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Research-based Personas: Teaching Empathy in Professional Education

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Abstract

Graduate students enrolled in professional education degree programs are increasingly challenged by the need to acquire the complex skills/competencies of their respective professions on the one hand, while retaining empathy for the individuals they will be serving on the other hand. This paper suggests a technique which uses the Persona, a narrative representation of a desired client's or user's behavior patterns that is grounded in the philosophy of User-centered Design (UCD), to integrate empathy into professional education, and includes an example from a graduate-level program in instructional design. Opportunities for adopting this technique in various disciplines at the undergraduate level are also identified.

Keywords: Professional education, empathy, personas, collaborative learning, instructional design.

The number of students participating in education for the professions has been increasing steadily. Enrollments in post-baccalaureate professional degree programs (medicine, law, teacher licensure, etc.) in U.S. institutions of higher education are projected to exceed 425,000 by 2016 (National Center for Education Statistics, 2007), outpacing the growth of previous decades. Accompanying these trends is a concern about the lack of emphasis on the human touch in professional education. In the 36 years since Morrison and Leslie (1975) first challenged professional education to teach students to be more sensitive to the people they would be serving, calls for integrating empathy into the education of physicians (Afghani, Besimanto, Amin, & Shapiro, 2011; Neumann, et al., 2011; Spiro, 1992), therapists (Arizmendi, 2011; Elliott, Bohart, Watson, & Greenberg, 2011), engineering and product designers (Kouprie & Visser, 2009; Wright & McCarthy, 2008), and other professions remain firm. The question is: How can we teach empathy, particularly when the job-oriented focus of professional education encourages students to view themselves as problem-solvers, solution architects who have the right combination of technical and communication skills to meet the needs of their intended audiences and contribute to the success of their respective organizations?

This paper offers a technique for facilitating the integration of empathy into the practicum component of professional education by teaching students to construct research-

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based personas of the intended audience, a technique that draws upon the philosophy of User-centered Design (UCD). The paper begins with a brief review of the empathy and User-centered Design literature, including how personas are used for creating empathy into the design process. It will then describe an example of how this technique was used in a recently completed collaborative project practicum in a graduate-level instructional design program. It will also provide some suggestions for using this technique in virtual learning environments, as well as in education for other professions.

The Meaning of Empathy

The concept of empathy has generated a rich body of knowledge, primarily in counseling and psychotherapy and secondarily from social and developmental psychology. First used to describe a process of projecting human feelings into objects (Titchener, 1924), the term "empathy" has a variety of definitions, theories and constructs. Some scholars define it as emotional perspective-taking, our ability to understand other people's feelings (de Vignemont & Singer, 2006; Decety & Jackson, 2006; Preston & de Waal, 2002; Gallese & Goldman, 1998; Allport, 1961). Another perspective on defining empathy seeks to segment emotional empathy into components. There are the subjective components, including empathic concern or feelings of warmth and concern toward another or feelings of distress and discomfort (Batson, Darley, & Coke, 1978; Eisenberg & Miller, 1987). There are also physiological components, with most studies of this component focusing on electrodermal and cardiovascular measures as physiological indices of emotional empathy (Eisenberg & Fabes, 1990; Krebs, 1975). Empathy may also be defined as a sequential process that begins with emotional resonance, then becomes empathic knowledge gained from that resonance, which is, in turn, used to form an empathic response and a temporary role identification with another (Stern, 1985).

In their review of the literature on empathy from 1969-1995, Duan and Hill (1996) conclude that empathy has been used to represent divergent theories and constructs, all of which can be justified by the content and context in which they are studied. However, common to the various definitions and approaches is the core concept of empathy as the ability to emotionally identify with another, the feeling that persons and their problems or circumstances arouse in us as projections of our feelings and thoughts, when "I and you" becomes "I am you" or "I might be you." (Spiro, 1992). It is this concept of empathy that underlies the discussion in this paper.

Empathy and User-centered Design

One field in which empathy is deemed integral to professional success is the field of design. In the design literature, there is a general consensus that understanding and focusing on the end user during the design process is essential to the success of the final product (Roozenburg & Eekels, 1995; Griffin & Hauser, 1993). User-centered Design (UCD) is a multidisciplinary approach, the central premise of which is that user analysis should be an ongoing activity throughout the design and development process. Whether designing a product or a service, UCD addresses concerns that go beyond standard ease of use and satisfaction and considers the end user's characteristics, focuses on gathering, analyzing

and specifying their tasks, their work environment and usability requirements (Brown & Green, 2006; Van Duyne, Landay, & Hong, 2007). Empathy is incorporated into the design process by visualizing the end user utilizing product prototypes, interacting with specific aspects of a design, or utilizing previous designs that the designer is attempting to build upon (Rifkin, 1994; Dahl, Chattopadhyay, & Gorn, 2001; Coleman, Lebbon, & Myerson, 2003). The goal is to enable designers to make appropriate design choices for users who are unlike the designers themselves.

One way design students are taught to gain empathy with the audience for whom they are designing is to construct personas. Written in narrative form, personas are fictitious representations of the "archetypical" user intended to convey the needs, wants and attitudes of the user in the context of the product/service being designed (Baek, Cagiltay, Boling, & Frick, 2007; Norman & Draper, 1986; Rothwell & Kazanas, 2008). Personas are intended to make the user "real", so that students can develop empathy for the user and use that empathic connection to view design decision's from the persona's perspective.

Generally, the process of creating personas begins with qualitative research – one-on-one interviews or focus groups – conducted among the target audience. Interview or focus group notes are reviewed in order to find patterns that enable the designer to group similar people together into types of users based on their attitudes, behavior or goals. Each category is then reduced to an "individual" with a name, a photo, demographic information and key characteristics (see Figure 1). To ensure that the personas created are representative of the target audience as a whole, quantitative data collected from surveys or other large scale studies of the target audience, can be used to validate the personas. Quantitative validation is particularly important when the target audience is large or when designing business web sites where hard data is required to defend decisions (Mulder &

Figure 1. Example persona used in the design of a website (Barlow-Busch, n.d.)

Yaar, 2007). However, while there is ample information about the importance of personas, there is little published information about teaching students how to create research-based personas.

Example from a Student Project

Context

In the 2010-2011 academic year, I taught students how to create personas as part of a collaborative project practicum in instructional design. The students were enrolled in a full-time, one-year Master's degree program in which they participated as a single design team in a real-world, real-client project. The students learned the process of instructional design while applying that process to create a proof-of-concept prototype of an instructional product sponsored by the client. The four-member student design team was granted a project by the Virginia Department of Education to create a website for the parents and families of children with special needs. The ultimate goal was to make the new site a one-stop-shop for parents and families to plan for and remain engaged with the education of their children. Two dedicated subject matter experts (SMEs), one client liaison, and one programmer supported the student design team. In addition to my teaching duties, I served as the project manager.

To gather data about their target audience, the student team conducted three focus groups in fall 2010 with parents recruited from the Northern Virginia area. The focus groups were intended to address four research questions: 1) How do parents of children with special needs articulate/verbalize their special education information needs? 2) Why do they deem some pieces of information to be important? 3) How do parents find information they need and why do they search in the way they do? 4) What do parents believe is missing in terms of available content and why is that missing information important?

Assisting with participant recruitment were three local parents' advocacy groups recommended by the subject matter experts (SMEs) and the client liaison. The parents' advocacy groups also offered their facilities and logistical support for the focus group sessions, while I served as focus group facilitator. Topics in the focus group discussion guide included participant stories about their best and worst experiences as parents dealing with the special education needs of their children; the types and sources of information used to remain engaged with their children's education needs; the extent to which current information sources fill all of their special education information needs, and; participant perceptions of the ideal special education information source(s). The student team compiled, synthesized and analyzed all focus group notes and audio recordings, then presented the results of their analyses in class.

Persona Creation Process

Following the presentation of focus group results, I introduced the concept of personas and displayed some examples of user personas developed in website design. Emphasizing the sensitive nature of our target audience and the potential impact of underlying emo-

tions associated with the topic of disability, I stepped them through the process illustrated in Figure 2.

First, I passed out packs of sticky notes to each student. Next, I asked each student to recall one particular parent that stood out in his/her mind and, using the sticky notes, write down the characteristics of that parent, one characteristic per sticky note. I had the students line up their sticky notes in separate columns on the whiteboard, so that each column represented one student's description of his/her most memorable parent. Next, I directed the students to review and discuss each of the sticky notes and ask the note's author for clarification, if needed. The goal was to ensure that everyone had a common understanding of what was on each sticky note.

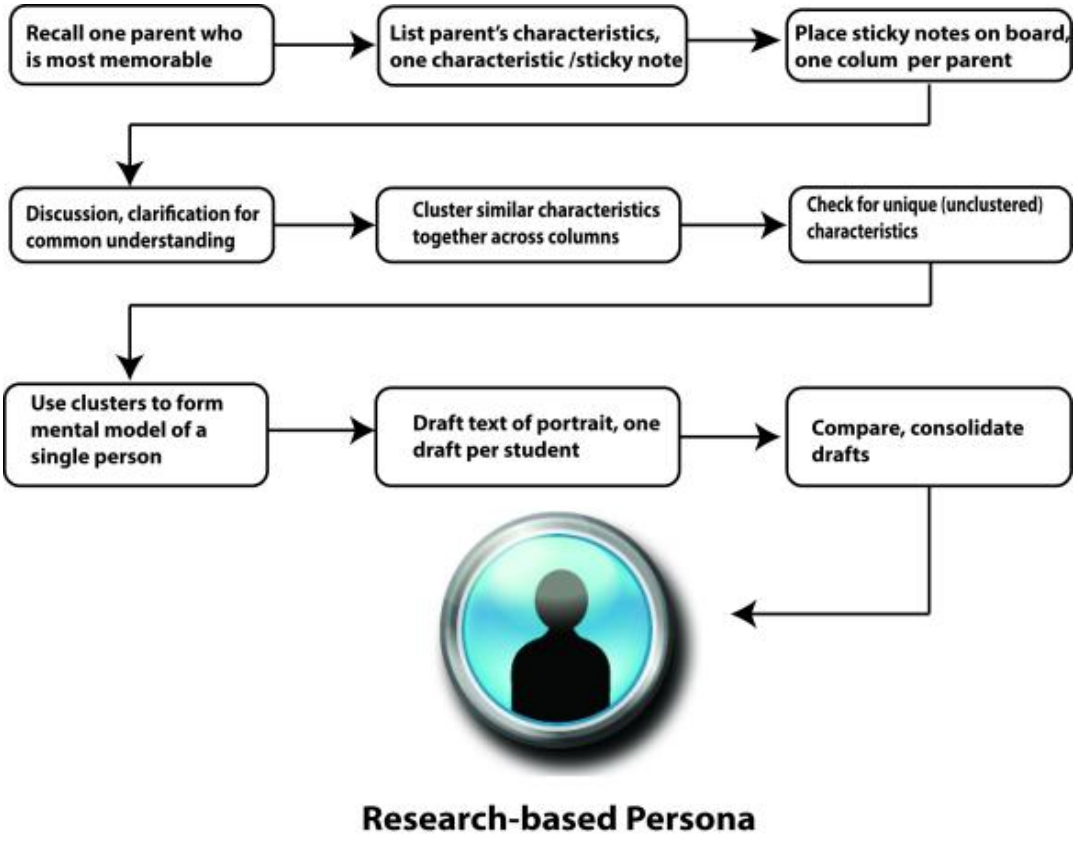

Figure 2. Creating research-based personas

I then had the students work as a team to cluster similar characteristics together across all of the columns. Sticky notes that were not placed into clusters were re-examined to make sure that they were indeed unique characteristics. After that, I had the students return to their seats and, working individually, form a mental model of a single person using the sticky note clusters on the whiteboard. I had each student write narrative representations of their mental models, then work as a group to compare and consolidate their narratives. The persona that emerged at the end of this one-hour process is shown in Figure 3. The

process was repeated in subsequent class sessions to yield a total of three distinct user personas for fall 2010.

Portrait of Mary

Mary is a 39 year old mother. She has an 8 year old son, Johnny, who was diagnosed with autism at the age of 2. Johnny understands what is being said to him, but is only able to say a few words and has trouble articulating them. When upset, he either pinches or tries to run away. Mary is a college graduate and a Certified Public Accountant (CPA). She spent the last six years researching treatment options and resources related to autism and special education on the Internet. She works closely with advocacy organizations and runs a support group for parents of children on the autism spectrum.

Mary is involved in her sons' education. She is always in contact with the school principal and teachers to follow up on his progress. She thinks that her son would be better served in a self-contained classroom, with more behavioral support than he is currently receiving. She is concerned that he does not have more than a rudimentary communication system with limited picture symbols to say "yes" or "no" "hungry" and "bathroom". She tries to share strategies she has learned through her extensive research, but doesn't think that they are listening to her. She wants to know more about the Federal and State regulations to get a better idea of what her rights are so she can be a better advocate for her child.

Figure 3. Research-based persona: Portrait of Mary.

Validation

Because the personas were based on focus groups conducted among Northern Virginia parents, there was a need to ensure that parents from other regions in the state shared similar characteristics, attitudes and behaviors. Liaising with client representatives at the Virginia Department of Education, the student design team formed a 16-member Parents' Panel drawn from a list of volunteers across the state and conducted a web-based survey of panel members in early-spring 2011. The survey consisted of seven items drawn from the fall 2010 focus group results. The survey asked panel members to rate their agreement with each item on a 5-point scale. The survey results affirmed most of the previous research outcomes, and contributed additional insights. The design team used those additional insights to construct a fourth user persona. All four personas served as key input to the design and development of the website prototype, with usability testing providing further validation.

Discussion

Research-based personas are an excellent tool for helping students gain empathy with the individuals they eventually will be serving. The opportunity to "walk in the shoes" of the client, patient or product user helps student to acquire and retain a holistic view of their intended audience. Though generally associated with education for the design professions, personas as a technique for creating empathy can be applied to education for other professions. In teacher education, for example, using personas enables aspiring teachers to better understand the challenges of the 21st Century classroom, particularly when those future teachers come from socio-economic backgrounds that differ dramatically from the schools to which they will subsequently be assigned (Kelchtermans, Ballet, & Piot, 2009; Cooper, 2007).

The collaborative team-based approach used to create personas enables the use of the technique in large classes in which group work supports the course's learning objectives. In law, medicine and special education, for example, the teaching case is a common instructional strategy in which students must delve into the characteristics, attitudes and behaviors of their "subject" (Stevens, et al., 2006; Hammond, 2009). Personas help to flesh out that "subject" into a real person which, in turn, can teach students what it is to be the lawyer/doctor/educator and what it is to be the client/patient/pupil. Medical education already makes use of the narrative when teaching students history-taking. Personas-writing could be readily integrated into that part of the curriculum. Persona-writing also offers an excellent professional development opportunity for teaching assistants (TAs) assigned to large classes, enabling them to enhance their group facilitation skills as they learn a new technique for developing patient- or client-related narratives.

Technology-based learning enhances the number of opportunities for integrating personas into professional education. Virtual teams working with threaded discussion boards, web conferencing tools, wikis or other communication and collaboration tools can use the same processes for creating personas as used in the face-to-face classroom. Institutions of higher education that have adopted enterprise-wide course management systems such as Blackboard, Moodle or Sakai, already have these collaborative tools in place. Studies have shown how professional education faculty have been using these tools to design learning tasks that support and promote student engagement (Sanders, Homer, Pell, & Croker, 2008; El Tantawi, 2010; Fahser-Herro & Steinkuehler, 2009). As such, creating personas in a virtual environment would complement existing online collaborative activities.

At the undergraduate level, research-based personas are closely aligned with some well-established active learning strategies used in a variety of disciplines. In psychology, for example, Fitch and Marshall (2008) describe the use of psychobiography as a teaching technique. This technique enables students to develop a comprehensive and enriched perspective on the study of influential figures by exploring the figure's personality, motivations, and relationship styles, traits that are also explored in research-based personas. Grauerholz (2007) focuses on student perspectives on the world through the lens of sociology and employs role-taking exercises to enable students to experience being members

of an oppressed group. DeWelde and Hubbard (2003) used an individualized variant of personas by having students in a sociology class write "coming out" letters in a sociology course exploring perceptions of what it means to be gay. In English literature, Orzulak (2006) employs collaborative theater exercises to support reading comprehension, vocabulary building and understanding of controversial issues, with role-playing exercises that require students to immerse themselves in the "personas" of particular characters. Smith (1999) emphasizes the value of role-playing and personality portraits to improved writing skills in any discipline.

In conclusion, research-based personas offer an excellent opportunity to integrate empathy into professional education and also undergraduate education in a variety of disciplines. I have found that teaching design students to create research-based personas enables them to remain focused on the individuals for whom they are designing, in order to better address the feature/function requirements of the product they are creating. This balance of human and functional requirements is as applicable to other disciplines as it is to the field of design.

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