

# Understanding Culturally Distant End-Users Through Intermediary-Derived Personas

Fritz Meissner  
University of Cape Town  
Dept Computer Science  
Rondebosch, 7701  
+27 74 112 3795

fritz.meissner@gmail.com

Edwin Blake  
University of Cape Town  
Dept Computer Science  
Rondebosch, 7701  
+27 21 650 3661

edwin@cs.uct.ac.za

## ABSTRACT

In this paper we present the use of a persona creation process for gathering information from intermediaries for information and communication technology for development (ICT4D) projects. Our approach represents a departure from traditional persona use in that it does not organise pre-existing data about potential users, but is itself a data gathering process. We present a case study of our use of the process on an ICT4D project, during which time we observed the combined benefits of using personas and of working with a non-governmental organisation (NGO) intermediary materialise. We attribute these outcomes to our persona creation workshops. Information which the NGO furnished regarding sensitive personal circumstances typical of our end users greatly improved our understanding of our users. This information would likely not have come to light had we interviewed the users ourselves, which we believe demonstrates the validity of relying on intermediary information for persona creation rather than first-hand information.

## Categories and Subject Descriptors

D.2.1 [Software Engineering]: Requirements / Specifications – *Elicitation Methods*; H.5.2 [HCI]: User Interfaces – *Theory and Methods*

## General Terms

Design, Human Factors, Theory

## Keywords

Cultural Distance, Design, ICT4D, Intermediaries, NGOs, Personas

## 1. INTRODUCTION

This paper describes an approach to creating personas (a design technique which creates realistic but fictional characters intended to aid communication and understanding of end users – discussed further in section 2.1) in which the assembly of the persona is used as a data gathering process rather than just for data analysis or modelling. We are in the process of creating a website in collaboration with a non-governmental organisation (NGO) called The Warehouse [10] as part of a programme they call “Link”, which aims to address a weakness of the South

African schooling system in preparing students from low income communities for the post secondary education job search process. In order to better understand the users, we employed our approach to gather and understand intermediary knowledge in a format suitable for influencing the design process.

We first discuss necessary background information, introducing personas and their benefits. We also describe the aims of our NGO partner, following which we provide a case study which outlines the effect of our persona creation approach. We then discuss how our approach contributes to the use of personas in Information and Communication Technology for Development (ICT4D) projects which involve intermediaries or “human access points” [1]. Finally, we describe how we might improve our approach for future work.

## 2. BACKGROUND

### 2.1 Personas

Personas are a design technique introduced by Alan Cooper [2, 6, 8]. The technique generates recognisable and distinct fictional characters representative of typical end user groups. Each persona includes detailed background information, including habits, skill levels and goals [6]. Once defined, they are used as characters in scenarios which later inform requirements. The benefits to a product team of defining detailed personas include:

- Differentiation between user groups who must be made happy by the product, those who must not be left unhappy and those who should be ignored. This allows the team to focus on delivering a small number of high quality features for important user groups rather than a larger but poorer set of features in an attempt to please everyone [2].
- Gaining an empathy for the personas in a manner which would not likely occur with the original data. This helps the team to design appropriately for the user groups whom the personas represent [8].
- Improved communication between product team members. Awareness of personas throughout the product lifecycle averts decisions which could make important users unhappy or ineffectual and reinforces the weight of earlier decisions. Cooper singles out developers in particular of being guilty of subverting design decisions unless they are presented with an easily communicable picture of a user whose interests would be harmed by doing so [2].

A central aspect of the technique as employed by the examples we found in the literature is that it is a method for organising data gathered by other means, for instance interviews, focus groups and direct observation [4, 6, 8]. In section 3 we discuss how we employed the technique as a means of gathering data.

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## 2.2 The Role of NGOs in Addressing Researcher and End-User Differences

ICT4D projects are at risk when the designers bring a “developed” mindset to designing technology for “developing” communities [3, 5]. Designers have to bridge cultural and linguistic gaps when designing for communities with whom they have had relatively little interaction, otherwise we are likely to create “Western-inspired designs within developing country organisations” [5].

By working with NGOs, ICT4D researchers can benefit from associative trust and so many ICT4D project teams involve NGOs in order to gain access to developing country communities [3]. However, of the dimensions of difference between researchers and end users listed in [3] (language, culture, attitudes and locality), many ICT4D projects involve NGOs only to address issues of locality and language. This represents an inability on the part of ICT4D researchers to recognise their own limitations regarding understanding of local culture and attitudes. NGOs are capable of serving in a greater role than just “community liaison” – they should play an integral role in design and evaluation, and be considered partners in setting the goals of the intervention [3]. Accordingly, we believe that the involvement of The Warehouse (introduced in the next sub-section) was crucial for narrowing the gap between us and our end users.

## 2.3 The Warehouse NGO and Link Programme

As part of our research project, we agreed to collaborate on the design and development of a website for the Link programme, a development initiative operated by an NGO called The Warehouse [10], which works with churches in Cape Town to develop their capacity to respond appropriately to poverty. The organisation has identified weaknesses in community (school and familial) support for young people as they make important study and career decisions. These weaknesses exacerbate community-wide unemployment and poverty issues. The Link programme was established in 2009 to address this, starting with career guidance workshops run for pupils between grades 9 and 12 in two low income areas of Cape Town, Manenberg and Khayelitsha.

In 2010 the programme expanded to more pupils, but an obstacle which it faced was ineffective dissemination of job or study opportunity information. The experience of the previous year's school leavers highlighted that programme participants needed more regular input, as job information became dated quickly, and academic application deadlines passed. The NGO did not have the person-power to push information actively to individual participants, and workshops could not be run frequently enough to keep up with the pace at which such information was updated. The Link coordinators' proposed solution was a website which would allow them to collect and publish such information once, and which learners who completed their workshops could use to keep abreast of relevant information.

Prior to our arrival, the NGO team learned about its beneficiaries from conversations in a variety of contexts: workshops, one-on-one career guidance counselling sessions and while networking with stakeholders. They had access to staff and volunteers who worked on other programmes at the NGO and they interacted regularly with contacts in the communities (social workers, teachers, mentors and community

leaders). In the next section, we describe our efforts to capture this knowledge as a starting point for our design efforts.

## 3. CASE STUDY: PERSONAS FOR THE LINK WEBSITE

In order to collect the NGO's knowledge in a format suitable for informing the website design, we decided to package it in persona form. In this section we describe our process for creating personas and the insights we gained as a result.

### 3.1 Methodology

To gather the data we held two workshops with the Link team. In each workshop we used a persona template adapted by Jones and Marsden [6] from Pruitt and Grudin's work at Microsoft [8]. Our approach differed from theirs in that instead of using the template as a document to organise pre-existing data, we used it to guide our conversation with the NGO. We presented the template, asked the NGO team to name and identify a hypothetical user, and then together decided what each section of the template should contain for that user. We maintained consistency between headings, but allowed later sections to influence earlier sections and vice versa.

We worked primarily with two personas, Sindiswa and Leandre, grade 12 girls from Khayelitsha and Heideveld respectively. The Sindiswa persona's ambitions included tertiary study, while the Leandre persona was focused on finding full-time work to replace her existing part-time job immediately following the completion of her grade 12 exams.

After each workshop the personas were passed between the NGO and ourselves by email for further comment. We held one interview between the workshops and another in preparation for writing this paper in order to reflect upon the effects of the process. In sections 3.2 and 3.3 we group the insights gained from interviews and our personal reflection according to which party they affected: first the NGO and then the researcher.

### 3.2 Insights Gained by the NGO

Two changes in approach were made by the NGO as a result of our workshops. These can be related to points made in our section 2.1 – that the persona process allows the team to narrow its focus, and that communication would occur which could avert negative experiences for the users.

Initially, the programme had prepared material for high school pupils of all ages. Following our workshops, the NGO team recognised that they wanted to focus their efforts on pupils in the later years of high school, helping them to complete their schooling and providing advice as to how best to prepare for the job market or tertiary study once they finished. It is not possible to be certain that this decision might not have been taken at some other stage of our design process, but in an interview the day after our first workshop the NGO team did attribute it to the discussion of the previous day. In that workshop we had defined two personas: Themba and Sindiswa. The Themba persona was a 15 year old AIDS-orphan who had just failed grade 9 and did not believe he would pass if he tried again, while the Sindiswa persona was on track to complete grade 12. Being able to compare the personas side-by-side enabled them to see that despite the desire to aid users in circumstances similar to Themba's, their programme had more to offer those in the Sindiswa persona's position.

Another effect of the process was to bring into focus assumptions made by the programme team. For example, a decision was made that the programme would offer only

English medium material despite only about ten per cent of the anticipated users speaking English as their home language. This came up while defining the Themba persona, when the team realised that someone with his background would only be able to read very simple English, preferably interspersed with clarifications in his home language, Xhosa. The outcome of this conversation was to make explicit the decision that the team would not commit to providing material in languages other than English. Despite discarding the Themba persona, the NGO team recognised that in order to help participants with weaker English they would need to provide training for end users before they used the website.

### 3.3 Insights Gained by the Researcher

An intended outcome of the persona process is an empathy due to familiarity between product team and persona. Our understanding of the users was most affected by the following characteristics of the personas and their environment.

- Goals, fears and aspirations of our end users would be very focused on basic needs. The Sindiswa persona feared the poverty traps that her peers had fallen into and aspired to greater material wealth than her parents, while the Leandre persona's dream was to escape a home life that included an unplanned baby, alcoholic parents and an abusive uncle. An important mindset change which emerged as a result was the awareness that our users were not planning for the "right" job (i.e. the best combination of pay, fulfillment and benefits), but rather for anything which would pay enough to lead the lifestyle they wanted (Sindiswa) or even just for survival (Leandre).
- Our users would have only minimal spare time. Working or incapacitated parents required the Sindiswa and Leandre personas to look after the younger family members and clean their homes, study and work a part-time job (Leandre). Their schedules demanded early starts and late evenings. We are now aware of time-efficiency as a factor, where previously it was not a concern – our uninitiated concept of communities characterised by unemployment and a lack of entertainment facilities was that time would be the one unconstrained resource available.
- Older members of the household or community were not necessarily supportive influences. The Sindiswa persona faced relative apathy from her parents in her quest for tertiary education. They were eager for her to find work so that she could share in the household expenses, and tertiary study would increase the time they needed to support her. Further, they did not know enough to provide useful advice as to how she might go about increasing her prospects of employability in the long run. The Leandre persona's family were a primary motivation for her to find work, but only in as much as she wanted to escape them. The discarded Themba persona faced a similar situation – his uncle and sole guardian was preparing to kick him out of the house once he grew too old to bring in a child support grant from the state. This affects time and ease-of-use constraints, as PC-based interactions may cost the users money (many community centres charge per use) or understanding the website might require advice which elders would be incapable or unwilling to offer.

To revisit our discussion in section 2.2 of the roles of NGO intermediaries, we have demonstrated how our cultural and attitudinal assumptions were challenged and our distance to the end users narrowed as a result.

## 4. DISCUSSION

Our approach to gathering user data is different from others in that intermediary insights are substituted for the interviews and observations that a design team would normally carry out themselves. In this section we discuss similarities and differences between our approach and a concept called provisional personas [4] which in some respects resembles our work. As part of this we consider the peculiar nature of our user's goals when compared to the existing persona literature and sensitivity to stories to which we now have access without the community's express permission.

### 4.1 Provisional Personas

Goodwin's discussion of provisional personas in [4] reveals an approach similar to our own. Intended as a tool for projects where time to gather data is short, Goodwin suggests gathering stakeholder input as a substitute for data gathered from potential users as a temporary measure. Stakeholders are defined as "... the people in [the organisation creating the product] who fund, build, test, market, sell and support the product, plus anyone else who will influence the product's direction." Her reasons for pursuing a temporary approach are two-fold: first having some guideline is better than none, and second that the process may facilitate discussion between stakeholders which has not yet taken place. She suggests that measures be taken to reinforce the temporary nature of the personas developed upon the client.

We find our approach to be analogous to hers when we consider that similarly to her stakeholders, the NGO team with whom we work is invested in the outcome of our product. Our informants possess insight into the end users' capabilities and characteristics and will be involved in the context of deployment long after we have departed. It is likely that similar parallels could be drawn in other ICT4D projects in which NGO intermediaries form part of the team.

We can also identify with the espoused benefits: our time with actual users has been short (certainly compared to the time required to pursue the approach suggested elsewhere in [4]), and the conversations we outline in our case study took place for the first time in our workshops.

Where we differ from Goodwin is in the trust we place in our personas. Goodwin indicates that these stakeholder inspired personas should not be viewed as a permanent substitute for the designer's firsthand observations. On the other hand, given the role of NGO intermediaries in ICT4D projects (see section 2.2) we find it likely that the capacity of an intermediary stakeholder for understanding our end users would be superior to our own. The clearest demonstration of this principle became apparent when we considered our personas' goals and motivations, which is the topic of section 4.2.

### 4.2 Considering Needs and Motivations of Marginalised Communities

In [4] Goodwin states that only occasionally as a designer would one create a persona for whom basic human goals (e.g. food and shelter) are salient. This is a product of the relatively prosperous context of her work. Amongst our users, we learned that the reverse is true – fulfilment of basic needs could not be taken for granted.

The dissimilarities of motivation do not stop there. Our persona descriptions contained very personal insights of a sort we have not encountered elsewhere in the persona literature:

dysfunctional families, substance abuse, teenage pregnancy and even regular sexual abuse. Were western UCD experts suddenly to find themselves designing for marginalised communities, it is unlikely that their face to face interviews could yield such insights, but these hidden motivations remain of great importance. Fortunately, we were able to draw upon knowledge built up by an NGO's network of people who were in a position to observe unfortunate personal circumstances. In this respect, relying on our "stakeholders'" knowledge may be a better starting point for understanding our users than we could gain through direct observation. This reveals the most important difference between our work and Goodwin's – our NGO intermediaries are more involved in the lives of our end users than stakeholders of Goodwin's provisional persona context would be.

### 4.3 Communicating Sensitive Persona Content

Working with sensitive information restricts the context in which our personas may be used. Pruitt and Grudin and Goodwin suggest that personas be used throughout the product lifecycle, as a means to discuss with executives, developers, marketers and even customers or end users [4, 8]. However, it would be unethical of us to spread the sensitive aspects of our personas too widely. If a persona's description reached end users or community leaders they could wrongly attribute the more stigmatic aspects of the persona to members of their own communities based on other aspects of the story. Our Leandre persona was barred from communion in her church because she had fallen pregnant outside of marriage. It would be unfortunate if spreading this story resulted in our end users assuming the same reason for non-participation in religious ritual by any real people, especially if the assumptions were correct.

A further difficulty of dealing with sensitive information relates to the technique of making personas more believable by attaching a picture which represents the persona [6]. Due to our sensitive content, it was unpalatable to use a photo of someone with whom we had contact and who might be confused with the actual persona. An alternative is to use a stock portrait from an online photo gallery [6]. This proved difficult in our context, as pictures of Africans in online photo galleries seemed to be restricted to either African-American stereotypes or people in traditional African dress. To address this problem we are currently considering a technique from Goodwin's provisional persona approach. Sketched, low-detail drawings of provisional personas are intended as reminders that they are not considered final [4]. In our case we believe they could be used to underline the fact that the personas are fictional.

## 5. FUTURE WORK

We have identified some areas in which our approach could be improved. The NGO appreciated the persona creation process once it was complete, but were uncertain during the process of the benefits to be gained for the time spent. This is consistent with Pruitt and Grudin's assertion that creating personas represents a non-obvious step away from core design activities [8]. Future efforts could address this by beginning the process with an explanation of the expected benefits.

There may also be benefit in augmenting our approach with other data gathering techniques. Adding direct observation and interviews could aid persona creation for aspects of personas where intermediary knowledge is lacking. Data from unrelated studies such as [7] could also be used as per Putnam et al's approach [9]. Pruitt and Grudin's principle that personas should

be improved throughout the product lifecycle [8] applies and we may have opportunity to include such data as we evaluate and refine our product.

## 6. CONCLUSION

We have described a new approach for the use of personas – gathering data from NGO intermediaries. Our process provided us with benefits associated with traditional personas: narrowing focus, making explicit previously implicit assumptions, and improving the designer's understanding of the users. The process also helped us realise the potential of our relationship with The Warehouse for narrowing our cultural distance to the users.

In terms of the aims of the Link programme, our persona creation process has affected the material that will be offered by the programme as a whole as well as the scope of data captured on the website, which will lean towards material suitable for older students. The developer is more aware of ease-of-use and time constraints, and the NGO has decided to provide training to end users as a result of considering English proficiency more closely.

NGOs can be the equivalent of the stakeholders who inform Goodwin's provisional persona. However, we put more stock in our persona output than she does in provisional personas. The reason for this is that The Warehouse has insights into the users' personal lives which we would not be able to obtain ourselves. This insight is valuable for understanding motivation but must be dealt with sensitively.

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