



EXPLORING THE PERSONA MODEL AS A TOOL TO GENERATE USER INSIGHT THROUGH CO-CREATION WITH USERS IN THE EARLY PHASE OF A DESIGN PROJECT

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Abstract

The persona model is a widely know tool for synthesizing user research. A persona is a hypothetical archetype based on actual users, which is typically created to create a shared understanding of the user in the design team. Previous research has focused on the personal model as a consensus-making tool. However, in this paper the aim is to explore, whether the persona model can also be useful and valuable for collecting user insights. More specifically, the paper investigates the potentials and challenges of using the persona model as a generative tool to achieve user insight, when co-creating with the user in the early phase of a design project. A modified persona template with fixed parameters has been introduced to users in two co-creation workshops. The users were asked to fill in the persona template based on their own experiences. This study is a first endeavor into exploring the persona model as a generative tool and so far the empirical study includes only two co-creation-workshops, which is too few to make any solid conclusions. Still, the study indicates some interesting insights about the potentials and challenges the persona model has, when used as a generative tool.

Keywords: Participatory design, Early design phases, Research methodologies and methods, Persona, User insight

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1 INTRODUCTION

User research has developed over the last years (Sanders, 2006) and has become an established part of the development process in many design projects. User involvement is implemented to gain knowledge about the user's behaviours, needs and contexts in order to develop a product or service that will actually be used when fully designed and introduced to the market. User research can be collected in many different ways, and will almost always contribute with useful information.

User research focuses on understanding user behaviours, needs and motivations within a specific topic of a design project. The insight is needed to learn about user requirements and goals for a project, and leads to a deeper understanding of the user's needs before starting the development of the product. User research can be obtained through interviews and observations, but can also be gathered in cooperation with the user. Depending on the method used to obtain user insight, different levels of insight become available to the design team.

According to Sanders (2002) the type of user insight that can be obtained from user involvement depends on what the user is saying, doing or creating (see Figure 1).



Figure 1. User involvement and insights based on what the users say, do, and make.

Listening to what people *say* is dependent on what people can express in words and on what they *think*, which in turn is based on their *explicit* knowledge about acknowledged needs. Observing what people *do*, seeing what people *use* and how they *use* it, provides us with knowledge about *observable* needs. And most importantly, when people are *making stuff*, the designer gains insight into the users' *tacit* and *latent* knowledge including their feelings and dreams in respect to a given subject (Sanders, 2002).

This project focuses in particular on user research in the fuzzy front end of innovation. Here, it is important to gain knowledge about the user's tacit and latent needs as well as an understanding of the overall context of the project (Merit S., 2006). For this purpose co-creation can be useful, because this ensures that the user is active in making things and thereby helps the designer to gain a deeper and more varied knowledge about the user's recognised- and unrecognised needs (Lassen et al., 2010).

In order to facilitate the co-creation process, Sanders suggests the use of *generative tools*. As she explains it: *The generative tools approach is a way to fill the fuzzy front end with the ideas, dreams and insight of the people who are to be served through design.* (2006, p. 6)

This paper explores the *persona model* as a generative tool in two co-creation workshops. The personas become a generative tool as it contributes with insight about the users' needs and dreams, as well as function as a concrete communications tool between the designers and users.

1.1 Persona

The persona model was introduced in 1999 as hypothetical archetypes of actual users, and as a necessary foundation for good it-interaction design (Cooper, 1999). Cooper explained the need for personas as a method to create consensus within a development team during the design process, and as a way to produce a shared reference when ideas or concepts are evaluated.

Personas are created on the basis of the actual end-users and describe their goals, aptitudes, and interests (Nielsen, 2004). The persona is i.a. represented with name, age, and an associated illustration or picture that adds a face to the persona and helps bringing it to life, which makes it memorable for the developer (Nielsen, 2011).

The created persona is used to test and validate assumptions about the target audience. In order to target a representative group of end users more personas can be developed (Blomquist and Arvola, 2002).

Nielsen (2011) and Cooper et al. (2007) states that the maximum number of personas is 6 and 12 respectively. There are different opinions about, if a persona should be based solely on one person, or based on a group of people within the target audience (Chang et al., 2008; Hinton, 2007).

Personas are, by now, a well-known user-oriented design method used in many different contexts where a specific group of people is targeted. According to Pruitt and Adlin (2006), the use of personas also offers great benefits in product development teams and helps build products that real people will actual use.

Many studies have investigated how personas actually work in a design team. Some studies question whether the personas are in fact implemented in the design process or not, and others question if the personas are understood and used as a useful design method (Blomquist and Arvola, 2002; Matthews et al., 2012; Pruitt and Grundin, 2003). Other report about new efforts to make good use of the persona concept, and how to create them and make them more powerful (Hinton, 2007; Junior and Filgueiras, 2005).

1.2 This research project

Until now the persona model had only been explored as a tool for internally use in development teams, with the aim to create consensus and overview for the developers.

This paper, as the first, explores the persona model as a generative tool, which can be used to gain user insight by making the end user create the persona in a co-creation workshop facilitated by designers. The study thus explores new ways of including the end-user in co-creating activities in the fuzzy front end of innovation.

The creation of a persona typically includes the creation of a fictive person represented by a visual model including pictures, quotes, and text which quickly creates an overview of the respective target audience. In this project, the persona model is redesigned to fit the purpose of making the user complete the persona. To do this, a persona template with fixed parameters and information is created to guide the direction of the development, and more importantly to add constraints that clarifies the task and makes it tangible for the user. The user, the end user (who will gain value from the future product when it is fully design), and the person participating in the workshops are understood as the same person.

By using the persona templates as a generative tool in two co-creation workshops, this research takes a first step towards answering the research question:

What are the potentials and challenges of using the persona model as a tool to achieve user insight in co-creation workshop with the users in the early phase of a design process?

2 METHODOLOGY

In order to implement the persona method in the co-creation workshop and use it as a tool to generate user insight (instead of an internal design-tool creating consensus in a design team), the persona needed modification. A persona template was created and worked as a guideline for the user when completing the creation of the persona. The modified persona template and its purposes, the content of the two workshops, and the details of the data collection will be further addressed in the methodology section.

2.1 Persona template

As it was pre-supposed that none of the participants were familiar with the persona model, and in order to redesign the persona model to become an external generative tool, the persona templates were created based on a template by Keane et al. (2004) (see Figure 2). The persona templates gave a visual representation of the model with a minimum of text, clear headlines, and a maximum of empty space to fill in, which made the task straight forward when seeing only the persona template and receiving a short verbal introduction.


 <p>Name: Bongani Age: 23</p>	Who am I?	3 reasons for me to engage with Montebello design centre:	3 reasons for me not to engage with Montebello design centre:	
		1. 2. 3.	1. 2. 3.	
My interests:	My personality:	My skills:	My dreams:	My social environment:

Figure 2. Example of persona template

The persona template functioned as design constraint for the co-creation, by guiding the participants through which information was needed and where to fill it in. Constraints in design processes are assumed as a precondition for creativity, especially when the level of creativity for the participants are limited or unknown (Onarheim, 2012). Further constraints were added by writing name, age and a quote on each persona template before the workshop (the blue text on Figure 2). This was done to create a guiding silhouette of the persona's personality from where the participants could be inspired to complete the details and insights. The premade templates also ensured a wide range of personas representing a variety of users within the topic.

The template was handed out in A3 format, and the participants were asked to fill in the persona template on the behalf and perspectives of the fictive persona. There were no rules about how to fill in the template. The participants were, furthermore, provided with colored pencil, pens, and markers. It was clearly explained to the users that they were the experts within the field, and the only ones able to fill in the templates with the needed information. This was explained to create confidence in the participants, and to make them comfortable about adding their own experiences as valuable knowledge.

2.2 Data collection

Prior to the workshops, research about the two projects was conducted. This included semi-structured interviews with the project managers and visits to the main locations of the projects (two public hospitals and a design centre). The participants of the workshops in this study were the project managers of the two projects and several possible future end users who were recruited by the project managers.

The persona theory argues that a persona should represent both a single user and a group of users (Chang et al., 2008; Hinton, 2007). By creating the personas differently in the two workshops, the personas were generated from both perspectives. In one of the workshops, the persona templates were filled in individual, and in the other one, each persona was completed by two or three users in cooperation.

The data from the workshops was collected through observations, notes, pictures, and persona templates. Immediately after the workshops, the facilitator and the co-facilitators did an evaluation, and later the data from the two workshops was gathered and analysed to compare and identify possible patterns. The persona templates are not publically available, but permission was granted for the author to describe them in this paper.

2.3 Empirical data

The workshops were planned as a part of the design process of both projects. The persona model was implemented in the workshop as the main tool to achieve user insight.

The workshops started with an introduction based on the IDOARRT approach by setting out a clear purpose, structure, and goal for the workshop (Hyper Island, 2016). The IDOARRT acronym stands for *intention, desired outcome, agenda, roles, rules, and time* and these were presented to the participants introductory to the workshop. The aim was to prepare the participants and to help them understand the process and provide them with equal knowledge.

2.3.1 Workshop program

The workshops were executed from the same structure, based on the steps seen in Figure 3.

1. Create comfort	2. Stage discussion	3. Develop together	4. Check out
Welcome by the IDOARRT approach Presentation of participants "Who are you and what do you like?"	Presentation of the persona templates in relation to the subject and context (done by the designer)	Participants creates the personas Presentation of the persona to the group by acting it out	Thanks and goodbye

Figure 3. The workshop program

2.3.2 The pillbox workshop

Two local doctors joined an innovation program at a public hospital in Cape Town, South Africa, with a vision of designing a pillbox for patients with chronic diseases treated at public hospitals. One of the main challenges is that the patients do not know why they take medication or what it does. Therefore, the doctors' aim was to educate the patients in their own diseases and make them understand the importance of the right treatment, medication, and side effects.

This workshop was conducted at an innovation lab at a public hospital in Cape Town in September 2015. Seven hospitalised chronic patients were participating as patient experts, one of the doctors behind the project was attending as co-facilitator, and three external designers participated, two as co-facilitators and one as the main facilitator conducting the workshop. This workshop will be referred to as the *Pillbox workshop* in the remainder of this paper.

2.3.3 The Pillbox personas

The objective of the workshop was to gain better understanding of the patients' issues, needs and problems when medicated for a chronically illness. The insight was obtained through the development of personas. Three persona templates suffering from different chronic diseases were created in advance and filled in with name, age, and picture. The purpose of creating personas with well-known illnesses was to illustrate similar contexts to what the participating users knew from their daily life living with a chronic disease. And to let them tell their own histories expressed through a persona, so to gain knowledge about gaps and errors without asking the users directly about what errors they personally faced when taking medication. The workshop provided the following insights about the personas with chronically deceases:

1. The chronically deceased persona's lack of knowledge about her own deceases is not due to lack of interest, but rather due to the fact that the information is hard to obtain. Every doctor's consultation is only five minutes long and the persona has to share this consultation with six to seven other patients with the same chronic decease, which makes it difficult to ask personal questions.
2. The chronically deceased persona easily forgets the doctor's instructions about the medication including when and how to take it, with food or without, as well as which side effects to expect. And because she is illiterate, she cannot read the instructions on the medication, nor read the doctor's written instructions.
3. Going to the hospital is a costly and time-consuming affair, and because the persona cannot be sure to see a doctor, even if she has appointment on the given day, she sometimes choose not to go at all.
4. If the persona carries her medication around with her, she runs the risk of being mugged or even assaulted because the medication can easily be sold on the black marked, and she therefore wants a discreet way to carry it around.

2.3.4 The MDC workshop

Montebello Design Centre, MDC, is an old brewery building owned by the University of Cape Town. Today, it functions as a design centre and is home to a range of offices, art- and craft workshops and a café. Over the last years, MDC has experienced a decline in the number of visitors and recently the university required increased student integration, since it is university property. The university demanded that the tenants of MDC create a long-term development plan. Therefore, the purpose of the

workshop was to establish a shared vision and create a common understanding of the term “design”, which was demanded as a part of the future development plan for the university.

The workshop was conducted at Montebello Design Centre in Cape Town in September 2015. Seven tenants, all representatives from different tenancies at MDC participated, including one local co-facilitator, one external designer functioning as co-facilitator and one designer as the main facilitator. This workshop will be referred to as *MDC workshop* in the remainder of this paper.

2.3.5 The MDC personas

The objective of the MDC workshop was to gain a clearer understanding of the target audience, and understand their needs and expectation when visiting MDC. Furthermore, the tenants of MDC were required to come up with a shared vision and a future plan for the MDC. Insights about different needs were investigated based on the development of persona templates. The tenants' businesses differed a lot and the working relationship between them was tense. Therefore, two personas templates of all of the target audiences: student-, client- and tourist, were created in advance, and prepared with name, nationality, age, quote and picture. The purpose was to challenging the tenants to consider the future situation from a different perspective than their own, and instead invite them to focus on the big perspective. The workshop provided following insights about three different personas, who use the MDC:

1. The student persona would come to MDC to connect with the creative businesses, share ideas, find job/work experience opportunities as well as use the quiet spaces for working and thinking. However, the student persona was missing structures for collaboration that would make it less intimidating to connect and get in touch with the on-site businesses. Also this persona missed a welcoming atmosphere and new ‘things’ happening.
2. The client persona would come to MDC to buy products or services from the different tenants. They would come to visit different studios, learn about crafts and be inspired by new ideas. Also the client persona would use the MDC for meetings in the coffee shop, for ‘being seen by others’ and for strolling around in the inspirational atmosphere. However, the client persona was missing an overview of the different studios, how they operate and are linked together as well as a specific retail space to visit as well as more public hang-out areas.
3. The tourist persona would come to the MDC and visit the different studios. The tourist persona comes there to experience the grassroots of crafts and artists as well as to learn about crafts and to seek new ideas. For the tourist persona finding the MDC in the first place is a challenge, the next challenge is to find out which studios are open and finally where the artists are friendly towards tourists.

3 ANALYSIS & FINDINGS

This section introduces the analysis and findings of the outcome of the two co-creating workshops. From using the persona model as a co-creation tool, user insight has been generated, and different potentials and challenges identified. They are represented on the list below, and unfolded with practical examples further down.

3.1 Potentials

Below the potentials of using the persona template as a generative tool in co-creation workshops is listed.

The persona:

- has potential for providing useful user insight
- helped create comfort
- created common ground and discussion among the participants
- helped remove focus from the individual
- created a bond between the participants

Potential for providing useful user insight

Both workshops indicate that the persona model has some potential in respect to creating useful user insights. For instance, in the pillbox project, the insight about the possibility of being assaulted or mugged, when carrying medication, was ‘translated’ into a design requirement, ensuring that the pillbox should not be identified as medication. Similarly, in the MDC project, the different insights from about

the personas not feeling welcome in MDC etc. led to the idea of creating a common room that would represent all the different studios and businesses, which would always be open and welcome the different users.

However, it seems that the persona model's potential for providing detailed user insights is probably better in a situation where the different types of personas have been identified upfront, and where the invited users match the definitions of these types as it was the case in the MDC workshop. In the pillbox workshop, even if more persona templates were created, they would all represent the same persona.

Helped create comfort

In both of the workshops, the personas seemed to create comfort between the participants, who did not know each other beforehand. The persona templates created a clear setting of what to do and how to do it, which limited the level of nervousness about doing something wrong and generated a relaxed atmosphere and dynamic among the participants.

This was especially the case in the MDC workshop, where the persona templates were fully completed and acted out by the participants with big empathy and enjoyment in front of the rest. This indicated that the participants grew comfortable with and open minded towards each other, which is completely opposite to the tense atmosphere that was dominating when the workshop started.

Created common ground and discussion among the participants

The MDC results of the workshop indicate that by having the end users create the persona templates and act them out afterward, they tend to extend their own views, and gain a more common vision with the other participants. The personas and their human likeness made the participants aware that other perspectives beside their own existed. Before the MDC workshop the participants had different and conflicting views about the future vision of the design centre, but afterwards a more united vision essential to the MDC was gained.

The personas helped to create a new atmosphere where the participants could argue from the persona's perspective instead of their own, and thereby voice their concern in a fictive context without arguing against each other's personal opinions.

Removed focus from the individual

The workshops indicate that all users widely contributed with both positive and negative views about e.g. how to manage a specific topic or how to act in a given context. When creating the personas the users could talk about negative personal experiences and preferences on the behalf of the persona instead of themselves.

In the pillbox workshop, one of the main reasons for using the persona templates was that the users did not have to tell their own stories, but could hide behind the persona. Some users were happy to share private experiences, while others focused on the template and explained through the persona. A lot of insight about why medication is not taken regularly was gained through the persona templates, or through stories about the user's "friends".

Created a bond between the participants

In the workshops the persona also seemed to function as a useful tool to create a natural relationship between the participants, because the personas were based on a topic they were all intimately familiar with. It seemed easy to add knowledge and start a conversation because all were experienced in the field. In the Pillbox workshop the users did not know each other beforehand, but quickly some started to talk about their own illnesses and experiences instead of "hiding behind" the persona. This indicates a level of comfort and interest in the other participants more than in the fictive personas. It seemed that the participants shared stories and gained relationship by relating to each other's experiences.

3.2 Challenges

Challenges related to using the persona template as a generative tool in co-creation workshops:

- The persona template needs the right amount of constraints
- Some participants found it challenging to create the persona in a creative process
- Some participants found it challenging to relate to the persona
- Some participants found it challenging to participate in a workshop with professional designers

The persona template needs the right amount of constraints

The design constraints represented as fixed parameters on the persona templates, did not only help the participants to deliver insights. The fixed parameters were created to give the participants a clear understanding of the persona model, and to guide them with clearly marked areas to fill in.

In the Pillbox workshop, the participants had a hard time cracking the code about how to start filling in the persona template, which indicates that the task was still too undefined and further constraints were needed. The participants also found it hard to fill in a template where the persona had a different illness than their own, and found it easier to relate to parameters closely related to their own experiences. This indicates that the design constraints were too wide and/or few, and more parameters would be useful in order to guide the users more smoothly through the creation of the persona.

Challenging to create the persona in a creative process

As it turned out the creation of the personas was not as simple as predicted, and the workshops indicated that the difference in the participants' level of education might have been an important factor in their approach to the task. While the participants from the MDC workshop easily started picking and filling in a template, the participants from the Pillbox workshop were more cautious about getting started and hesitant about what to do.

The participants from the MDC workshop were all tenants in the design centre and the participants from the Pillbox workshop were all people from the lower class of society treated at public hospitals. The workshops showed a big difference between the two groups' ability to create the personas. This indicates a relation between the level of education and the ability to work creatively in a workshop based on a relatively short introduction.

Challenging to relate to the persona

As mentioned previously, some participants in the Pillbox workshop had difficulties in relating their own experiences to the persona's experiences if it e.g. had another disease or sex than themselves. This again indicates that the user groups have different abilities to work creatively and think abstractly, and that they, therefore, need different levels of constraints when doing a co-creation task.

Challenging to participate in a workshop with professional designers

In the Pillbox workshop some participants acted shyly and cautiously, and indicated a level of insecurity. The participants viewed the professional designers as being the experts and themselves as being the unlearned, which created an unwanted gap between the designers and the users. This gap existed even though the designers were aware of it being a possible problem, and therefore tried to avoid it by giving a well-considered introduction. This again, indicates that there may be a social barrier when co-creating with uneducated and that it can be more challenging compared to co-creating with educated users.

4 CONCLUSION & DISCUSSION

This study is a first endeavour into exploring the persona model as a generative tool and in this particular study this has only been explored in two co-creation workshops, which is too few to make any solid conclusions. Still, the study indicates some interesting insights about the potentials and challenges that the persona model has when it is used as a generative tool.

First of all, the persona model has some potential in respect to creating useful user insights. The persona model allowed the users in the two workshops to share their experiences through the persona, and provide insights that were useful to the two projects. However, the extent and quality of user insights have not been explored or determined in this study.

Furthermore, the use of the persona model in a co-creation workshop seemed to create comfort as well as a common ground for discussion among the participants, who did not know each other beforehand. It also seemed to remove focus from the individual user and to some extent it created a bond between the participants.

However, even if the persona template worked as a guideline for the user, it seemed that some user needed more constraints and fixed parameters than others. Furthermore, some participants found it challenging to relate to the persona if it had different parameters (e.g. sex or age) than themselves, and it was indicated that the level of abstract thinking could be related to the users' level of education, which therefore needs to be considered in respect to using the persona model as a generative tool. Finally, it seemed that the educational distance between some users and the professional designers need to be overcome to make the users feel comfortable in the workshop situation and deliver useful insights.

The persona model is assumed to be rewarding in situations where a large amount of user insights is needed, and the resources are limited. The workshops only need little preparation, and can easily be conducted in few hours, if the participants have been recruited beforehand. Furthermore, it can be a cost efficient setup based on the limited time spent and the use of accessible and cheap materials. It could therefore be interesting to create a full study on the basis of the indications from this research project

and to identify to which extent the persona model can be used as a generative and the quality of doing so. Another interesting perspective would be to investigate the outcome of the personas if these were to be built by the users with physical materials, instead of filling in a paper template. This could increase the making-activity and thereby provide more insight about tacit and latent needs, as described by Sanders (2002).

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Figures

- (1) Own illustration based on Sanders (2002) and on modifications by Lassen et al. (2010)
- (2) Own illustration based on Kean et al. (2014)
- (3) Own illustration

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