange the cards in a diamond shape. The top of the diamond represents people that are very important, the middle of the diamond represents people that have some influence on them and the bottom represents people that have no influence on the child’s life.

Mapping by importance is mostly done in psychology but can also be done in other situation. In psychology this method is used to get to know the child and its opinion about its relations.

The benefits of mapping are that this technique gives the children a question and they can solve in their own tempo and that the technique gives a lot of room for talking with the child about the map. The disadvantage of this technique is that the roles are divided in an old fashioned way: the interviewer asks the questions, has the power over the interview and is rather dominant while the child has to answer the questions and do the assignments that are given to him.
Puppets (Jager and Ryan, 2007)
Puppets can be used to evaluate the emotional state of children. There are two different ways of using puppets for interviews with children: the doll house and using puppets and large dolls. In the doll the child is asked to act out different situations in a miniature house. When using puppets or large dolls, the focus lies on the interaction between people.

Both these methods are used by Jager and Ryan (2007) to evaluate the psychological treatment of a child.
In this case, the doll house is equipped with the usual toys of a therapy play room. The evaluation starts with two open assignments the child has to act out: a regular session with the psychologist and the first time you visit the psychologist. A more structured approach is taken later in the session: the researcher begins a story that the child has to finish.
Puppets or large dolls are used for two scenarios. The child was invited to act out a therapy session. The child has total power over this session: it chooses the dolls, what to act out and if the therapist can also join in and play. In the second act the child is asked to act out what happens when somebody goes to a therapy sessions for the first time. In this case, other puppets can ask the child questions about the session and what will happen through a therapy session and even what happens when the child is in a later stage of the therapy.

Because the child is represented by its puppet, it’s not directly confronted with the topic or questions: this attributes to the child feeling safe. When the researcher plays with the child, he can ask the child questions by using different puppets. These puppets can represent friends, parents and other children going to therapy: this is also less confronting for the child and a different puppet can be used for a different question.
The topics that the child has to play out can be easily adapted for different situations. Different children can also play with the puppets so a group session is easily constructed with this method.
Playing with puppets does seem to be a method more suited for small children. Also, integrating this method with a contextmapping session may be a bit more difficult because not much room is left for creating things.

3.3 Guidelines for a good contextmapping session with children from an industrial design perspective
The aim of contextmapping is to map the context of people’s interaction with products. Designers and researchers use these techniques to gain deeper insight into the needs and dreams of prospective users of new products.

When conducting a contextmapping research, there are guidelines for conducting such a research. We present a table with a summary of the guidelines, which we will explain afterwards. Examples for the guidelines will be given in section 3.4.

<table>
<thead>
<tr>
<th>Aspect of the session</th>
<th>How to?</th>
<th>Which research?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Follow contextmapping procedure</td>
<td>Prepare, sensitize, do session, analyze, communicate</td>
<td>Sleeswijk et al. (2005)</td>
</tr>
<tr>
<td>Select suitin environment</td>
<td>Large enough for group</td>
<td>Knutzon et al. (2003)</td>
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<tr>
<td></td>
<td>Safe environment for the participants</td>
<td>Gielen (2008), Knutzon et al. (2003)</td>
</tr>
<tr>
<td></td>
<td>Environment where role definition is not decided</td>
<td>Gielen (2008)</td>
</tr>
<tr>
<td>Guideline</td>
<td>Description</td>
<td>Reference</td>
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<td>-----------</td>
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<tr>
<td>Stimulating creativity</td>
<td>Stimulate creative thinking about the topic before session</td>
<td>Sleeswijk et al. (2005), Gielen (2008), Sosinowska et al. (2008)</td>
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<tr>
<td>Not distracting from session</td>
<td></td>
<td>Knutzon et al. (2003)</td>
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<tr>
<td>Eliminate power differentials</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Create safe environment</td>
<td>Knutzon et al. (2003), Gielen (2008)</td>
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<td></td>
<td>Select a team members with varying interests</td>
<td>Knutzon et al. (2003)</td>
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<td></td>
<td>Do teambuilding activities or introduction rounds</td>
<td>Knutzon et al. (2003)</td>
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<td></td>
<td>Make sure there is no competitive spirit</td>
<td>Gielen (2008)</td>
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<td></td>
<td>Position yourself at the level of the child</td>
<td>Knutzon et al. (2003), Sosinowska et al. (2008)</td>
</tr>
<tr>
<td>Get in touch with tacit and latent knowledge</td>
<td>Prepare yourself as facilitator</td>
<td>Sleeswijk et al. (2005)</td>
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<td></td>
<td>Prepare materials</td>
<td>Sleeswijk et al. (2005)</td>
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<tr>
<td></td>
<td>Stimulate creative thinking about the topic before session</td>
<td>Sleeswijk et al. (2005), Gielen (2008), Sosinowska et al. (2008)</td>
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<td></td>
<td>Creative exercises</td>
<td>Sleeswijk et al. (2005), Gielen (2008)</td>
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<td></td>
<td>Use multiple exercises with differ in method (drawing, storytelling, acting, etc.)</td>
<td>Gielen (2008), Sosinowska et al. (2008)</td>
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<td></td>
<td>Quick and multiple exercises</td>
<td>Gielen (2008)</td>
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<tr>
<td></td>
<td>Use stimuli</td>
<td>Sleeswijk et al. (2005), Gielen (2008)</td>
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<tr>
<td></td>
<td>Switch between talking, thinking and doing</td>
<td>Sleeswijk et al. (2005), Knutzon et al. (2003)</td>
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<td></td>
<td>Distract the child from the actual exercise</td>
<td>Sosinowska et al. (2008)</td>
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<td></td>
<td>Make sure the exercises get advanced during the session</td>
<td>Sosinowska et al. (2008)</td>
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<td></td>
<td>Make sure exercises give opportunities to be creative</td>
<td>Gielen (2007)</td>
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<td></td>
<td>Group session so everybody stimulates each other</td>
<td>Sleeswijk et al. (2005), Gielen (2008)</td>
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<td></td>
<td>Reward contributions, make sure contributions are noticed</td>
<td>Gielen (2008)</td>
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Table 2: Guidelines for a good contextmapping session with children from an industrial design perspective

3.3.1 **Explanation of the categories from Table 2 ‘Guidelines for a good contextmapping session with children from an industrial design perspective’**

**Contextmapping procedure.** The procedure of contextmapping enables the participants to get access to their tacit and latent knowledge. When using generative techniques to uncover that knowledge, rich and meaningful information comes about. Following the contextmapping procedure influences the results of a session in a positive way.
The preparation helps the researcher in making the actual research successful. In this phase you can prepare your materials, select your participants and prepare yourself for your role of facilitator. The sensitization phase prepares your participants for the session. In this phase they can get inspired and start thinking about the topic of the research. The actual session is used to generate the information that will be used by the designers as inspiration. The session is creative and generative, but there is also room for reflection, discussion and conversation. The contextmapping session is a group session because in this way the participants can stimulate each other to create and do the exercises. Analyzing the data is an important part of the contextmapping procedure. In this phase the information generated in the session is studied, the video from the session is watched and transcripts are made. Meaning is discovered in the materials and the information is grouped. Communication of the data means that the designers are briefed with the information from the contextmapping session. Often this does not happen in the shape of written reports, but in workshops, pictures, re-mapping and other creative techniques are used by the designers to get inspired by the materials.

Select suitig environment. Different aspects in selecting the environment for the session play a role. The environment should be suited for the kind of contextmapping session you want to hold: for a session about nature you would rather sit outside, but for a session about modern architecture you would choose museum or a building of that kind. It is important that the physical environment is inviting but you also want the atmosphere to be safe: these are aspects that are less easy to influence. When choosing a safe environment, you should make sure that in that environment the roles of the participants aren't already set: this would damage the creative atmosphere. The right combination of creative and safe aspects has to be chosen to make the environment suitig for the session.

Eliminate power differentials. Power differentials should be eliminated in order to reduce the power of the researcher and enhance the power of the child. Both aspects will contribute to the child feeling safe and empower it to share their knowledge.

Get in touch with tacit and latent knowledge. In a contextmapping session it is most important for the participants to get in touch with their tacit and latent knowledge. Only then the participants can shape their needs and dreams for a future product. Preparation is needed to make a session a success. Not only do you have to prepare yourself as a facilitator, but also the materials have to be well prepared. Though this preparation is needed, the facilitator should keep in mind that preparation should not result in lack of flexibility and a dominant position in the group. When the researcher is dominant there isn't much room for creative and generative exercises, the child might not feel safe and will probably not participate in the session. Another aspect that is important for the child to get in touch with the tacit and latent knowledge is the fact that the focus shouldn't lie too much on the exercises: in this case the children may focus too much on performing instead of participating in the session and sharing their needs and dreams. The session should be a mix between doing, talking and discussing.
3.4 Contextmapping sessions with children in Industrial Design

We are going to review some methods used in Industrial Design to conduct contextmapping sessions, especially with children, and provide examples of some research projects executed with these techniques. After describing the procedure we are going to describe how the guidelines mentioned in the previous section can be useful for our research.

Cultural probes (Gaver et al., 1999; Gaver et al., 2004; Wyeth and Diercke, 2006; Rijn, H., Van., and Stappers, P.J., 2007)

Cultural probes are meant to gain information of the target group by giving the target group inspiring assignments. The information that cultural probes contain can give designers insights about the product (or house, environment etc.) to be developed. Often a cultural probe is an artifact with an assignment attached to it: a diary that has to be filled in, a map on which different places have to be specified, a camera to make pictures with, a postcard that has to be sent back and there are many more options. Most of the time, there is no interaction between designer and participant: the assignment has to be fulfilled and the cultural probe is sent back. Cultural probes are already used in different fields, not only in industrial design, also in architecture and when researching children's interest within an educational context.

Cultural probes in industrial design are used by Van Rijn (Rijn, H., Van, and Stappers, P.J., 2007). In this research insights are gained from three parties, an autistic child, their parents and a pedagogue to develop a language learning toy for the child. In this research different techniques were used next to each other: observing, interviewing and contextmapping techniques. The observing techniques were used to learn about the autistic children and how they behave, and later in the process to evaluate the (mock-up/concept) product. The interviewing sessions were used to gain information from the parents about the children, their behavior and when evaluating the (mock up/concept) product. The contextmapping techniques were used to learn about the needs and dreams of the parents, pedagogues and indirectly the children for the future language learning toy.

A workbook was given to the parents to fill in individually (because of the lack of possibilities to join a group session) with text, pictures, and drawings and with other materials they felt like. The workbooks the parents made were very personal. When discussing the workbook, often very personal conversations emerged.

The pedagogues participated in a group session. The information from this session was more factual; the pedagogues found it difficult to show their feelings. Assignments regarding the development of the toy were solved by using knowledge about the language learning needs of an autistic child, and not their feelings about a certain child needs in a situation.

The different techniques that are used in this research stimulated all the participants to provide the researcher with information for the final design. In every situation a certain technique was appropriate, but the researcher stresses that the contextmapping techniques were very useful for her to gain insights for the final product.

In architecture, cultural probes were used when developing different sites for elderly people from three countries (Sweden, The Netherlands and Italy) (Gaver et al., 1999). To get inspired to develop the site and understand the particularities of these elderly people cultural probes were used. The cultural probe package consisted out of postcards, maps, a camera, a photo album and a media diary. The postcards had questions on the back that the elderly could answer. On the maps, important places had to be pointed out with stickers. The camera’s were provided to take a few pictures with assigned topics and the other pictures could be used to make pictures of whatever the
elderly wanted to show the researchers. The photo album was used to provide the researchers with pictures of things important to the elderly. Finally, the media diary was used to keep track of different media in the lives of the elderly: most of the elderly documented their TV usage and phone calls. The probes gave the architects much information about the different cultures and their particularities. The information provided was also very personal, and some elderly even kept in touch with the researchers when the project finished.

Cultural probes were also used in the context of children and educational software (Wyeth and Diercke, 2006). The children were given nine different assignments to finish individually. These assignments required drawing, writing, collage making, story telling exercises and other creative assignments. The results from these assignments were creative and inspiring for the designers. It became clear thought that it is difficult to regain all the probes that were spread: the children found it difficult to finish parts from the probes without support from others.

Cultural probes are interesting for our context mapping research because of the wide variety of assignments that stimulate creativity and give children opportunity to get access to information. Also, the information gained from cultural probes is often very rich and meaningful and can inspire the designer a lot. The children can decide themselves when they want to do the assignments: there is no pressure on finishing the assignments, participating in the research and there is no pressure in giving a right or wrong answer. A downside of the cultural probe is that the children work on their own: they do not stimulate and inspire each other in doing the assignments. Also, when there is totally no pressure on finishing and returning the probes there is a chance that very little probes are actually returned.

KidReporter (Bekker et al., 2003)
In the KidReporter technique, children are reporters and have to construct a newspaper. For this newspaper different materials have to be gathered, therefore, different activities have to be executed: taking pictures and providing them with text, interviewing, article writing and filling in a questionnaire. The participants are free to use the activity they like the most. The results that are gathered form a newspaper that provides the researchers with information and inspiration about one product.

This technique is used to acquire information about an interactive educational game for a zoo. Children were asked to choose a method and to execute an assignment in the zoo. At the end all children were asked to fill in a questionnaire. The information helped the designer determine requirements for the topics and animals that should be covered by the educational game, what kind of game would be appealing for boys and girls and ideas about how the educational part might be embedded. The success of the method also relied on all the extra manpower the researcher got to help her execute the research.

In this method there is less room for talking and a lot room for doing, which is not good for our research, which is especially set on talking. The children think they are making a newspaper in this research, which is an extra motivation for them to participate. What also is a big motivation is the fact that the children can choose the activity they do. This gives the children an important voice in the research. The fact that the results will be actually used is also important for them: they feel appreciated. This method takes a lot of time and
recourses: the researcher actually has to go to the location with the children and there have to be other volunteers to watch the children.

Playacting and focus troupes (Sate and Salvador, 1999)
This method is based on theater techniques. Different assignments are used to stimulate creativity: playing different roles, acting out scripts, changing the outcome of the play, making the participants act and debating and taking sides.
In the first three cases, the acting is done by others than the participants of the session. When different roles are acted out, the participants get inspired to look at a situation from different sides. When a script is acted out, the participants may quickly see what is wrong about a situation and what they would improve. When the play is ‘frozen’ and the outcome is changed, the participants can see what different scenarios are possible in a situation.
The participants can also be asked to act with the actors. In this case the participants are directly involved in the play and can incorporate personal experiences and emotions.
Debating and taking sides is used to view a situation from different sides.

This method is mostly used in marketing as a method to evaluated product usage, what is wrong about a product and what the perfect product would be.

In this method the focus lies on acting and doing. The acting by others provides direct stimulation, while in the case where the participants would be asked to also act, they may be to shy too actually do so. The method does offer a lot of room to act out different situations so this method can be adapted to our research and topic.

The ZOOM method (Sosinowska et al., 2007)
The ZOOM method is a contextmapping session that consists out of several short assignments. Short assignments are used to slowly introduce the topic of research throughout the session.
In the ZOOM method, the children have a sense of control. This happens by slowly introducing the topic which helps the children to activate knowledge. Also, the short assignments keep the children focused. Several techniques are used in the ZOOM method, like making a collage, drawing and writing. Different techniques are used to make sure the child can communicate in its own way.

The ZOOM method was used by TU Delft students to elicit information of children about fear. This research was done at primary school with groups of 9 children. In this particular research, two of the researchers also did the assignments together with the children (Sosinowska et al., 2007).
This research consisted out of a sensitizer, four assignments and a debriefing assignment. The sensitizer was used to make the children think about the subject of fear before the session. The assignments in the session all addressed fear and build on each other to activate as much knowledge as possible. The assignment made use of several techniques like drawing, making collages, mapping and writing. Finally, in the debriefing the children were asked how they felt about participating in the session by means of a diary.
The sensitizer was handed in by most of the children and gave diverse and interesting results. The researcher gave a reward for handing in the sensitizer. Most of the assignments in which the children could draw, collage and write comments were evaluated as successful: divers, rich, meaningful and even personal information was gathered about the topic of fear. An interesting aspect of this research was that talking simultaneously with doing was especially successful in gathering rich and meaningful information. The children didn’t want to draw or write down their fears, though they did
want to talk more seriously about them. In the case of the debriefing assignment, the diary, most children didn’t hand the booklet in, even with a reward in prospect.

In this research the focus did not lie on talking but the possibility for it added greatly to the rich and meaningful results that were gained. The researchers joined in the session itself, which created opportunity to talk with the children and at the same time it positioned them at the same level as the children: the children felt safe to talk to the researchers.

In this research we clearly see that there is a progress in the assignments given which slowly introduced the children with the subject and gave them time to access their knowledge.

Mixing Ideas (Guha et al., 2004)

This method takes contextmapping sessions a step further to a participatory design setting. Children can help in a co-design setting to develop a solution for a problem.

The children are set with a problem that fits their experience. To investigate that problem they first go and study peers in the situation that the problem occurs. They have to document ideas that they get and they are helped doing this by adults. After this each child must develop a solution for the problem individually. After this, groups are formed and the ideas of the group members have to be integrated to one idea. In this situation it is stressed that every idea is important for the integrated idea, and several ways are used to explain this. The step of integration can be repeated a few times, after which a couple of accumulated solutions remain. Then the children can explain how the solutions solve the problem.

For the actual integration of the idea different methods are used. In the first phases only drawing is used, but later physically integrating of ideas can be helpful.

This method was used with small kindergarten children to design an ideal playing corner or location. The children were accompanied by adults to help them during the process. What was going to happen and what the topic was, was first explained by the researcher to give the children clarity about the process.

When observing fears, the children were helped a lot by the adults: they made notations and tried to help the children to describe what they saw. The adults helped the children less when individually designing the play corner. The integrating of the ideas went well, though the children needed good explanation about why the ideas were integrated and how their individual idea contributed. When evaluating the process the children were happy with the results and said they liked the mixing ideas sessions.

Again, power issues are important. In this method, the child has less power to decide how the session will continue: the steps from identifying the problem to final solution are set. The child can contribute through its own idea and can make the decisions about which ideas and to what extent they are used in the ‘accumulated ideas’. The course of the project is well explained to the participants, and when decision moments occur extra explanation is given to elaborate on why certain ideas are chosen and others not.

The environment where the contextmapping session takes place is often a classroom, so this is safe for the children. The classroom environment can also be restraining for the children, because the role they have to play is set. The researcher and the other adults that are helping do not have to be at the same level as the children, but they have to be open and have an informal attitude to keep the atmosphere good.
3.5 Combining methods from psychology and industrial design
We used our insights derived from literature to describe the aspects that are important when combining the methods from psychology and industrial design to conduct a contextmapping session where shy children are encouraged to participate more. Looking at the two fields, different aspects have to be taken into account.

Doing vs. talking
Eliciting information from children is done by generative exercises in contextmapping, while psychology mostly focuses on talking. Dreams and needs can also be explained as potential future learning experiences (Sleeswijk et al., 2005). To elicit this kind of information it is necessary to get in touch with tacit and latent knowledge. Tacit knowledge is knowledge people can act upon, but cannot express in words. Latent knowledge is knowledge people aren't aware of they have. Generative techniques like making artifacts or drawing can give access to both these types of knowledge. Interviews can uncover explicit and observable knowledge about context and give us information about past memories and the present moment. Based on our previous literature research in the fields of psychology and industrial design we think that both aspects contribute to eliciting rich and meaningful information from children so a good balance has to be made between doing and talking. Generative techniques and interviews can complement each other in this way: the artifacts that children make with generative techniques often need some explanation (with the help of an interview) and doing a generative exercise can work distracting which diminishes the pressure of an interview.

Group vs. individual session
Contextmapping research focuses on group sessions to elicit information because this method relies on the stimulating effect the different group members have on each other: group assignments are needed to stimulate creativity and give the participants new ideas about the topics. Interviews in psychology are done individually because this contributes to the child feeling safe and therefore the child is willing to share more with the interviewer. What has to be taken into account is the dominance that can occur in a group. There also needs to be room for individual assignments to give everybody opportunity to express their individual thoughts.

Environmental issues
The environment has to be safe for the child to give it opportunity to express itself. On the other hand, choosing a safe environment also has downsides. A safe environment may have as effect that the roles of the participants are already defined (like in a classroom: teacher and student roles) which has a negative effect on creative spirit. In order to stimulate a creative spirit we want the environment to be surprising, inspiring and inviting to creativeness. Which environment is chosen is not only influenced by the research, but also by practical considerations like budget, available space, etc. The researcher has to make sure that the environment consists out of a right combination of safe, stimulating and practical factors.

Safety and power issues
An important aspect of the session is safety: the child has to feel safe in order to be free to share its thoughts. We already discussed that a safe feeling can be accomplished by making the environment safe. Another important aspect which can contribute to a safe feeling is the reducing of power differentials, which is an important aspect both in psychology and industrial design.
The power of the child can be enhanced by different means. First is important that the child participates in the research voluntarily. The child can be given the power to decide which topics are discussed and what is done during the session or interview. Finally, a part of the analyses can be done together with the child. The exercises should be adapted to the communication skills of the child so it can share its knowledge in its own way.

Additionally, the power of the interviewer can also be reduced. The interviewer needs to be clear about the procedure of the research and he needs to communicate this clearly to the child. Also, he has to adapt his language to the children and he has to position himself at the same level as the child. On the other hand, the researcher has to keep control over the session: the session has to be kept on track, time schedules have to be followed, exercises have to be done and certain topics have to be discussed. It becomes clear that the researcher has to have various skills to make sure the child feels safe as well as that the session continues as planned.

Effort of the researcher and the information gained
Like discussed before, the researcher is an important aspect in making the session a success. He has to have various capabilities to ensure the child feels safe to say says everything it wants to, that the information is interpreted correctly and the right means are used to elicit information.

An experienced researcher contributes to gaining rich and meaningful information. The researcher has to be selected and trained to conduct contextmapping sessions with shy children and to interpret the information gained. Multiple researchers can be engaged in the study to make sure that the session is conducted as well as possible and that the results are interpreted correctly.

Doing as a key to knowledge
Doing generative exercises can be a way to get in touch with tacit and latent knowledge, but not all generative techniques have this effect. The success of these techniques lies in the preparation of the session. The researcher himself has to be prepared: he has to be knowledgeable about the topic and the course of the session and the exercises and the materials have to be arranged. Finally, the design of the session is also important: it is wise to use a ‘funnel shape’ structure in your research. In this way you can work from general to specific knowledge.

Preparation is also important when conducting interviews. In this case the topics to address and the stimulus materials (dolls, etc.) are key.

3.6 Ethics
Different ethical aspects are important when doing research with children, especially when talking with children about sensitive topics.

When wanting to do research with children, except their own consent the consent of the parents is needed. When needing this, researchers must be able to clearly explain what the goal of their research is, what the procedure will be and what kind of information will be elicited from children.

Talking about sensitive topics brings extra challenges to the research. Questions arise what will be done with the sensitive information or when disturbing information is gathered who must be warned. When gathering sensitive information from the children, this information must be handled with care. In this type of research this information can be used as inspiration for designers and the information shouldn’t be used for other means. Researchers work with children on a base of trust: when the child tells the researcher something in trust he can’t tell this to others. A problem arises when the information given is disturbing.

Another aspect that must be taken into consideration is rewarding children for their participation: when and how is it appropriate to reward children for their participation? Joining a contextmapping
research is voluntary, but a reward often stimulates the child to participate. Rewards can also be given as a token of the researcher’s gratitude. The question is whether the caretakers are happy with rewards or when executing a research at another location (like a school or sports club), if rewards fit in the location’s policy. What kinds of rewards are appropriate is also interesting. It is not desirable that the children generate results that are needed for our research just to get the reward: the reward should give the child a sense of appreciation for it contribution.

4. Research

4.1 Research objective
With this research we want to explore the possibilities of including shy children in a contextmapping research. More specifically, we want to explore if they can open up to us about a sensitive topic, by means of talking. Finally, we will explore how including these children will influence the information about the topic.

We have two main activities in our research:
1. “Exploring with shy children the use of techniques directed at stimulating children to talk.”
2. “Exploring the influence of including shy children as participants in contextmapping research, where talking is the primary means of communication, on the outcomes of such research”

4.2 Method

4.2.1 Environment
The research is held in an after school care facility. We chose for a school environment because we can easily find child participants willing to take part in our research there. Also, both shy and not shy children can be found at schools: diversity in participants is important for this research. Finally, we especially chose for an after school care facility because there are fewer role patterns than during school hours present in this environment. This environment also has other advantages: the room is often equipped toys and it furnished and decorated to play and to be relaxed. Children will have positive presumptions about this room and will link it to playing and having fun.

4.2.2 Participants
In order to explore how shy children influence the information gained from a contextmapping session, we will have three groups:
- A group with only shy children.
- A group with only ‘open’ children.
- A ‘mixed’ group: shy and open children.
The groups will consist out of four people and the researcher. In this way there will be enough participants for a stimulating group session, the researcher will be able to oversee the group sessions and will be able to talk with all the participants.

Extra attention has to be given to how the participants are selected; the four steps of the selection process are described below. We are going to ask the teachers to select the children. We made a short ‘list of demands’ for both types of children (shy and not shy) with which the teachers will select the potential participants. In this way we can make sure that the same type of children are selected for as shy children and that also the same type of children are selected as not shy children.
After this we will schedule some time in which the researcher can talk with the potential participants. In this short talk, the researcher can get to know the children and they him. This first talk is also meant to start diffusing the power differentials: the researcher will have the possibility to position himself at the same level as the child. Hereafter the final participant group will be constructed by the researcher.

Selection process of the participants
1. Parents get a letter (appendix 2) to give consent for the child to join the research.
2. Participants are chosen by teachers to be shy or not shy (depending on the group) with help of the ‘list of demands’ (appendix 3).
3. The children meet the researcher and get acquainted.
4. The researcher asks if children want to join the research.
5. The final participant group is constructed.

4.2.3 Materials
Materials that will be used in the session are dolls and other figures, paper and pencils and a theater house.
The dolls and figures will be used for the group session: scenarios will be acted out by the whole group using the dolls and figures. The acting will also facilitate the talks in the whole group, between the children and between the children individually and the researcher. The paper and pencils will be used to draw the comics that result from the group discussions. Finally, a camera will be used to record the last assignment: the play that is made by and acted by the children. A second camera and a tape recorder will be used to record the whole session.

4.2.4 Topic
The topic that will be the subject of this session is manners. In this research, we define manners as following: the way that people interact with each other, or social behavior.
When choosing a subject we wanted this subject to be sensitive to talk about. Also, we wanted the subject to address the children’s shyness indirectly to ensure they wouldn’t entirely close down.
The subject of manners is a sensitive subject because this involves interacting with others which can emphasize your shy character. On the other hand, this subject isn’t as direct as teasing, which stresses this shyness.

4.2.5 Exercises
The research will consist out of a sensitizer, five exercises and one debriefing assignment (appendix 4). Through the whole process the researcher will try to be clear about the procedure and the exercises to follow, to adapt her language to that of the children and to position her at the level of the children. Positioning herself at the level of the children will happen by joining the session.
Means to enhance the power of the child will also be taken. Though which exercises will be done during the session is set, how the exercises can be filled in will be left to the children.

The basis of the exercises lies in role playing and theater. The children will be asked to act out several situations concerning the topic of manners. This method is suitable for this type of research because the children will not be directly confronted with the situations they will be acting out and the conversation that will be held. Hereby the method will contribute to the children feeling safe.
On the other hand, the contact with the other children will be direct and this can stimulate shyness. How the methods used influence the children in their behavior is what we want to research.
Sensitization
Ask children to bring a puppet from home that is just like he. As a help for this exercise the child will receive a worksheet on which it can draw their puppet and write in which aspect the puppet and itself are alike and different. This exercise will stimulate the children to think about whom they are and help them to describe this. Finally, to introduce the topic of manners, the child has to write a short story about how the puppet behaves when he has to introduce itself to others.

Introduction
First the researcher introduces herself: not only regular facts important for children are shared, but also trivial things like favorite color and singer. In this way the researcher tries to position herself as a normal member of the group, not as group leader. The introduction is followed by explaining what the role of the researcher in the session will be: the researcher will join the session. Also this contributes to positioning the researcher as a member of the group. After this the researcher clearly says what is going to happen in the session. It is explained that there is no wrong or right answer for the assignments, that it doesn't matter if you are not a good actor, writer or drawer and that participating in the session is what matters.
After this, she says that the children don't have to participate in the exercises if they don't want to: everything is voluntary.
A situation setting will be used to make the children feel like experts, which will contribute to the children feeling safe and help them to share their knowledge with the researcher.

Situation sketch
1. The designer wants to know how different children contribute to a creative session.
2. Do explore how different children contribute to a creative session the children will work together on making a play about manners.
3. Finally, the children will act the play out together.

Icebreaker
The icebreaker is used as an introduction and to relax everybody.
The children use their puppets to explain who they are and why the puppet fits them. The remaining puppets (provided by the researcher) must get a role too. After this, the researcher must also give a role for her puppet: she'll do this with the help of the children.

Exercise one: introducing the subject of manners
The assignment will be used to answer the following questions to introduce the subject:
1. What are manners?
2. Where and with whom do you use manners?

To answer the questions, the children will act out scenarios with their puppets.
First the researcher will ask the children to come up with a daily life scenario to act out. If the children can't think of a situation to act out, the research will help them by giving them an example (school, home, football club/korfball club).
After having acted out several scenarios, the research will discuss the questions set above with the children. She will ask the children to fill in a circle with the relations the children came up with in the scenario’s (teachers, parents, trainers, friends, dentist, etc.) and to place the relations on the circle close or far from them (depending on the relation). Hereafter, the children can think of more relations to finish the circle.
Finally, the researcher will discuss some relations on the circle with the children and how the children behave with the relations to introduce what manners are.

Exercise two: Assignment about ‘good manners’
In this assignment the following questions will be answered:
1. How do you behave with people you like or who stand close to you?
2. How do that people behave with you?
3. What is special in your behavior in those situations?

The researcher will use the relations that she drew with the children on the circle: in this assignment relations that stand close to the children will be used. The researcher will ask how the children behave with (for example) their parents or good friends, and if the children can act this out. Several of these scenarios will be acted out to get the feel of how you behave with people close to you. Hereafter the children will be asked to make one comic about a good manners situation. To do this, they can discuss the how comic should look, with whom they interact, where it happens, etc. Finally, the children will get some sentences to finish together which describe how they behave when they like somebody. An example of such a sentence is:
In a conversation with my parents ...
When my best friend asks me to play with him ...
I missed my grandmother, so ...

Exercise three: Assignment about ‘bad manners’
Questions to be answered in this assignment are:
1. How do you act with people that you don’t like or who aren’t close to you?
2. How do that people act with you?
3. What is special in these situations?
4. How can bad manners be improved?

The researcher will use the relations that she drew with the children on the circle: in this assignment relations that stand far away from the children will be used. The researcher will ask how the children behave with (for example) their sports trainer or neighbor, and if the children can act this out. Several of these scenarios will be acted out to get the feel of how you behave with people far away from you.

The researcher will ask the children to think of a way how they could change their behavior in these situations for the better. As a hint the researcher will say that the children can use their sentences and scenario’s of the close relations. After a group discussion, the researcher will ask the children to act out the ‘bad manners situation’ again, but with a ‘good manner situation’ ending. When having acted out these new and improved ‘bad manners situation’, the children can make one comic about it. Just like in the previous exercise the children should first discuss how the comic should look like. Finally, the children will finish sentences together which represent how you can change your behavior, for example:
When I’m angry, I can also ...
If I’m in a fight with my sibling, I should ...
I don’t want to go to sleep, but ...
Exercise four: making a play about how you can use your manners in a difficult situation.
This assignment will be used to make a play with the children about manners and to record in on tape.

The children will think of a person they really don’t like or who is very far away from them. Also, they will think of a very tricky situation, in which they would find in difficult to behave.
The children will make a big comic together. First they will start with making the difficult situations. Before finishing the comic with a good ending, they will discuss how that ending should look. The researcher will use the example of how you can use your manners with ‘close relations’ to help the children to make a good ending. When the children will agree on an ending, they can draw the ending of the comic.
The roles of the comic will be divided after this and the children will first make a try out of the play. After the try out, the play will be recorded in the theater house. When the play is recorded the researcher will watch the play with the children.

Debriefing
Finally it is important to evaluate the research. After the theater play, every participant will be interviewed as one of the actors of the play: this means the child will be put in an expert position in this way.
To break the ice, questions about the play will be asked: how does the child feel now it’s a famous actor, what type of movies they like, etc. The questions about the research will consider what the children thought of the exercises (the acting with the dolls, the finishing of the sentences, the scenario writing and the making and acting of the play). Also, we want to evaluate if the children thought if they contributed to the research, and if so, how.
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| 1. Sensitizer         | Child has to choose a puppet which is like him. Hereafter it should draw this puppet and describe in which thing they are alike. Finally, the child has to write a story about the puppet meeting a stranger. | - Drawing puppet  
- Writing to answer the questions and describing the story. | The child has to be triggered to think about the subject individually. In this way the child will have some power in the actual research, because it already activated its knowledge. Also, when using both drawing and writing techniques, these techniques can supplement each other. |
| 2. Introduction       | The researcher introduces herself and the research                           | - Conversation                                  | By introducing herself, the researcher diminishes the power issues. Also, clearly describing the research helps the child to gain some power.                                                                   |
| 3. Situation          | Description of the purpose of the research                                   | - Conversation                                  | This is an ethical question: the child has to know what the research is about to be able to say it wants to participate. Also this gives the child power.                                                      |
| 4. Icebreaker         | The child has to introduce its puppet and describe why he and its puppet are alike. | - Roleplaying  
- Conversation                                        | By combining doing (doing the sensitizer at home) and talking (explaining it to the group) will give rich results.                                                                                     |
| 5. Introduction of manners | Acting out of daily life situations. Hereafter a circle has to be filled in with relations: close relations are in the centre of the circle, far relations are at the side of the circle. | - Acting out the scenarios.  
- Discussing which relations are close and which far  
- Drawing/filling in the circle | There are four exercises about the topic of manners, the research is designed in ‘funnel shape’ which will give the child the possibility to activate knowledge. Using a puppet and acting in the research will create a distance between the child and the conversations, but it will encourage the child to participate in discussions. Using discussion, drawing and writing is a good combination because usage of these different techniques will |
| 6. Good sides of manners | Acting out scenarios for close relations and making a comic describing a typical close relation scenario. Finally, the children will finish a few sentences to describe behavior in a close relation. | - Acting out the scenarios  
- Discussing how the comic should look  
- Drawing the comic  
- Discussing the end of the sentences  
- Writing the end of the sentences |                                                                                                                                                                                                          |
<table>
<thead>
<tr>
<th>Exercise</th>
<th>Description</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Bad sides of manners</td>
<td>Acting our scenarios for far relations. Hereafter there will be a group discussing of how the ‘bad ending’ for the far away relations can be changed. New scenarios (with good) ending will be acted out and a comic will be made. Finally, the children will finish a few sentences to describe behavior in bad relations and how you can change it.</td>
<td>Supplement each other. These assignments are done in groups because we want the children to stimulate each other and explore the influence on the different children of such a group setting. The researcher will try to be lead by the children so the children will have the power in the course of the research: they will choose which relations are far and which close, discuss the comics to draw and how to finish the sentences. The researcher will only help in the assignments when the children will ask her to.</td>
</tr>
<tr>
<td>8. Making of the play</td>
<td>Making a play about how you can change ‘bad manners’. First the children will discuss which far away relation to use in the play. Hereafter they will make a comic describing the play together. Finally, the play will be acted out.</td>
<td>- Discussing which far away relation to use - Drawing the comic. - Acting out the play</td>
</tr>
<tr>
<td>9. Debriefing</td>
<td>‘Interviewing’ the children about the play and the research. The child will be interviewed in an expert setting: in a big chair with the camera pointed at it, with the interviewer by its side. Funny questions will be asked, but also serious questions to evaluate how the child felt in the research etc.</td>
<td>Conversation</td>
</tr>
</tbody>
</table>

Table 3: justification of the exercises
5. Appendix

5.1 Table with overview of methods from psychology and industrial design

<table>
<thead>
<tr>
<th>Area of expertise</th>
<th>Method</th>
<th>Description</th>
<th>Value for our type of research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychology</td>
<td>Winnicott’s squiggle game</td>
<td>An interviewing method in which drawing is used to talk with the child. The drawings are used to start a conversation, or just as a game. First the interviewer makes a squiggle, and hands it over to the child to finish. Hereafter the child makes a squiggle to finish by the researcher.</td>
<td>The drawing gives opportunity to the child to communicate on its own level. Also, they can act as distraction of the actual interview. The drawings have to be interpreted by the researcher, so he has to be a trained interviewer to be able to assess and explain the information gained.</td>
</tr>
<tr>
<td>Children’s Thematic Apperception Test</td>
<td>Thematic Apperception Test</td>
<td>A method which uses pictures of animal or human figures in daily life situations to assess a child’s personality, attitude and traits. The child has to make a story about a picture, and the researcher has to interpret it.</td>
<td>The researcher has a lot of power over the interview, because he interprets the information. The child also has some power, because it can talk about anything it wants. The pictures give the child opportunity to explain itself more easily.</td>
</tr>
<tr>
<td></td>
<td>Draw a story test</td>
<td>The child makes a story with the help of two pictures of animal or human figures in daily life situations. A scale is used to interpret the story made by the child.</td>
<td>Little knowledge needed to interpret information because this method uses a scale: the researcher has less power. This method is not that interesting for this research, because we don’t focus on measuring predetermined situations.</td>
</tr>
<tr>
<td></td>
<td>The blob tree</td>
<td>A tree with ‘blobs’ with different moods and expressions is used to interview a child. The child is asked a question like “where do you sit in the tree”, and it can point out a blob. Hereafter, a conversation is started about the blob with the child.</td>
<td>This method mostly focuses on the emotional state of the child, and is not easily adapted to our research. There is little room to integrated this method with a doing aspect. The power is equally divided between researcher and child because the interviewer asks the questions and the child point outs the blob. The child decides itself what it talks about.</td>
</tr>
<tr>
<td></td>
<td>The Expert Show</td>
<td>The expert show is an interviewing method that uses role-playing and theater to elicit information from children. The child is interviewed in a TV show setting about its experiences as an expert.</td>
<td>The child has power when answering questions and when telling about its own experiences: in this case the child feels like an expert. The researcher has power over the course of the interview.</td>
</tr>
<tr>
<td>Method</td>
<td>Description</td>
<td>Example</td>
<td></td>
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<tr>
<td>-------------------------------</td>
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<tr>
<td>The draw and write technique</td>
<td>In the draw and write technique, the child can use drawings in an interview to make clear what it means. The child can also add text to the drawings to make sure the meaning of the drawing is clear.</td>
<td>The child can use drawing to communicate: in this way it can communicate on its own level. Also, the child can decide on its own what to draw, and what is discussed in the interview. This method also makes sure that the child has a voice in explaining the drawings so they are not misinterpreted.</td>
<td></td>
</tr>
<tr>
<td>Photo interviews</td>
<td>There are several ways in which photo’s can be used in an interview: the child can bring its own photo’s to talk about, or the child can first get an assignment to make pictures about a certain topic, and then talks about it. The photos are used to lead the interview.</td>
<td>When photos are used, children can easier tell what they want to because the photo gives a starting point to a story. When they use their own pictures, this gives the child a lot of power. In the case that the researcher brings the pictures to talk about, he decides the course of the interview so he has more power.</td>
<td></td>
</tr>
<tr>
<td>Mapping</td>
<td>Mapping is used to map the child’s environment. This can be done by mapping the physical environment or by ‘mapping by importance’, which maps the decision makers in the child’s life.</td>
<td>When being interviewed with the help of this method, the child has the power in answering questions because it can do it on its own tempo an in its own way. The mapping technique isn’t easily adapted to our research because there is little room for creativity and actual ‘doing’.</td>
<td></td>
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<tr>
<td>Puppets</td>
<td>Puppets are used to get a clear image of the child’s interpersonal relations. Small puppets and a dollhouse can be used to act out daily life activities, big puppets can be used to act out the relation of the child with certain persons.</td>
<td>Using puppets in an interview helps the child to take distance from the questions. Also, by deciding how detailed the play is, the child has power over the interview. The researcher has power because he can ask to act out certain situations and in this way steer the interview. Integrating this method with contextmapping is difficult, because it does not leave much room for creating things.</td>
<td></td>
</tr>
<tr>
<td>Method</td>
<td>Description</td>
<td>Additional Information</td>
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<td>---------------------</td>
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<tr>
<td>Cultural probes</td>
<td>Cultural probes are packages with stimulus material, distributed to the target group of a to be developed product. These stimulus materials contain assignments, and after finishing the assignment the cultural probes have to be returned to the designers. The cultural probe gives the designers information and inspiration about the product to be developed.</td>
<td>The cultural probes are often interesting assignments which result in rich and meaningful information. In this method there is no contact with the target group though, which is less interesting for us. The members of the target group also don't have work in groups, so they don't stimulate and inspire each other.</td>
<td></td>
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<tr>
<td>KidReporter</td>
<td>KidReporter is a method to gather information from the target group, which uses several techniques like interviews, pictures, writing and inquiries. A group of children is asked to make a newspaper, this newspaper consists out of pictures, a story and interviews. Every child can pick a part to add to the newspaper.</td>
<td>The children can all choose a method that they like most to contribute to the newspaper: in this way they have the opportunity to communicate their thoughts in the best way they can. On the other hand, there is less room for talking in this method, which is the basis of our research. Though this method is very creative and inspiring, it needs a lot of recourses.</td>
<td></td>
</tr>
<tr>
<td>Playacting and focus troupes</td>
<td>Playacting and focus troupes used theater as basis to gather information from the target group. Theater is used is several ways, like letting the target group act out scenario’s, finish them or change their endings.</td>
<td>Theater gives direct stimulation to the target group which is good for our research but when acting has to be done by the participants themselves, they may actually be to shy to do so.</td>
<td></td>
</tr>
<tr>
<td>The ZOOM method</td>
<td>The ZOOM method is a contextmapping session which consists out of several short assignments. The topic of the session isn't presented directly, but becomes clear throughout the assignments. The short assignments keep the children focused and give them the opportunity to access as much knowledge as possible. To diminish the power differentials, the researchers work together with the children on the assignments</td>
<td>The ZOOM method gives the children a lot of opportunity to access their knowledge through the multiple short messages and by introducing the topic slowly. Because the researchers work together with the children, they can talk with them a lot and this is very interesting for our research. The ZOOM method also makes clear that by diminishing the power differentials by working together with the children establishes personal contact, which leads to personal conversations.</td>
<td></td>
</tr>
<tr>
<td>Mixing Ideas</td>
<td>Mixing ideas is a method in which children co-design with designers. This method has several stages. In the first stage the children gather information about a problem, in the second phase they form an solution for that problem, in the following phases the children’s ideas are used to make an accumulated solution, in the last phase the final solution is presented.</td>
<td>The children have a big voice in how the final idea will look like in this method. They start by contributing with their individual solution, and they move on by together making the accumulated solution. The researcher only guides the process, so he hasn’t got a lot of power.</td>
<td></td>
</tr>
</tbody>
</table>
5.2 Letter for the parents

Beste ouder/verzorger,


Het onderzoek gaat over hoe verschillende kinderen kunnen bijdragen aan een creatieve sessie. De creatieve sessie zal in dit geval het maken van een toneelstuk over omgangsvormen zijn. De kinderen zullen dan in een groepje van vier op de NSO één middag bezig zijn met het maken van dit toneelstuk. Het onderzoek zal plaatsvinden in de week van 22 t/m 26 juni. Voor het onderzoek is zij op zoek naar kinderen tussen de 8 en de 10 jaar.

De kinderen zullen de hele middag op video en tape worden opgenomen. Het toneelstuk zelf zal worden opgenomen en er is de mogelijkheid dat U na afloop van het onderzoek het toneelstuk op e-mail kan ontvangen.

De resultaten van het onderzoek zullen alleen worden gebruikt door deze studente voor onderzoek, en alleen voor onderwijs doeleinden.

Stemt U in met het deelnemen van Uw kind aan dit onderzoek, en is Uw kind tussen de 8 en de 10 jaar oud, wilt U dan het formulier hieronder invullen en de brief zo snel mogelijk aan Uw kind meegestuurd worden?

Voor nadere informatie kan op contact worden genomen met Kataryna Tabeau:

k.e.tabeau@student.tudelft.nl

NAME KIND

…………………………………...
…………………………………………

NAME OUDER/VERZORGER

…………………………………..
…………………………………………..

Als U na afloop van het onderzoek het toneelstuk op e-mail wilt ontvangen, dan kunt U hier Uw e-mail noteren:

……………………………………………………………………………………………………

NAME KIND

…………………………………
…………………………………………

NAME OUDER/VERZORGER

…………………………………..
…………………………………………..

HANDTEKENING OUDER/VERZORGER

…………………………………..
…………………………………………..

Als U na afloop van het onderzoek het toneelstuk op e-mail wilt ontvangen, dan kunt U hier Uw e-mail noteren:

……………………………………………………………………………………………………
5.3 List of demands for teachers (Xu and Farver, 2008, Younger et al., 2008)

Questions should be asked about the specific behavior of the child:
1. Does this child talk little?
2. Does this child stay on its own?
3. Does this child participate in games?
4. Does this child run away from others?
5. Does this child hide?
6. Does this child walk avoid eye contact?
7. Does this child show physical signs of anxiety?
8. Does this child stay close to familiar people?
9. Does this child stay close to familiar people?
10. Does this child cry easily?
11. Does this child stutter or does it get mixed up when talking?
12. Does this child blush or turn red easily?
13. Does the child talk to strangers easily?
14. Does the child play with unfamiliar children?
15. Is the child afraid to answer questions incorrectly?
16. Does the child take initiative in playing with others?

A shy child is characterized by most these behaviors. If there is any doubt, a conversation can be held with the teacher to estimate to what extent the child is shy.
5.4 Assignments

5.4.1 Sensitizer

5.4.2 Introduction of manners
Circle on which relations can be filled in
5.4.3 Good sides of manners

Comic

Scenarios to act out
Good manners
1. Playing outside with best friend.
2. Having dinner with the whole family, you’re having pasta (your favorite).
3. Your grandparents are visiting and have a present for you.
4. You are training with you whole … team.
5. Your class is going on a trip.
6. You’re in the swimming pool with your sibling.
7. You’re having your birthday party.
8. You’re mother just bought you a nice outfit.
9. You’re teacher made you ‘klassenhulp’ and you have to pick a buddy.
10. You have to take care of the class fish for a week.

Sentences to finish
1. I am in the supermarket with my mother and I want some candy, then I...
2. I am playing outside with my best friend; she/he wants to do something else so...
3. My grandmother brought me a present, so I...
4. My teacher gives me an assignment to do so...
5. When we’re having a nice dinner, I tell my mother...
6. When me and my dad go on a trip, I
7. When we’re having a picnic with the whole family I
8. My little brother/sister wants me to help him, so...
9. My grandfather drops something and I...
10. When I buy something, I
11. When somebody looks nice I say
12. If I am asked by my teacher to help cleaning I
13. When mother is reading a book, I
14. When my best friend and I watch a movie together, I
15. When my father wants to play soccer with me...
5.4.4 Bad sides of manners

Comic

Scenarios to act out
1. Having a fight with your parents/best friend/etc.
2. You don’t want to clean you’re room.
3. You don't get the present you want for you're birthday.
4. You’re mother tells you to quiet down.
5. You and your parents are in a hurry but you are slowing everybody down.
6. You have to go to the dentist to pull a tooth.
7. The teacher of the eight grade wants you to help her.
8. A woman you don't know asks you if you can help her with something.
9. You’re going on a visit and you have to wear a strange outfit.
10. The librarian asks you if you can loan these books because she thinks you’re too young.

Sentences to finish
1. My and my best friend are having a fight, ...
2. I'm agry at my mother so I
3. My father says I have to clean my room.
4. I don’t get what I want for my birthday ...
5. I don’t want to go to school...
6. My brother stole my toys.
7. We're having something for dinner I don’t like...
8. My neighbor says that we can’t play soccer in front of his window ...
9. I don’t want to go to sleep yet ...
10. If I wake up in the morning very early, first I go to...
11. When I have to brush my teeth I.
12. I've called somebody a bad name.
13. I feel sick but my mother says I still have to go to school...
14. I drew on the walls...
15. I lost my mothers ring ...
5.5 Pilot session
The pilot was held in an after school care facility of a primary school. The after school care facility is an environment with three rooms and a garden. This research was held in the playroom of the after school care facility because the room had both safe as stimulating factors to it: the children have to obey rules in the room, but they can play with the toys available and the room itself is very colorful. First, a letter (appendix 3) was sent to the parents to get approval for their children to join the research. Three children were able to join the session in the research period: two boys (Quimey, 8 years, Daniel, 10 years) and one girl (Susan, 8 years). The teacher was interviewed about the children, to determine their nature. For this goal, the ‘list of demands’ (appendix 3) was used. Quimey was shy, Susan was normal and Daniel was busy, according to the teacher. Hereafter, the researcher held a conversation with the children, if they wanted to join in the session: all children were excited to join.

In this section we will describe our findings for each of the assignments and we will discuss the recommendations for the final research.

5.5.1 Sensitizer
Two children handed in the sensitizer. They both made a drawing of a person-like figure: Susan made a drawing of a girl doll and Quimey made a drawing of a gnome. Overall, the children mentioned that they found the questions of the sensitizer hard to answer. They didn't elaborate much on the questions.

In the question-answer part, Quimey answered the following to the third question (‘When my doll meets somebody he doesn't know, this happens’): “He get’s very shy and hides behind my back”.

Picture 1: sensitizers of Susan and Quimey
5.5.2 Introduction and situation sketch
First the researcher introduced herself with her name, hobbies and favorite color. Hereafter, she explained what was going to happen and what the goal of the research was. Also, she said that participation was voluntary and that it’s no problem if the children don’t want to do something. All the children understood was going to happened and what the goal of the research was. The researcher asked several times if everything was clear and the children though everything was clear. The children didn’t ask any questions; at this point they all weren’t talkative.

5.5.3 Icebreaker
Quimey brought its own puppet (a gnome); the other two children chose a puppet that resembled them for the playroom. All the children and the researcher explained why the puppet fitted them, the two children without puppet continued explaining why their puppet at home resembled them and why they chose the puppet that they would use in the exercise. The children thought this was a funny exercise, they laughed a lot when they had to explain why their puppet fitted them. The choosing of the puppets and explaining why they fit them was found enjoyable by the children, already some conversations started about the puppets: which are bad/good, why are they bad/good, etc.

5.5.4 Introduction of manners
The children first hesitated when acting out daily life situation. After giving a few examples they started to act out their own scenario. Still, only a few scenarios were acted out, because the children found it difficult to come up with something to act out. Hereafter the circle with all the relations was filled in. The children found it easy to come up with relations that were close to them, but the farther away relations were more difficult to come up with. The children already sheared something with the researcher something about their environment: Quimey sheared that his father wasn’t close to him, because his parents were divorced and didn’t like each other, Daniel talked about a aunt that she didn’t know and that she should stand in a ‘far away’ circle, Susan put her favorite toy in the inner circle and their were many more comments made about far away and close relatives and friends. Some bad relations that Daniel came up were the police, president Obama and president Ahmedinedjad. The children commented often at each other stories with telling about resembling situations, for example: Susan briefly said that her parents were also divorced as a reaction on Quimey.
5.5.5 Good sides of manners
The children all acted out daily life situations. Daniel was the first to act out the daily life situations: he acted out how he and his brother had a fight that morning, but also made up. Susan and Quimey were less eager to act their scenarios out, so the researcher let them first write down what they wanted to act out, to organize their thoughts. Hereafter Susan acted out a story about a fight she had with her best friend and that they made up the same day. Quimey acted out a holiday on which he went skiing with a friend.
All these daily life situations were supposed to be incorporated in one big comic. The children had problems with making one big comic, so the researcher wanted to let them make their own comic. The children finally only wrote down the story they acted out.
Hereafter, the children had to finish the sentences that describe your behavior in daily life situations. They found this difficult and often finished the sentences in a very simple way. A few obvious sentences are:
If your grandpa drops something, you do this: I pick it up for him.
If you don’t get what you want from your parents for your birthday, they you do this: I’m still happy

But there were also more interesting sentences:
When your mother has made your favorite food, they do this: I eat it right away!
When your father tells you to clean your room, then you do this: I hide my stuff under my bed.
5.5.6 *Bad sides of manners*

When describing the bad sides of manners, the children also acted out a lot of scenarios. Only one ‘out of the box’ scenario was acted out, in which Daniel describe what happens during war. The other scenario’s still described daily life situations. Quimey made a comic about his parents splitting up and having a fight and Susan did the same, Daniel drew his scenario about war. At this point the children talked with each other a lot and made comments about each others stories, drawings and comics. The children had to make one big comic now. The researcher asked the children to incorporate all their drawings, and to make a ‘good’ ending. The children very quickly understood what the point of the exercise was, and made up a story in which all the children’s voices were heard. The comic told the story of two children teasing their classmates. The teasers first teased everybody in their class, but then the class took revenge and made fun of them. Hereafter the teasers fell in love and decided not to tease anymore. They apologized to the class and became friends with them. Finally, the children also finished the sentences about the bad manners, but again they had difficulties doing this.
Picture 4: Comics of the children
Picture 5: Incorporated comic

Picture 5: Finished sentences
5.5.7 Making the play
For this exercise, the children were supposed to make a new comic. Due the lack of time and the fact that the children were getting tired, the comic from the previous exercise was used. The children divided the roles and started making the play. All the children had several parts in the play. After having a ‘try-out’ for a couple of times, the play was finished and taped. While making the play, the children commented on each other when mistakes were made, this was not a problem, nobody got shy or angry. When somebody lost track of what had to be acted, the children helped each other. The atmosphere was very good during the making of the play: all the children seemed to enjoy making the play very much.

5.5.8 Debriefing
The children were asked to come in for an ‘expert interview’ one by one. The camera was established before the couch, where the researcher and the child sat. The researcher asked the children several questions about the research and if they felt they contributed throughout the exercises. All the children said they really like the research, especially the play. They all thought the finishing of the sentences was difficult. All the children said that they contributed, and that their opinion was incorporated in the play. The children all answered the questions very quick and short, they didn’t elaborate a lot. Also, they didn’t give many comments on what could be improved. All the children seemed a little bit nervous in this situation.

5.5.10 Discussion
Overall, the session went well: all the children felt that they contributed to the research, and even Quimey, the shy boy, sheared sensitive information with the researcher. The children interacted with each other by commenting on their stories and drawings. When having to finish and assignment together, the children worked as a team to do so. In the cases of the sentences that had to be finished, they consulted each other for the endings. When making the comic for the play, all children contributed to making the story, and then to putting it on paper.
Susan, Quimey and Daniel were very lively and talked about each others work a lot, this didn’t influence the course of the assignments. Only in one case a comment was a little bit mean, and this had effect on the group work: Susan commented Quimey’s drawing, and immediately he stopped.

There are also several comments that can be made to improve the research. It is important to plan the research in advance, to make sure that there are enough participants. This research was set up in two weeks, which influenced the participant group itself and how well they were prepared. Looking back, the shy participant was less shy then was meant in the research. Also, the participants did not all hand in their sensitizer, choose and bring a puppet to resemble them.
Further, the children themselves commented the sentences to finish: they thought they were difficult to finish. Looking back, the sentences have to be improved to be of better use to the whole research. The researcher also had to help the children several times to start an assignment by giving examples or joining into the research herself. Better aids and examples have to be developed for the researcher to give to the children (better good and bad scenarios and sentences to finish).
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Involving shy children in context mapping research

Continuation of research K.Tabeau 1260332 and Ir. M A. Gielen

TU DELFT FACULTY OF INDUSTRIAL DESIGN ENGINEERING

2010

Anna Sosinowska 1252550
This paper reports the continuation of the research proposition prepared by Kasia Tabeau and Mathieu Gielen and therefore needs to be viewed as a complete whole with the work of the above mentioned authors. The theory that has lead to the form of this research is therefore to be found in *The inclusion of shy children in a context mapping session.*
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Introduction

In recent years, the involvement of the user in the design process plays more and more important role. Despite of the fact that various methods and techniques have been already developed and used it is still relatively new field of research and most of the techniques are still in development especially as far as working with children is concerned. Adaptation of those techniques to children’s skills and abilities of understanding is required when applied. From our previous work in the field of context mapping with children we have observed that it is natural tendency of the researcher to be working more intensive with the children that are easy accessible that means that most of the times the shy children that take part of the generative session are getting less attention than their non-shy peers.
1 Problem definition

1.1 Research background

As already mentioned, context mapping is a young user research method and it has just recently been applied to children. The intention of this research is to have closer look at the involvement of shy children in the context mapping study. First we want to explore possibilities of involving shy children in a context mapping study by testing different generative techniques that are used in this kind of research and how those techniques influence the involvement of shy children. Secondly we want to try to answer the question what kind of influence of the involvement of shy children has on the outcomes of the context mapping study.

To be able to develop techniques that help shy children get involved in the session we have performed an extensive literature research \[12\]. We had a close look at the psychological literature describing shyness of children and interviewing techniques.

The interviewing techniques are chosen based on our previous study that has shown us that detailed, specific, rich and meaningful information can be elicit from children by means of talking especially when the talk is accompanied with doing (drawing, writing, etc.). \[10\]

1.2 Research questions

Our research consists of two main activities:

1. "Exploring with shy children the use of techniques directed at stimulating children to talk."
2. "Exploring the influence of including shy children as participants in context mapping research, where talking is the primary means of communication, on the outcomes of such research"

1.3 Theory about shyness

In order to be able to prepare research activities that will be used in the context mapping session we need to understand the nature of shyness/withdrawn. In this paragraph we will show some theory on shyness/withdraw.

Shyness/withdrawn can not be considered as unitary constructed behavior. We can distinguish two different kinds of shyness in children. There is so called fearful shyness and self-conscious shyness \[3\]. Those two are reflecting two different aspects, the first one reflects the fear of strangers and new situations, and whereas the second is related to self awareness and can occur as embarrassment and fear of being observed. The fearful shyness emerges early in childhood and usually fades with age. Self-conscious, however, emerges later on as the child becomes more aware of itself. Buss thinks that this kind of shyness can appear already as soon as at 4-5 year and increases with age. Other researches \[4\] claim that this kind of shyness appears later at 7 or 8, but agree that it increases with age. Research shows also that the younger children were associating shyness with fear for strangers and new situations and the older ones were in contradiction more often mentioning the self-conscious shyness.
It has been observed that the shy/withdrawn children interact less with their peers \cite{9} and can develop less appropriate social skills \cite{8}. It happens often that the shy/withdrawn children are excluded from the group already in the beginning of the elementary school \cite{5,6}. Being shy results in loneliness and poor self-esteem and can develop serious problems such as anxiety and/or depression \cite{2,5,7}. The awareness of children grows over the years of primary school and that this awareness results in the fact that the shy/withdrawn children are less liked by their peers \cite{1}. These studies show that children are aware of the withdrawn and that they also can tell who in the group is shy. However it is important to mention that these insights are being assessed with the scales developed by adults that may not be the best source of information on shyness in children, and that the observations of adults may not always identify shy/withdrawn children correctly \cite{11}. It is due to the fact that the children do behave different while in presence of adults and that is not always a derivative if shyness.

Another study has shown in detail how children can determine whether their peer is shy or not \cite{13}. The results could indeed be classified into two categories that can be described as fear for strangers and concerns over social evaluation. The children have indicated which symptoms tell them that another peer was shy. The results are to be seen in the table 3.

\begin{table}[h]
\centering
\begin{tabular}{|l|l|}
\hline
Symptom & Percentage  \\
\hline
Doesn’t talk/talks quietly & 83\%  \\
Stays by self & 50\%  \\
Doesn’t play/participate & 36\%  \\
Runs/walks away from others & 27\%  \\
Hides & 25\%  \\
Looks away/avoids eye contact & 21\%  \\
Shows physical signs of anxiety & 21\%  \\
Stays close to familiar people & 19\%  \\
Cries easily & 9\%  \\
Gets mixed up when talking/stutters & 8\%  \\
Blushes/turns red easily & 8\%  \\
\hline
\end{tabular}
\caption{Symptoms which children mentioned that tell them that the other peer is shy.}
\end{table}
2 Method

2.1 Environment

Originally the research was planned to take place in an after school care facility however due to the limited size of the group of children that attend this facility we were forced to place our research at primary school. This environment can contribute to a safe feeling of children as they know this environment very well. However it also implies the division of the roles and the fixed hierarchy. To limit the power distance we have chosen a class room that was not used during the normal lessons. The room where the research took place is also furnished with couch and contains toys and a puppet called Cö that is now and then allowed to go with the children’s families on holidays. We believe that this environment contributes to the comfort of the participants.

2.2 Participants

Due to the limited scope and time of this research we have trusted the selection of the participants to the teachers of the class. The teachers were given a list of the criteria that was based on the characteristics mentioned by children when referring to shy peers. [4] For the list of criteria see the Appendix A.

The research consisted of 3 groups:

- Non-shy children
- Shy children
- Mix group (2 shy and 2 non-shy children)

Each of the groups consisted of 4 children. To be able to observe two different kinds of shyness, the fearful shyness and the self-conscious shyness we have chosen for the participants that are 8 and are to have developed the self-conscious shyness. [1]

2.3 Materials

The materials we used are dolls, puppets, paper, pencils, markers and stickers. The dolls were used in the play role acting scenarios with the whole group. The drawing materials were used both individually and in group. During all the sessions video and audio recordings were made.
2.4 Topic

The topic that we have used for the sessions was the topic of manners. We defined the manners as *the way that people interact with each other, or social behavior*. This subject has been chosen as we believe that this is rather sensitive, furthermore it also addresses children’s shyness indirectly.

2.5 Exercises

In this section we will discuss all of the activities that our study consists off. The activities are described in detail in a table in the *Appendix G*. The table in the *Appendix G* shows the original planning of the session however in the actual sessions we have used a bit simplified version of exercises. This has been done after we have performed the pilot of the session and the literature research on shyness. The pilot of the session made it clear that the originally planned session was too intensive for children and that there were too many exercises. The theory of shyness did not influence the kind of the exercises used in the session but had an influence on how the sessions were analyzed.

The actual sessions consisted of nine main activities:

1. Sensitizer
2. Introduction
3. Icebreaker
4. Introduction of manners
5. Good manners
6. Bad manners
7. Bad situation solved by good manners
8. Debriefing – an expert interview

We will shortly explain each of the activities and our expectations of the shyness levels connected to each of the activity. All of the activities that involved manners had the same set up therefore in the *table 2* we discuss them only once.

<table>
<thead>
<tr>
<th>Exercise</th>
<th>Justification</th>
<th>Expected level of shyness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitizer</td>
<td>The child has to be triggered before the actual session in order to be able to talk about the subject at the session easier.</td>
<td>![Shyness Level Chart]</td>
</tr>
<tr>
<td>Introduction</td>
<td>By introducing herself, the researcher diminishes the power issues. Also, clearly describing the research helps the child to gain some power.</td>
<td>![Shyness Level Chart]</td>
</tr>
<tr>
<td>Icebreaker</td>
<td>Combinations of doing (doing the sensitizer at home) and talking (explaining it to the group) should give rich results. By using of a puppet child can take a distance</td>
<td>![Shyness Level Chart]</td>
</tr>
</tbody>
</table>
### Table 2 Exercises of the session

<table>
<thead>
<tr>
<th>From the subject.</th>
<th>There are several activities that consider the subject of manners. Children are asked to talk about the subject freely. They are to act out the situations that have been mentioned and then to draw a comic regarding the subject. There are both individual tasks as well as group ones.</th>
<th>The child is asked to tell about the session in an &quot;expert show&quot;.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roleplay via puppet</td>
<td>Manners</td>
<td>Debriefing &quot;The expert show&quot;</td>
</tr>
<tr>
<td>Acting</td>
<td>Write or draw</td>
<td>Conversation</td>
</tr>
<tr>
<td>Conversation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 2.5.1 Sensitizer

Children are asked to choose a puppet which is similar to them, then to draw the chosen puppet and describe in which ways they are alike. Finally, the child has to write a story about the puppet meeting a stranger.

We expect that this exercise is relatively neutral for both kinds of shyness. It is an individual activity so there is no confrontation with the group and there are also no strangers involved. The level of self-conscious shyness can be slightly higher as the children are asked to choose a puppet that represents them.

#### 2.5.2 Introduction

The researcher introduces herself and the research.

At this point of the session children are not asked to do anything, however the level of the fearful shyness can be pretty high as the children will meet the researcher who is a stranger for the first time. Self-conscious shyness level can get a bit higher as well as the child will be put in a group. This is however very difficult to observe.

The purpose of the research is being explained.

Children are not asked to do anything. Still the researcher is a stranger to children and the level of the fearful shyness can be high. The researcher has a big influence on how the children will feel. The level of self-conscious shyness is not high.

#### 2.5.3 Icebreaker

The children are asked to introduce their puppet and describe why they and their puppet are alike.

By this time of research we can expect that the fearful shyness is fading away. But on the other hand the self-conscious shyness can increase as children are asked to tell a story about themselves in front of a group. In order to limit the self-conscious shyness a puppet is used as a kind of filter to talk about personal topics.

#### 2.5.4 Introduction of manners

The subject of manners is introduced. Children are asked if they know what manners are and if they can give an example.

We can expect here that the less shy (both kinds) children will be more active. It is important to observe it precisely.

Next a relation circle has to be filled in: close relations are in the centre of the circle, far relations are at the side of
the circle.

2.5.5 **Good manners**

First children are asked to explain what good manners are. Than some daily situations are introduced and children are asked to tell how such situation would end if the involved people were to use good manners. Then some of the children are asked to act such scene with their puppets.

We expect that at this point of the session the fearful shyness will not play a significant role anymore. The self-conscious shyness can be still present as the children are asked to perform in front of a group however we expect the level of the self-conscious shyness to stay limited as the puppets are used to act the scenarios.

2.5.6 **Bad manners**

As in the previous exercise the children are asked to explain first what bad manners are. Then some daily situations are introduced and the children are asked to tell what would happen next if the bad manners were to be used in this situation. Next some of the children are asked to act via puppets the discussed situations.

The same as in the previous exercise we expect the fearful shyness to be very limited and the self-conscious one to play a little role.

2.5.7 **Bad situation solved with good manners**

Children are asked to come up with a bad situation that is to be solved with a use of good manners. Then they are asked to draw a big comic with the scenes of the play they are next to act. Children are asked to divide the roles themselves.

We expect that by this time the fearful shyness will not play a role. The self-conscious shyness level however is expected to rise as children are asked to interact in a group and to act without using the puppets.

2.5.8 **Debriefing – an expert interview**

Children are asked to join the researcher on the couch and to give an interview about the session. There are questions asked about the session and about how the child felt during the session. Next the researcher asks the child to give an advice to her for the next session.

The level of the self-conscious shyness is expected to rise again as the child in confronted with performing alone where all the attention is pointed at him/her.
3 Results

3.1 Analysis of the session data

The analysis involved looking at the video footages and listening to the audio material that has been collected during the sessions. The researcher tried to observe the differences in the behavior of children of the three different groups without judging it. This part of the analysis was meant to find the answers to the first research question: “Exploring with shy children the use of techniques directed at stimulating children to talk.”

The other part of the analysis was comparing the artifacts made by the children of the different groups during the sessions. This part of the analysis was meant to find the answers to the second research question: “Exploring the influence of including shy children as participants in contextmapping research, where talking is the primary means of communication, on the outcomes of such research”.

3.2 The comparison of the sessions

In order to be able to show the result of each session and each of the assignments that has been done a table has been created. Table 3 reports what has happened during each exercise of each session and provides an interpretation of what has been observed. Because during the actual session the Icebreaker and the talking about the Sensitizer naturally followed, we will discuss them in the table together.

Because this study is primarily meant to provide designers with a tool that allows them to be able to design better products for children we have included handy tips about the sessions in the table 3. Those tips are to be found in the last column of the table.
<table>
<thead>
<tr>
<th>Exercise</th>
<th>What has happened/Observation</th>
<th>Interpretation</th>
<th>Tips</th>
</tr>
</thead>
</table>
| **Icebreaker**        | All of the participating children come into the room where the research is held taking about what they expect to meet and ask a lot of questions about the research. They look directly at the researcher and ask her direct questions. Ones that have taken the sensitizer carry it open so everyone can see it. They also carry the puppet without any bag. Some of the children did not bring any puppet and also did not fill in the sensitizer and they are afraid it is a problem. When asked if there was someone that wants to tell something about the assignment one of boys says "maybe" and the conversation about the assignment starts. Children start to talk to each other about the puppets that they have brought. Two boys have a more vivid conversation about their puppets and why they think they are similar to them. They talk and laugh a lot but they | **Prediction** | **Same** | **Different** | • Due to the high levels of both kinds of shyness at this stage of the research use an activity not directly related to the research but one that shows children it is fun to participate and that all the answers are correct (it is helpful to show them by doing and not only explaining)  
• Do not force children to do something they do not want to, it will make them withdraw only more. Give them time they need to open up, be flexible  
• It seemed that the setting of the mixed group helped shy children to participate at the beginning with more ease |
| Mixed group           | Children are talking to each other when entering the room. When the researcher asks "who wants to tell something about the assignment that you have been asked to do at home?" one of the shy girls says that she wants to go first. Children listen to each other while they tell why they have chosen for a certain puppet. Two of the children did bring neither a puppet nor the assignment. Children are curious about what is going to happen next and ask questions. | Sensitizer at home  
Expected level of fearful shyness  
Talking about the sensitizer at the session  
Expected level of fearful shyness  
Expected level of self-conscious shyness | For all the groups the level of fearful shyness is relatively high at the very beginning of the session.  
**Note:** In the prediction we have thought that the level will be low as the children are asked to do the exercise at home however we have asked the children to share their assignment with the rest of the group and it resulted in higher level of shyness. We find it difficult to define which of the shyness kinds was dominant at this point as we see two possibilities:  
1. children have high level of the fearful shyness because it is the first thing they have to do in the research  
2. children have high level of the self-conscious shyness and that is why they do not want to share with the rest of the group (the shy group)  
The level of the fearful shyness is declining very quickly in the non-shy children group and it stays rather high in the shy children group. In the mixed group the shy children stay relatively longer on the higher level of the fearful shyness than their non-shy peers. However we have observed that the composition of the mixed group help shy children to limit the level of the fearful shyness.  
**Note:** all shy children did not want to show the sensitizer they have made at home. We suspect that it is related to the fact that they were working on their own and were afraid to show their work to the rest of the group. We did not experience this problem when the children were asked to draw in the research room and they could all see what they were working on. |  
| Shy children          | There are only three of four children present and one of the present children did not take sensitizer to the session. When the researcher asks if there was someone that wants to tell about the assignment all of the children shake their heads that they do not want to. When the researcher points one of the children she refuses to show the drawing. All of the sensitizer sheets are folded in a way that it is impossible for the rest of the group to see what is on them. The children are asked about the puppets and they are willing to show them. All of the brought the puppets in some kind of a bag or a box. One of the boys is telling about the penguin that he had chosen to take with him. Children are talking very soft and only answer when asked. The researchers try to ask several times if they could see and show the sensitizer but the |

**Involving shy children in context mapping research**

|          | 3/30/2010 |
**2. Introduction**

| Children listen to what is being said. They make jokes. They play with the puppets. They become pretty noisy at the end of the explanation. | Children are listening to what the researcher is telling about the session today. | All children listen to the researcher. They do not ask questions. They make eye contact with the researcher and react on what is being said by commenting. | Expected level of fearful shyness

It is still a new situation for children and they do not know what to expect.

Expected level of self-conscious shyness

Children are not asked to do anything except for listening. | Non-shy group is much noisier and reacts on what has been said verbally whereas the other two groups are quieter. Children listen and sometimes give a confirmation by nodding or shaking their heads. |

- Explain the goal of the session and tell a lot about yourself that makes the distance with children smaller.
- Make it explicit that during the session all that the children think matters and that there are no right or wrong answers. |
### Introduction of manners

Children talk a lot especially about the lack of manners they seem to be amused with the story. There is no problem with getting very detail story. There is what she has made. She tells a story about what she told about her to tell about what points the girl and asks to put their hands up this exercise? all children telling us about the planned. When asked about the assignment takes too much because the children to try to round up because the assignment takes too much time (more than planned). When asked "who wants to start with telling us about the exercise?" all children put their hands up this time. The researcher points the girl and asks her to tell about what she has made. She tells a very detail story. There is no problem with getting

### Mapping of the relations of the children

One of the boys is making jokes on what can be done with the paper "ohh, this is funny you use it is used to shoot... You can put your mother in the middle and shoot then" the other adds "it can be the teacher". The boys are getting noisy and do not pay that much attention to the facilitator. Children start to map their relations and two of the boys keep joking and making a lot of noise. They start to draw on each others pages. Children tell stories about people they map while completing the assignment. The researcher has to tell the children to try to round up because the assignment takes too much time (more than planned). When asked "who wants to start with telling us about the exercise?" all children put their hands up this time. The researcher points the girl and asks her to tell about what she has made. She tells a very detail story. There is no problem with getting

### Mapping of the relations of the children

Children pay attention to the explanation of the mapping exercise. When the children are asked "who wants to go first with telling about the mapping exercise?" the non-shy girl is eager to go first. The second to go is the non-shy boy. When the shy girls are asked to tell about what they have made one of them says "I want to have a go". The last girl to go does not hesitate to tell about her map. Non-shy children interrupt their shy peers when talking. They seem lack the patience to wait.

### Mapping of the relations of the children

It is very quiet. Children do not talk to each other and they use non verbal communication to let the researcher know that they have understood the assignment. Children answer only the questions that the researchers are asking. Children are very concentrated on their task. When asked "who wants to go first?" one of the boys puts his finger up and says he wants to tell about his relation circle. He tells about his family and friends. He mentions his cousin who is really shy and blushes easily. The next boy when asked if he wants to go next agrees without hesitation. The girl tells about her relation circle without hesitation when it is her turn. She tells a joke about how she called her neighbors when she was little.

### Conversation

Expected level of fearful shyness

Expected level of self-conscious shyness

### Write or draw

Expected level of self-conscious shyness

The expectations of the level of the self-conscious shyness were correct: higher when talking and lower when drawing. This was true for all 3 groups.

We have expected that the level of the fearful shyness would decline visibly at this point however it is only true for the non-shy children group.

It is difficult to keep non-shy children on the track of the session.

Shy children seem to put much more devotion to the drawing exercises than their non-shy peers. They draw with much more details.

Note: Shy children do not refuse to share the results of their work when they work together with others (as they did with their sensitizer drawing). We suspect that this is due to the fact that they were all working at the same assignment and that they could see what the others were doing.

- It is difficult to find a balance between “all is allowed” and keeping the research on the track without sounding like a teacher or parent. Make sure that you have enough space to set children a little away from each other to prevent them from writing on each other’s papers and talking too much. Maybe it is also a good idea to have little breaks between the activities when children could be active physically (especially important with non-shy active children)

- It is important to facilitate the session in the way that suits all the participants. Therefore it is also important to make sure that all of the children are allowed to tell their opinion not only the ones that talk much. It is possible to make an agreement with children that there is a fixed order of taking turns through out the whole session (especially important with mixed groups)

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Involving shy children in context mapping research

Next child to tell about his map. The rest is laughing a lot while the stories are told. Children get quieter when one of the researchers tells about what she has made. The two boys that were make the most noise struggle a bit more to tell their stories, but when asked they do not seem to have problem with that.

4. Good manners

Talking about good manners:

It is extremely loud in the room. Children are very busy and talk out loud and laugh a lot. It is difficult to get their attention on the activities. The boys are not staying on their places and say that ‘these are the bad manners’. It takes more then 2 minutes to get them a bit quiet. When asked to tell something about the good manners one of the boys says ‘good manners are bad’. One of the girls tells ‘It is about behaving proper for example that you do not eat with your hands’. The boys are making fun by telling about all bad behaviors. The situation in the room is very chaotic. Children talk all together it is extremely difficult to understand what they are saying. The researcher asks if the children can come up a situation when you really need to

Talking about good manners:

Children are eager to clean up when the researcher says that they will do another exercise. Children tent to talk directly to the researcher maintaining the eye contact only with the researcher while telling their story while other children play silent with their puppets. When the researcher asks a shy child to do something the child is more resistant than when a peer asks to interact.

Talking about good manners:

Children are very quiet. They do not talk to each other. They answer questions when asked but do not take the initiative to talk first if not asked. Children talk in very quiet voices.

Expected level of fearful shyness

Conversation

This part of the session looks different in all of the groups.

Non-shy children are very busy and noisy and they seem not to take the assignment seriously they are even teasing the researcher as they were checking where the boundary of their bad behavior lays.

Mixed group: children are very eager to talk about the subject and they seem to be very motivated to participate. They talk a lot but in a polite manner and about the subject.

Shy children are very quiet and only answer the questions that they are personally asked. They do not take the initiative to talk when not asked or to each other.

- Shy children seem to respond better to their own peers than to the researcher so it is a good idea to let them choose the next participant to speak when they finish their story.
- Shy children put a lot of attention to the drawing assignments give them enough time to finish. If you rush them to finish they can withdraw being concerned that their drawing is either unfinished or ugly.
behave proper. The answer they come up very quick is 'when you meet the Queen' and they all agree on that one. They explain that you need to bow. One of the boys shows how you need to do that. It leads to a situation when the other boys stand up and act up again. The researcher needs to calm them down again and order them to sit. Children come up with more and more examples but they do not treat the subject serious. 

Role play via puppets: The children are asked to do the role play with the puppets. The researcher is introducing a situation in the supermarket when a child wants some candies from their mother and asks children how they are going to ask for it. One of the boys says 'I am not going to do anything just gonna zuren'. The researchers need to point out the children that are to take part in this role play.

Comic: Children are busy as they were. The two busiest boys keep drawing on each other's papers and do not take the assignment serious. 

Role play via puppets: During the role play one of the non-shy girls is to act the mother in the store and she is mocking the behavior of parents. She uses phrases that adults do using very funny voice. When another situation is sketched involving adults the same girl wants to act it out and chooses to be the adult in this role play mocking the behavior once again. Children lose attention when one of their peers is telling something.

Comic: All children are getting interested in what the next assignment is going to be and pay attention again. Children start drawing and talk about the assignment except for one shy girl that stays quiet. There is a clear difference between the shy and not shy children: the shy ones are concentrating on drawing and stay quiet whereas the non-shy children are.

Role play via puppets: When asked 'who wants to act the given situation with the puppets?' the girls says she wants to and when asked 'who she wants to help her' she chooses one of the boys and he does not hesitate to help her.

Write or draw: Children talk to each other while drawing they become more active. The researcher does not have to point anyone to talk. One of the boys joins the session later and all the children explain him what has happened in the session before, it is clear difference in behavior of the children that participate already long and the boy that has.

Comic: All 3 groups enjoy this part of the session. In all 3 groups there is a volunteer that wants to start with the acting assignment.

Note: in the shy children group the girl says she wants to go first and she picks up a partner who does not hesitate to help her.

Role play via puppets: When asked 'who wants to act the given situation with the puppets?' the girls says she wants to and when asked 'who she wants to help her' she chooses one of the boys and he does not hesitate to help her.

Write or draw: Children talk to each other while drawing they become more active. The researcher does not have to point anyone to talk. One of the boys joins the session later and all the children explain him what has happened in the session before, it is clear difference in behavior of the children that participate already long and the boy that has.

Shy children work more concentrated on the assignment what results in more detailed drawings than the ones of their non-shy peers. They seem to put more attention to the quality of the drawings and ask the facilitator more time to finish them.
Involving shy children in context mapping research

Talking a lot and are starting with drawing later. When the children start to tell about their comics the shyest girl is not paying any attention to what has been said she continues drawing her own comic. During this activity on of the shy girls reminds that we are being filmed and makes a remark that she has totally forgot about it the non-shy girl walks to the camera and makes funny faces and so does the non-shy buy. The shy girls stay calmer and only wave to the camera.

<table>
<thead>
<tr>
<th>5. Bad manners</th>
<th>Talking about bad manners: The situation is getting worse when the subject of bad manners is introduced. Children find it really exiting to talk about bad manners and they talk a lot and make a lot of noise, they also use abusive language.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role play via puppets: All of the children want to act the bad scenarios out so the facilitator has to decide who is to be acting.</td>
<td>Role play via puppets: When children are asked to act out such a scenario all of them are very enthusiastic including the shy girls. The researcher decides that all children are allowed to do the role play and divides them into pairs (two shy girls together and non-shy children in the other pair). The shy girls start the role play very politely by saying “hi” to each other and directly saying</td>
</tr>
<tr>
<td></td>
<td>Talking about bad manners: The children are much more open and relaxed than at the beginning of the session. They talk a lot to each other but also to the researcher.</td>
</tr>
<tr>
<td></td>
<td>Role play via puppets: They are eager to act the scenarios. When asked ‘who wants to act this one out?’ they all replay ‘me, me, me’. They even get very noisy screaming and jumping on their chairs.</td>
</tr>
</tbody>
</table>

The biggest difference is to be seen with the shy group. Children are clearly more open at this point of the session and the input of them is much richer than the one of the other two groups.

Note: Due to the circumstances at the school where the research took place the shy group had an hour break before this exercises. This is the factor that could influence the fact that the children were giving more input since they have rested. However it is clear that the fearful shyness was overcome at this point of the session.

Expected level of fearful shyness

- As mentioned before it is a good idea to plan breaks in the session to let the children rest and to be active physically
- Such breaks can be used as well when the non-shy children are getting very annoying and when it is difficult to keep them on the track of the session

All of the children enjoy the subject of bad manners.

Conversation

- Expected level of fearful shyness
- Expected level of self-conscious shyness

- As mentioned before it is a good idea to plan breaks in the session to let the children rest and to be active physically
- Such breaks can be used as well when the non-shy children are getting very annoying and when it is difficult to keep them on the track of the session
“we have a quarrel don’t we” and start again. The non-shy children are using a lot of physical power against the puppets when acting out the quarrel. Children have clearly much more fun while talking about the bad manners they laugh a lot and are more willing to participate. The non-shy boy realizes that the class is going to play outside and loses his interest in the session (it was snowing this day and he hoped to play in the snow). When asked to help with the role play he says “I do not feel like doing it” but he does act anyways. It is also visible that the children find it more and more difficult to concentrate and stay sited.

<table>
<thead>
<tr>
<th>Comic</th>
<th>Expected level of fearful shyness</th>
<th>Expected level of self-conscious shyness</th>
</tr>
</thead>
<tbody>
<tr>
<td>This time drawing of the comic is more fun for the children as they enjoy the bad manners subject. They come up with a lot of stories.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>This time the comics are clearly less detailed children are tired and show less concentration.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children interact with each other extensively. They talk to each other and respond to each other’s stories. This is also to be seen in their comics that correspond with what has been said.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 6. Bad situation solved by good manners

**Comic (together)**
Children do not want to solve the problem in a good manner way they find it much more fun to talk about the bad manners. After some persuasion time of the researcher they decide to solve the situation with good manners.

**Acting the story from the comic**
At this point children use obsessive language and get rather aggressive hitting each other for real when acting out a quarrel. The researcher steps in to put this to end.

### Write or draw

**Expected level of fearful shyness**

**Expected level of self-conscious shyness**

We expect that the level of self-conscious shyness will rise at this point as this assignment is to be done in the group.

### Acting

**Expected level of fearful shyness**

**Expected level of self-conscious shyness**

Same goes for the acting with the whole group without using the puppets.

### Our expectations about the levels of shyness in this activity were only partially true. Children did not seem to be more shy when drawing the coming despite the fact that it was a group activity.

### However when acting without the use of puppet the expectations proved to be true. Children of all 3 groups were much more tense and uncomfortable when acting the situation described in the comic.

### Yet again it is clear that the break that the non-shy group had contributes to the good results of the session.
### Expected level of fearful shyness

<table>
<thead>
<tr>
<th>Conversation</th>
<th>Expected level of fearful shyness</th>
</tr>
</thead>
</table>
| **Boy 1 (who joined the session later):** drawing was the nicest it was funny. He is allowed to choose the next child that is to be interviewed he chooses the shyest girl who did not want to show the sensitizer and she refuses to be interviewed at this point of session. The researcher respects her decision and asks the boy to choose another child. **Boy 2:** the acting exercises were the nicest. The drawing of the comics was the least nice. **Boy 3:** drawing exercises were the nicest. He comes up with the idea that the puppets need to be interview as well and so the researcher asks the boys penguin what he found of the session. One of the boys asks when they will be able to see the sensitizer drawings. **Girl:** she decides to give the interview but as the last one. She says she liked drawing the most. She says that there is still some one to be interview and she brings her puppet she brought with her. At this point of the session all children join the researcher and the girl on the couch and all the puppets jump on the researcher’s head. One of the boys sits down on the researcher’s lap. The researcher asks the children again if they want to share their drawings they have made in the sensitizer. The boys are enthusiastic but the girl still says ‘no not mine’. The boys encourage her to let the children felt more uncomfortable when they were asked to sit on the coach with the researcher and tell a bit how they felt about the session. It was clear that they did not enjoy the position where everybody was watching them and listen to what they were saying. One of the shy boys came up with the idea that the puppets needed to be interview. The researcher added this part to the interview and asked all the puppets that took part in this session same questions that the children had been asked. Children were eager to answer the questions and seemed more relaxed.

### Children gain interest

Children gain interest again they seem to be energized by the set up change (as the activity moves from the table to the couch). The all pay attention again. First to go is the non-shy boy he tells what was not so nice about the session: he did not enjoy the drawing exercises especially the comics. He recalls that it was a bit boring and admits that he does not enjoy drawing that much. Role play with puppets he likes the most. Advise: does not know. He chooses the next child to go for the interview and it is the non-shy girl. She says she likes all about the session. Advise: use less sheets next time, less assignments. Next to go is the shy girl she liked the session but she recommends less activities and longer time to finish the drawings “than I can draw nicer”. She found role play with the puppets the most fun. Last to go is the shyest girl. She says that the session was very nice. She has found all the activities nice and fun “all was nice and I did not find anything bothering”. After the session the researcher is bringing children back to the class room. The non-shy girl is asking her questions about the research: “are you going to do this every week? How many times are you going to do this?”

### Children find it a bit

Children find it a bit confronting to sit on the couch and talk with the researcher. They settle down. **Boy 1:** says that he did like all the exercises and that he was not feeling shy to tell whatever he wanted. He also mentions that he was not shy to other children because he knew them all. He says it would be more exiting if he was in the session with children he did not know. **Boy 2:** finds the session fun. He like the acting of the last exercise the nicest. **Girl:** she finds comic drawing exercises very nice. The acting with the puppets she does not like that much. **Boy 3:** the nicest exercise of the session was to play with the puppets. Drawing was a bit less exiting according to the boy. He says that the other kids were ‘a bit too busy’. At some points he could not say much because they were so busy.
researcher see her drawing but she still refuses. The researcher says that only the drawings of the children that agree on that will be shown and they watch those drawings. After they watched the drawings of the boys the researcher asks the girl once more if they are allowed to see her drawing and this time she says ‘wait a moment I want to see it first myself’ she shows it for one second and hides it again. She says ‘I will read it for you’ and she reads what she has put in the sensitizer. Than she lets the boys seen the drawing.
4 Conclusion

The sessions have clearly show differences between the 3 groups of children. We have observed mainly the aspects of the influence of the different techniques on the behavior of different kind of children. The shy children enjoyed mostly the assignments that involved drawing and role-plays with the puppets, whereas the non-shy children preferred the role-plays to the drawing assignments. This is also to be seen in the results of the session (the artifacts children have made and the stories they have told during the role-plays). We have also observed that the shy children while working on their assignments where more concentrated on the assignment and did not talk too much whereas their non-shy peers were talking a lot while drawing and not always about the topic of their assignment. On the other hand the stories of the non-shy children told during the role-plays were longer since the children felt visibly more at ease during this kind of assignment than their shy peers. However, due to the fact that this was a very small scale study it is difficult to say if the results found are applicable to a larger scale.

Further, we would like to conclude that the influence of the researcher plays a major role in the session and the involvement of the shy children. The successful involvement of shy children depends significantly on the approach of the researcher/facilitator of the session and his/her skills. It is therefore desired that an experienced researcher conducts the session while working with shy children. If this is impossible then the person who conducts the session should take into consideration the tips we want to recall once more here:

- Do not force children to do something they do not want to, it will make them withdraw only more. Give them time they need to open up, be flexible.
- Due to the high levels of both kinds of shyness at the beginning of the session it is wise to use an activity that is not directly related to the research, but one that shows children it is fun to participate and that all the answers are correct (it is helpful to show them by doing and not only explaining).
- It seemed that the setting of the mixed group (shy and non-shy children) helps shy children to participate in the session, let the non-shy children talk first so that their shy peers can see it is fun.
- Explain the goal of the session and tell a lot about yourself in a funny way that makes the distance between children and you smaller.
- Make it explicit that during the session all that the children think matters and that there are no right or wrong answers.
- Show that you are really interested and act enthusiastic.
- It is important to facilitate the session in the way that suits all the participants. Therefore it is also important to make sure that all of the children are allowed to tell their opinion not only the ones that talk much. It is possible to make an agreement with children that there is a fixed order of taking turns throughout the whole session. This solution avoids the situation when the shy child is confronted to talk unexpectedly.
- Shy children seem to respond better to their own peers than to the researcher so it is a good idea to let children choose the next participant to speak when they finish their story.
- Shy children put a lot of attention to the drawing assignments give them enough time to finish. If you rush them to finish they can withdraw being concerned that their drawing is either unfinished or ugly.
- If you show examples do not make them too perfect, shy children can think they cannot draw nice enough and will withdraw.
5 Discussion and the limitations of the research

Firstly we would like to mention that the study that we have conducted was a little scale study and that the further research is recommended.

Due to the fact that we were not able to select the participants ourselves and that we had to relay on the choice of the teachers we observed that the selected shy children were mostly children that were fearful shy. We suspect that only one girl was also self-conscious shy. We can therefore conclude that the fearful shyness is relatively easy to overcome provided that the researcher is able to build up the trust of children. However we cannot make any conclusion about the self-conscious shyness and the techniques that could help involving of this kind of shy children in the context mapping session. We also suspect that this kind of shyness is more difficult to overcome and has more influence on the child either taking an active role in the session or not.

Another problem we have encountered due to the fact that the participants were chosen for us was the fact that the non-shy children were also fiscally very active children. Some boys had concentration problems and problems with sitting at the table for extensive period of time. This fact had a significant influence at the outcome of the session of non-shy children since the researcher had to put much of her effort to calm children down and therefore needed to take the position of the teacher/caretaker instead of “friend whom you can trust”.

Another important limitation that has to be named is that we were not able find the answers to the second research question. The only thing we have observed was that the shy children draw in much more detail and that they work with much more devotion and concentration and therefore the artifacts made by them are richer. It is however difficult to conclude that their input to the session is different. It is possible that the non-shy children tell a lot about the assignment while drawing and therefore either lack the time to put all the information on the paper or find it redundant to do so since they have already told it. We suspect that the difference in the input in the session is strongly dependant on the topic of the session. In the study we have tried to choose a topic that might have shown the difference between the shy and non-shy children that is the social behavior (the manners), however we did not see significant differences of the input. This could be different if the children were asked to help with designing a product that involves interaction with strangers. We believe that in this case the results of the session with different groups would be very different. It would be very interesting to investigate in the further research.

The analysis that has been conducted was a clear qualitative data analysis and was done by one researcher, no matter how the researcher tried to be objective in her observations there is a possibility that some of the observations and interpretations are subjective.
6 Recommendations for future research

As mentioned before this study has been a very limited one. We have conducted 3 sessions with 4 participants each. We have obtained interesting results which have to be verified in a broader research. The second research question was barely answered and therefore it is crucial that further study is conducted in order to answer it. A suggestion we want to make is a study that involves designing a product that involves a social interaction of children, such as for example a packaging of the sweets that allows the owner to share their sweets with other people. We believe that such a study could provide information on differences of the input of the shy and non-shy children to the context mapping session. We want to make a remark that we suspect that the differences in the input are strongly subject related.

In order to avoid the possibility of subjectivity we would like to recommend that the project team should consist of more than just one researcher. It is advisable that the person that conducted the session is not involved in the analysis stage of the research and that the analysis is conducted by more than just one person.
7 References


## Appendix

A. Table used for selection of participants

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doesn’t talk/talks quietly</td>
<td>83%</td>
</tr>
<tr>
<td>Stays by self</td>
<td>50%</td>
</tr>
<tr>
<td>Doesn’t play/participate</td>
<td>36%</td>
</tr>
<tr>
<td>Runs/walks away from others</td>
<td>27%</td>
</tr>
<tr>
<td>Hides</td>
<td>25%</td>
</tr>
<tr>
<td>Looks away/avoids eye contact</td>
<td>21%</td>
</tr>
<tr>
<td>Shows physical signs of anxiety</td>
<td>21%</td>
</tr>
<tr>
<td>Stays close to familiar people</td>
<td>19%</td>
</tr>
<tr>
<td>Cries easily</td>
<td>9%</td>
</tr>
<tr>
<td>Gets mixed up when talking/stutters</td>
<td>8%</td>
</tr>
<tr>
<td>Blushes/turns red easily</td>
<td>8%</td>
</tr>
</tbody>
</table>

*Table A*: Symptoms which children mentioned that tell them that the other peer is shy. [4]
B. Sensitizer

Naam: ___________________________ Leeftijd: ___________________________

OPDRACHT:

Maak hier een tekening van je gekozen pop:

We hebben drie vragen over jou en jouw pop. De vragen staan in het vak hieronder. Je kan jouw antwoorden daar opschrijven.

Mijn pop en ik zijn hetzelfde in de volgende dingen:

Mijn pop en ik zijn verschillend in de volgende dingen:

Als mijn pop iemand leert kennen die hij niet kent, dan gebeurt dit:
C. Situations for the good manners (exercise 6)
1. Ik ben met mijn moeder in de supermarkt en ik wil snoep, dan ….
2. Ik ben buiten aan het spelen met mijn beste vriendje/vriendinnetje; hij/zij wil iets anders spelen dus….
3. Mijn oma heeft een cadeau voor mij gebracht, dus …
4. Mijn leraar heeft mijn een opdracht gegeven, dus….
5. Als we een heel lekkere maaltijd krijgen dan zeg ik tegen mijn moeder….
6. Als ik met mijn vader op stap gaan, dan …
7. Als we met het hele gezin aan het picknicken zijn dan …
8. Mijn kleine broertje/zusje wil dat ik hem/haar help dus….
9. Mijn opa laat iets vallen dus …
10. Als ik iets koop dan…
11. Als iemand er mooi uitziet dan zeg ik …
12. Als mijn leraar me vraagt om te helpen met opruimen dan …
13. Als mijn moeder aan het lezen is, dan …
14. Als ik samen met mijn beste vriend(in) film aan het kijken ben, dan …
15. Als mijn vader met mij voetbal wil spelen dan…

D. Situations for the bad manners (exercise 7)
1. Als mijn beste vriend(in) en ik hebben ruzie, dan …
2. Ik ben boos met mijn moeder dus ik …
3. Als mijn vader zegt dat ik mijn kamer moet opruimen dan ….
4. Als ik voor mijn verjaardag niet het cadeau krijg dat ik wou hebben dan….
5. Ik wil niet naar school…
6. Mijn broeder/zus heeft mijn speelgoed gestolen…
7. Ik krijg s’ avonds iets te eten wat ik niet lust…
8. Mijn buurman zegt dat we geen voetbal voor zijn raam mogen spelen….
9. Ik wil nog niet slapen…
10. Als ik heel vroeg wakker ben dan ga ik eerst ….

11. Als ik mijn tanden moet poetsen...

12. Als ik iemand uitgescholden heb, dan....

13. Ik voel me ziek maar mijn moeder zeg nog steeds dat ik naar school moet...

14. Ik heb op de muren getekend...

15. Ik heb mijn moeders ring verloren....

E. Relations circle (exercise 5)
F. Comic drawing sheet (exercises 6 and 7)

<table>
<thead>
<tr>
<th>Striptekening nummer:</th>
<th>Onderwerp:</th>
<th>Naam:</th>
</tr>
</thead>
</table>

*Je kan hier opschrijven waar de strip over gaat.*

G. Table of all activities of the session
<table>
<thead>
<tr>
<th>Exercise</th>
<th>Description</th>
<th>Techniques</th>
<th>Justification</th>
<th>Shyness level</th>
</tr>
</thead>
</table>
| 1. Sensitizer | Write or draw  
Child has to choose a puppet which is like him. Hereafter it should draw this puppet and describe in which thing they are alike. Finally, the child has to write a story about the puppet meeting a stranger. | - Drawing puppet  
- Writing to answer the questions and describing the story. | Contextmapping  
The child has to be triggered to think about the subject individually.  
In this way the child will have some power in the actual research, because it already activated its knowledge.  
Also, when using both drawing and writing techniques, these | Fearful shyness  
LOW PROBABILITY HIGH  
Self-conscious shyness  
LOW PROBABILITY HIGH  
Relatively neutral for both kinds of shyness. Individual activity so there is no confrontation with the group and there are also no strangers involved. The level of self-conscious shyness can be slightly higher as the child is asked to choose a puppet that represents them. |

Involving shy children in context mapping research | 3/30/2010 |
2. Introduction

<table>
<thead>
<tr>
<th>Listen</th>
<th>Conversation</th>
<th>Contextmapping</th>
</tr>
</thead>
<tbody>
<tr>
<td>The researcher introduces herself and the research</td>
<td>By introducing herself, the researcher diminishes the power issues. Also, clearly describing the research helps the child to gain some power.</td>
<td>Children are not asked to do anything, however the level of the fearful shyness can be pretty high as the child will meet the researcher who is a stranger. Self-conscious shyness level can get a bit higher as well as the child will be put in a group of children.</td>
</tr>
</tbody>
</table>

3. Situation

<table>
<thead>
<tr>
<th>Listen</th>
<th>Conversation</th>
<th>Contextmapping</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of the purpose of the research</td>
<td>This is an ethical question: the child has to know what the research is about to be able to say it wants to participate. Also this gives the child power.</td>
<td>Children are not asked to do anything. Still the researcher is a stranger to children and the level of the fearful shyness can be high. The researcher has a big influence on how the children will feel. The level of self-conscious shyness is not high.</td>
</tr>
<tr>
<td>4. Icebreaker</td>
<td>Roleplay via puppet</td>
<td>- Roleplaying - Conversation</td>
</tr>
<tr>
<td>---------------</td>
<td>---------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td></td>
<td>The child has to introduce its puppet and describe why he and its puppet are alike.</td>
<td>By combining doing (doing the sensitizer at home) and talking (explaining it to the group) will give rich results.</td>
</tr>
</tbody>
</table>

While explaining what the purpose of the research and making it clear to the children that all the answers they come up with are correct the researcher will get closer with children and overcome a part of fearful shyness.
| 5. Introduction of manners | Conversation | - Discussing which relations are close and which far  
- Drawing/filling in the circle | Contextmapping | We can expect here that the less shy (both kinds) children will be more active. It is important to observe it precisely. |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Write or draw</td>
<td>Hereafter a circle has to be filled in with relations: close relations are in the centre of the circle, far relations are at the side of the circle.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 6. Good sides of manners | Acting       | - Acting out the scenarios  
- Discussing how the comic should look  
- Drawing the comic | Contextmapping | The acting activities are more difficult for children with self-conscious shyness (see previous row). It can be easier for them to express ideas in the writing exercise. |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Write or draw</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Involving shy children in context mapping research**

3/30/2010
Involving shy children in context mapping research

<table>
<thead>
<tr>
<th>Typical close relation scenario.</th>
<th>Discussing the end of the sentences</th>
<th>Write or draw</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children will draw a comic about good manners.</td>
<td>- Discussing the end of the sentences</td>
<td>- Writing the end of the sentences</td>
</tr>
<tr>
<td></td>
<td>Using discussion, drawing and writing is a good combination because usage of these different techniques will supplement each other.</td>
<td></td>
</tr>
</tbody>
</table>

**7. Bad sides of manners**

<table>
<thead>
<tr>
<th>Acting</th>
<th>Acting out scenarios</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Discussing how the ‘bad ending’ can be changed and how the comic should look</td>
</tr>
<tr>
<td></td>
<td>- Drawing the comic</td>
</tr>
<tr>
<td></td>
<td>- Writing the end of the sentences</td>
</tr>
<tr>
<td></td>
<td>Hereafter there will be a group discussing of how the ‘bad ending’ for the far away relations can be changed.</td>
</tr>
<tr>
<td></td>
<td>See previous.</td>
</tr>
</tbody>
</table>

The researcher will try to be lead by the children so the children will have the power in the course of the research: they will choose which relations are far and which close, discuss the comics to draw and how to finish the sentences. The
New scenarios (with good) ending will be acted out and a comic will be made.

- Write or draw

Finally, the children will finish a few sentences to describe behavior in bad relations and how you can change it.

- Write or draw

8. **Bad situation solved by good manners**

Making a play about how you can change ‘bad manners’. First the children will discuss which far away relation to use in the play.

- Conversation

Making a comic describing what is going to be in the play together.

- Write or draw

- Discussing which far away relation to use

- Drawing the comic.

- Acting out the play

researcher will only help in the assignments when the children will ask her to.

- Write or draw

- Conversation

- Write or draw
Finally, the play will be acted out.

<table>
<thead>
<tr>
<th>9. Debriefing</th>
<th>Conversation</th>
<th>Contextmapping</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘Interviewing’ the children about the play and the research. The child will be interviewed in an expert setting: in a big chair with the camera pointed at it, with the interviewer by its side. Funny questions will be asked, but also serious questions to evaluate how the child felt in the research etc.</td>
<td>- Conversation</td>
<td>The debriefing is used to get the individual opinion of the children: this is best done by conversation. The expert situation is used to contribute to the child feeling safe, just like discussing funny topics of the research. The level of the self-conscious shyness can increase at this point of the session as the children are asked to talk in front of the whole group. There is little change of not taking part in the activity as they are to take the central position of the interview. The level of fearful shyness is likely to increase as well, because children are become more aware of the fact that what they say will be analyzed by a stranger.</td>
</tr>
</tbody>
</table>
H. Sensitizers

**Naam:** Thomas Damen
**Leeftijd:** 8

**OPDRACHT:**

**Maak hier een tekening van je gekozen pop:**

We hebben drie vragen over jouw en jouw pop. De vragen staan in het vak hieronder. Je kan jouw antwoorden daar opschrijven.

**Mijn pop en ik zijn hetzelfde in de volgende dingen:** Voetballen,

**Mijn pop en ik zijn verschillend in de volgende dingen:** Hij is groot,

Als mijn pop iemand leert kennen die hij niet kent, dan gebeurt dit: Hij zegt: hullo

Non-shy (mixed group)
Naam: Chersenne Sassen
Leeftijd: 8

OPDRACHT:

Maak hier een tekening van je gekozen pop:

We hebben drie vragen over jou en jouw pop. De vragen staan in het vak hieronder. Je kan jouw antwoorden daar opschrijven.

Mijn pop en ik zijn hetzelfde in de volgende dingen:

Kleur van ogen, kleur van huid, modellen in pop, huidliefde, ogenliefde

Mijn pop en ik zijn verschillend in de volgende dingen:

Beding, oogcharad

Als mijn pop iemand leert kennen die hij niet kent, dan gebeurt dit:

Kantjegeven, noemen, zeggen, zegen, vloeken

Shy (mixed group)
Naam: Kasper  
Leeftijd: 8

OPDRACHT:  

Kasper wilde geen tekening maken. Er zijn ook geen poppen waar hij een band mee heeft.

Wel speelt hij met "Pet Shop", maar uit angst om deze kunst te raken, wil hij er geen meenemen. Zijn bereidheid om mee te doen in het onderzoek is niet zo groot. Wellicht kan nog een kind meedoen.

We hebben drie vragen over jou en jouw pop. De vragen staan in het vak hieronder. Je kan jouw antwoorden daar opschrijven.

Mijn pop en ik zijn hetzelfde in de volgende dingen:

Mijn pop en ik zijn verschillend in de volgende dingen:

Als mijn pop iemand leert kennen die hij niet kent, dan gebeurt dit:

Non-shy (non-shy group)
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Non-shy (non-shy group)

Vandaag heeft geen pop waar ze op lijkt, speelt
ook bijna vooral met poppen
met ongewoon gekleed.
Diane Hagen, woensd. 3 Vrijdag

Naam:  Vrijdag & Pigi
Leerjaar: 3

OPDRACHT:

Maak hier een tekening van je gekozen pop:

We hebben drie vragen over jou en jouw pop. De vragen staan in het vak hieronder. Je kan jouw antwoorden daar opschrijven.

Mijn pop en ik zijn hetzelfde in de volgende dingen:

Mijn pop en ik zijn verschillend in de volgende dingen:

Als mijn pop iemand leert kennen die hij niet kent, dan gebeurt dit:
Naam: Kelvin Ruigrok
Leeftijd: 8 jaar

OPDRACHT:

Maak hier een tekening van je gekozen pop:

We hebben drie vragen over jou en jouw pop. De vragen staan in het vak hieronder. Je kan jouw antwoorden daar opschrijven.

Mijn pop en ik zijn hetzelfde in de volgende dingen:

wij zijn allebei sterk

Mijn pop en ik zijn verschillend in de volgende dingen:

de gogo heeft maar één oog

Als mijn pop iemand leert kennen die hij niet kent, dan gebeurt dit:

? 

Non-shy (non-shy group)
Naam: Keesje momra2
Leeftijd: 9

OPDRACHT:

Maak hier een tekening van je gekozen pop:

We hebben drie vragen over jou en jouw pop. De vragen staan in het vak hieronder. Je kan jouw antwoorden daar opschrijven.

Mijn pop en ik zijn hetzelfde in de volgende dingen: 
- blonde ogen
- een beetje de zelfde neus

Mijn pop en ik zijn verschillend in de volgende dingen: 
- korter haar
- bijna honger

Als mijn pop iemand leert kennen die hij niet kent, dan gebeurt dit:
- geeft ze een handje, spoort soms en zegt niks

Shy (shy group)
Naam: Indi
Leeftijd: 8

OPDRACHT:

Maak hier een tekening van je gekozen pop:

We hebben drie vragen over jou en jouw pop. De vragen staan in het vak hieronder. Je kan jouw antwoorden daar opschrijven.

Mijn pop en ik zijn hetzelfde in de volgende dingen: 

Mijn pop en ik zijn verschillend in de volgende dingen: 

Als mijn pop iemand leert kennen die hij niet kent, dan gebeurt dit: 

Shy (shy group)
Naam: SEM
Leeftijd: 8

OPDRACHT:

Maak hier een tekening van je gekozen pop:

We hebben drie vragen over jou en jouw pop. De vragen staan in het vak hieronder. Je kan jouw antwoorden daar opschrijven.

Mijn pop en ik zijn hetzelfde in de volgende dingen: lang & oud

Mijn pop en ik zijn verschillend in de volgende dingen: harig

Als mijn pop iemand leert kennen die hij niet kent, dan gebeurt dit: ze gaan zeilen, niets doelen

Shy (shy group)
Naam: **Nander**  
Leeftijd: **30-12-01**

**OPDRACHT:**  

Maak hier een tekening van je gekozen pop:

![Tekening van een pop]

We hebben drie vragen over jou en jouw pop. De vragen staan in het vak hieronder. Je kan jouw antwoorden daar opschrijven.

Mijn pop en ik zijn netzelfde in de volgende dingen:
- **avontuurlijk**  
- **brugzichtig**

Mijn pop en ik zijn verschillend in de volgende dingen:
- **kunstenaar**

Als mijn pop iemand leert kennen die hij niet kent, dan gebeurt dit:
- **vijandig**

Shy (shy group)
I. Artifacts made by children during the session.

Non-shy (non-shy group)
Non-shy (non-shy group)
Involving shy children in context mapping research

Non-shy (non-shy group)
Involving shy children in context mapping research

Non-shy (non-shy group)
Involving shy children in context mapping research

Non-shy (non-shy group)
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Involving shy children in context mapping research

Non-shy (non-shy group)
Involving shy children in context mapping research | 3/30/2010
Involving shy children in context mapping research

Shy (shy group)
Involving shy children in context mapping research

Non-shy (non-shy group)
Involving shy children in context mapping research

Non-shy (non-shy group)
Je kan hier opschrijven waar de strip over gaat:

Wacht even: poes: ik hou je leuk: ik loop weg: nee
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Non-shy (non-shy group)
Involving shy children in context mapping research
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Naam:

Onderwerp:

Striptekening nummer:

Je kan hier opschriven waar de strip over gaat.
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Sly (shy group)
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Shy (shy group)
Involving shy children in context mapping research
Involving shy children in context mapping research

Unknown
Involving shy children in context mapping research

Shy (shy group)
Non-shy (non-shy group)
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Non-shy (non-shy group)
Non-shy (mixed group)
Involving shy children in context mapping research | 3/30/2010

Non-shy (mixed group)

Striptekening nummer: 100  Onderwerp: Goede manieren  Naam: Thomas

Je kan hier opschriven waar de strip over gaat:

Thomas
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Shy (mixed group)
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Non-shy (mixed group)

Je kan hier opschrijven waar de strip over gaat: bed fee bed

Angeliqe

Naam: Sophie

Ik snap het niet
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Shy (mixed group)
Involving shy children in context mapping research

Non-shy (mixed group)
Involving shy children in context mapping research

Non-shy (mixed group)
Involving shy children in context mapping research

Shy (mixed group)
Involving shy children in context mapping research

Shy (mixed group)
Non-shy (mixed group)
Involving shy children in context mapping research

Shy (mixed group)