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PERSONAS AND ROLE-PLAY HELP STUDENTS (AND DESIGNERS) EXPERIENCING REALITY

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ABSTRACT
Many experienced product designers will recognize this from their starting days in the design world: how to understand the people (e.g. users, customers), environment (e.g. professional, home, outdoors) and problems or needs one has to design for.
This paper explains how we teach design students the necessary awareness and skills to learn and experience reality on their own. The paper explains how we mimic the reality of product design and how qualitative research leads to output like personas and use scenarios. These tools exist for some time, but we made them more practical for both students and designers of products for caregivers in home situations. The paper also explains how a role-playing or experience tool, one of the results of the RAAK-MKB Ontwerpen voor Zorgverleners ("Design for caregivers") project, can be used by students to understand hands-on what it means to be a member of the target group. The tool can also be used by designers to explain to others in the product team the specifics of the target group.

Keywords: Experience, persona, qualitative research, use scenario, tool, role-play

1 INTRODUCTION

The public RAAK-MKB Ontwerpen voor Zorgverleners ("Design for Caregivers") project (further RAAK-OvZ) [1] was initiated by the Chair Industrial Design of the Research Centre Design and Technology of Saxion University of Applied Sciences [2]. Short for "Regional Attention and Action for Knowledge circulation", a RAAK project aims to improve knowledge exchange between small and medium regional enterprises and Universities of Applied sciences. Partners in the RAAK-OvZ project were University of Applied Sciences Utrecht, Panton (design studio medical innovations) [3], Industrial Design Centre (design network, region Twente) [4], Carinova (regional home care organization) [5] and U-design (design network, region Utrecht) [6].
The main research question of the project was: "how to design new products that are in line with the wishes and thoughts of home caregivers". The project explicitly did not focus on the care in hospitals or specialized institutions, but targeted two distinct groups in home care giving: the professional caregivers and the voluntary or informal caregivers. The latter is a group of caregivers that have a personal, non-professional relation with the person that receives care. The Dutch word for this group is "mantelzorgers".
The project ran from September 2011 up and till September 2013, and consisted of eighteen sub-projects. Some sub-projects were about identifying and describing the target groups. Other sub-projects where about designing new products or services: an electronic device to increase the level of safety for caregivers or a small footprint hoist or patient lifting system for transferring people in and out of bed.

2 TOOLS

This section describes the main research tools introduced to students in our program: qualitative research, personas use scenarios and the experience tool. Section 3 then explains how these tools are applied in our educational environment and in the RAAK OvZ project.

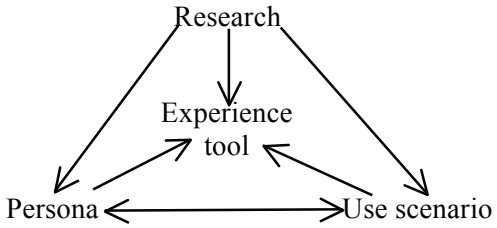

Figure 1. Relation between the design tools

2.1 Relation between tools

Before explaining each tool in detail, it should be clear that they are related as depicted in ***Figure 1***. The **research** tool is used to get to know the people, problems and domain. It's largely unstructured, and based upon observations and interviews. Part of the resulting research data is used to create **personas** that describe e.g. the whereabouts, demographics, problems, believes, etc. of the intended users. Other research data is used to create use cases or **scenarios**. These describe what the intended users want to achieve and how they get there. The **experience tool** then puts together research date, personas and scenarios and describes what happens between people or between a person and a product.

2.2 Qualitative Research

There are several qualitative research methods available: interview, observation, focus group, grounded theory, context mapping, cultural probes, to mention a few. The intention, however, is always the same: get in the head of actual people and find out why they do the things they do, how they do it and what they want to achieve by doing it. The answers to these questions drive design solutions. The best way get to that information is by observing how things are done and asking open questions. The participants are considered the experts in their domain, and the role of the researcher is that of an apprentice learning a new trade. In a later phase, when a prototype is available, the research focuses on the assumptions the designers made while designing the solution (prototype) and to what extend it works in the real world. Because of the state of the prototype or because the participant is asked to think aloud, it rarely makes sense to measure something like task time or speed of learning during the session.

2.3 Personas

Already used by many designers, it is worth mentioning that persona originates from ancient Etruscan and Greek words meaning "theatrical mask". In recent times Alan Cooper introduced it in software design with his book "The inmates are running the asylum" [7]. Since than, personas also got used in other design disciplines and in marketing as a method to give face to user or customer.

Design personas are created mainly from qualitative research. It is possible to create purely text or graphic personas. However, others in the product team will try to fill in the missing parts, thus creating their own image of the persona. A persona in both text and pictures communicates a much clearer image, leaving much less to the imagination and thus creating a better common understanding as to who the target people are. The visual part of the persona can be a ketch on paper, a photograph of a real person or even a mannequin (Dutch: paspop) dressed up like the target group. Background information is than added is text. A target group seldom can be described by a single persona. During the RAAK OvZ project, for instance, we found that an informal caregivers can be the oldest daughter but also the spouse. Two very distinct personas! Alan Cooper [8] recommends creating between three and seven personas.

Over the years, we have determined three persona flavours: the general persona described in this section, the product persona and the market or buyer persona. The general persona describes the target user group in broad terms and with general activities. From that, the product personas are examples of people actually using a specific product. The market or buyer persona depict the people that buy products and are not necessarily the same as the product or general personas.

2.4 Use Scenarios

Use scenarios, usage scenarios or use cases are not new and are aimed at describing a specific user-product-interaction. As with personas, use scenarios are visualizations of user-product-interactions,

especially of common and critical ones, that need to be incorporated in the product (re)design. The main use scenarios are the answer to actual user needs or desires.
Our scenarios are graphic in essence complemented with explaining text, very much like a cartoon. With these cartoon like use scenarios all members in the product team get the same impression about the interaction. Instead of discussing different interpretations, the team can immediately focus on designing the right solutions.
The visualization of a scenario depends on the available time and resources: drawing them up on paper or e.g. Photoshop will be faster than making pictures or even a video. As a rule of thumb, personas and scenarios created very early in the project can be simpler and sketchier than the ones that are used to actually communicate with others outside the project team. Videos are sometimes used, but the results are not all satisfactory. Because of the sequential nature, it is more difficult for the viewer to get the full picture of the scenario in his head. A six to eight picture cartoon can be grasped in one view, regardless if it is a large foam board in the project room or on an A4-page in the milestone report.

2.5 Experience tool

Quite late in the RAAK-OvZ project the experience tool came to live in an attempt to communicate the research date, personas and scenarios. In essence it is a role-playing tool, where two (or more) people enact on the research data, the personas and the scenarios. The actors can be anyone in the project team and they have the opportunity to search for background information considering the characters. This includes facial expressions, body language and body postures.
During the closing conference event of the RAAK-OvZ project, two project members gave an example of this tool. One character was named Fatima, a female Muslim professional caregiver while the other person took the role of an informal caregiver. In the role-play both met to discuss several issues. Both players added "features" based on the role they played. Fatima e.g. didn't look the caregiver in the eyes and hesitated to accept the welcome hand of the caregiver.
We have only scratched the surface of possibilities, applicability and educational challenges of this tool. More research and experimentation is needed to find out what competences and talents need to be developed by the student-designer. Francis Stam, trainer of non-verbal communication and one of the designers of the tool, explains that especially the empathic abilities may need explicit development and training.

3 PROCESS AND EDUCATION

In an ideal world, all information and knowledge is available right at the start of a (design) project. In reality it is not, and experienced designers have learned by experience to deal with it. A design student, however, doesn’t have that experience and has to become somewhat competent in a short period of time. He has to learn about e.g. conducting research, creating personas and scenarios, and almost at the same time apply that in design assignments. Quite a task for both students and teachers and one of the better ways of doing it is learning by doing or trail and error. The first thing students do when asked to find out how people e.g. work with a product, is to put together a (long) list of closed questions, This list is then put into questionnaire tools like surveymonkey [9] or thesistool [10]. When the results come in, they discover that they learn a lot about how people work with the product, but not what that is. At that point they realize that a different approach is needed to answer that question. The best thing we learned from education and research and design projects is for designers and students to go out in the real world at the very start of a project or assignment. Start with getting a scent of the intended users, the problems and the environment and then start searching and reading. This is especially true when entering new and unknown (market) segments: talking with two or three will bring designers and students up to speed for any research and work that follows.

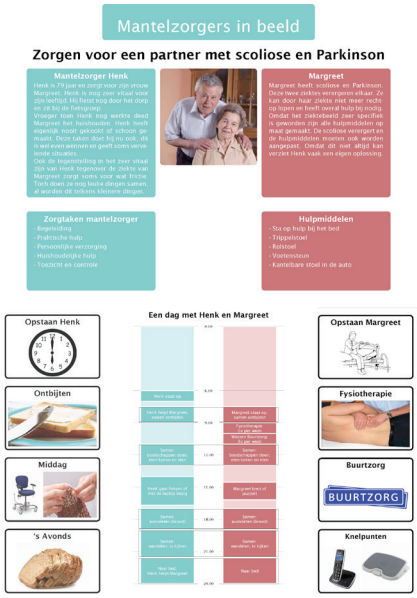

Figure 2. RAAK-OvZ informal care giver Henk and activities

As interview and observation are at the base of any qualitative research, students learn to become competent in setting up, conducting and analyzing observations and interviews. As a member of a larger research project, they can then learn to use additional like diaries, collages, grounded theory, etc.

During RAAK-OvZ, the student members of the team had the opportunity to go through the whole process from initial research to the newly end user products and the experience tool. The desk and field research led to personas and general use scenarios depicting the target group of professional and informal home caregivers (***Figure 2***). During the product design projects that followed, these personas and use scenarios were detailed to the product level.

The experience tool was actually triggered by another RAAK project: RAAK Vitale Ouderen project ("Vital Elderly") [11]. One of the deliverables of that project was an experience tool that enables designers to experience the consequences of having some form of physical restriction (handicap). The kit is build from material that can be bought at a local drug store or Do-It-Yourself market: security glasses for simulation visual problems, bandages for restriction of elbow and wrist movements, earplugs simulating hearing problems, latex gloves decreasing the sense of touch. The experience tool that emerged from RAAK OvZ enables designers and students to experience what it means do be a target user. Although only used once at the closing conference of the project, the first experience is that it adds to the understanding of the designers, students and other members of the team.

4 DISCUSSION AND CONCLUSION

To students, the methods discussed in this paper are not related to each other. They also have difficulties using the results for designing a solution. One reason could be that when they enrol, they think designing is about what they personally feel that is needed, very much like an artist. However, from the first class they take they are taught that design is about first getting a clear image about user and use. Only then they can start (re)designing a product solution. To do this, research is needed and personas and use scenarios have to be derived from that research. The experience tool than give the student first hand experience in what it takes to be a target user. All of these elements are preparations to actually design a user centred solution. To better prepare the student for what is to come, he should be informed differently prior to enrolling: This study it is not about creating products like an artist, but about user centred design that starts with gathering information from the field and using that in creating an optimal solution.

4.1 How we teach research

Teaching young people how to become a researcher is challenging both for the student and the teacher. The teacher cannot simply open his or her mind and let students copy anything that seems

useful for them. Knowledge transfer and gaining competence has to be dosed and practiced, starting with the basics and gradually increasing in complexity.
The way we try and teach research skills is to focus on the process much more than result. In other words: not the result of the research is important (and graded), but the process and arguments that led to that result. The student has to answer questions like why the specific research method chosen, what research question needs to be answered and why. During a research assignment the student is coached and taught what other methods could be used and why. It is because of the process perspective, that it is important that the student learns and shows improvement. When the student is able to incorporate acquired knowledge with little or no coaching, than he or she is on the path of becoming an excellent (junior) research designer.

4.2 How we teach creating and using personas and use scenarios

Although we used personas and use scenarios a number of years in research projects and curriculum, the results are not all satisfactory. Because we ask e.g. personas and scenarios in almost all design assignments, students do get a better image of who the product users are and what they want to achieve. The ultimate goal is that students create personas and scenarios on their own initiative because they know they actually need, and not because we (tutors) ask for them.
Having said that, our observation is that creating personas and scenarios doesn't automatically lead to creating good solutions. What seems missing is the ability to make a grounded translation of what was found during research into design solutions. At present, we are still working on this one. One assumption is, and this is food for further development in both the curriculum and at the Chair Industrial Design, that we ask the wrong questions. Clayton Christensen proposes in "Finding the right job for you product" [12] that we should find out what job the user needs to get done for which a particular product is hired. Although the article was written from a marketers perspective, the same question applies to user related research and design. The approach Christensen proposes uses qualitative research figuring out what users want to achieve and what they use now to achieve it. In future Chair research projects and Industrial Product Design classes we will be experimenting with this approach to 1) find out how and where this can be used, 2) how it influences the vividness an reality factor of personas and scenarios and 3) how it supports designing proper design solutions.

4.3 How we think teaching the use of the experience tool

The experience tool in this paper was never part of the curriculum. When we use it, it will be an experiment aimed at validating its added value. The experience tool possibly calls for the development of the empathic skills of students (and designers). For now, the best way we can think of is to simply do several role plays: learn by doing. The players have to find background information about the characters and use that in the specific situation that is to be played out. Positive feedback from tutor and fellow students will bring the student to the next level. It is crucial that students do several role-plays: only then can they apply new knowledge, show improvement and gain competence.
As the present experience tool is based on the home care environment, the description should be generalized. Another thing to find out is what is the right time and place to apply the tool: how much data should be available and how many personas and use scenarios should be visualized. Also: the present tool is about the interaction between people. Experimentation is needed to find out the extent to which it can also be used to experience the interaction between a human and a product.

4.4 Wrap-up

All of the above is a lot of work, so why not stop after creating personas and scenarios? The answer is actually quite simple. Only by actually applying the results of research, the personas and scenarios in actual role-play, a truly user centred and user-friendly solution can be designed. So: Yes, this is quite some work, but it leads to products that users want and like. The process leading to such a product will be smoother and shorter. Once results must be communicated to others in the project team or in the company, all of the above will help making a common and concise picture of who the target user is and what problems to solve. Personas, scenarios and role-plays are vivid and immediately recognizable, and complementing this with written product specifications saves a lot of discussion during product development.
In a way, the movie "Kitchen stories" [13] is a perfect example of how research results in role play. In the movie, researcher Folke Nilsson has to sit on an umpire's chair in a small kitchen to observe Isak

Bjørvik. When Isak dies, Folke seamlessly takes his place and acts like Isak to all of his friends and neighbours. The movie is mandatory for the students in our fourth year research class.

Figure 3. Kitchen Stories

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