

DESIGNING AUTHENTIC PERSONAS FOR OPEN EDUCATION RESOURCES DESIGNERS

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To guide designers developing open education resources for adults preparing for a high school equivalency exam, we developed six authentic personas that represented adults without high school diplomas. Our goal was to assist open education resources designers to develop empathy toward their learners and place themselves in their learners' shoes. The purpose of this design case is to share our journey in designing, constructing, and integrating authentic personas for the open education resources designers.

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INTRODUCTION

Effective instructional design relies on its ability to understand who the learners are. How can designers develop empathy toward their learners and put themselves in their learners' shoes? One way to gain empathy with an audience for whom a designer is designing is persona construction. Written in narrative form, a persona is a fictitious representation of a user developed to convey the needs, wants, and attitudes of the user in the context of the product or service that is being designed (Baek, Cagiltay, Boling, & Frick, 2008; Williams van Rooij, 2012). As an essential element of a design process, empathy is the intuitive ability to identify with other people's thoughts and feelings (Kouprie & Visser, 2009). Kouprie and Visser summarize an empathic design approach as a deep understanding of the learner's circumstances and experiences which involve "relating to," more than just "knowing about" the user (p. 441).

To assist designers developing open education resources (OER) for adults with a desire to prepare and pass a high school equivalency exam, we developed six authentic personas that represented adults without high school diplomas. Our purpose of this design case is to share our journey in designing, developing, and integrating authentic personas for the OER designers so they could wear their learners' shoes and view design decisions from the learners' perspective.

BACKGROUND

Since the mid-1990's, especially in human-computer interaction design, understanding and focusing on the end user during design has become very important. When designers visualize the end user of a design, they can influence the design process (Baek et al., 2008; Dahl, Chattopadhyay, & Gorn, 2001; Nielsen, 2013). Although placing the customer, user, or learner at the center of the design process can be difficult, especially when clients are unwilling to put resources toward this goal, relying solely on traditional descriptive information (i.e., demographics) about the intended audience does not help designers develop empathy toward the audience.

In user-centered design, user analysis should be an ongoing activity throughout the design and development process (van Rooij, 2012). Understanding the end user throughout the design and development process involves empathy where the designer puts him/herself in the shoes of the user. The word persona comes from Greek and means mask (Nielsen, 2012). Referring to its Greek roots, Nielsen explains that when designers construct personas, they assume the mask of the user so designers can understand the user and their needs in the development of new products.

In instructional design, personas are intended to make the learners real. The instructional designer then can develop empathy for the learner and use that empathic connection to view design decisions from the persona's (learner's) perspective (Williams van Rooij, 2012). Kouprie and Visser provide a 4-phase framework of empathy in design practice (Figure 1). A designer steps in the life of the user, wanders about for some time and then steps out of the life of the user with a deeper understanding of the user's motivations, values, priorities, preferences, and conflicts. In the discovery phase, a designer explores and discovers a user's situation and experiences. In the immersion phase, a designer, keeping an open mind and remaining nonjudgmental, names his users and wanders around in their world. In the connection phase, a designer resonates with the users and makes a connection on an emotional level by recalling his/her feelings and experiences. Finally, in the detachment phase, a designer steps back and makes sense of the users' world. Here, a designer reflects on new ideas and insights to help the users.

When designers construct personas, they build understanding and empathy for users, facilitate the design process, and ensure users' needs are met (Vestergaard, Hauge, & Hansen, 2016). Since personas are contextual (people and usage will be different in different contexts), one way to judge personas is their authenticity. Do personas appear realistic to the people they are supposed to represent? In constructing

personas for OER designers, our goal was to design and develop authentic personas.

SETTING

Designers for Learning (www.designersforlearning.org) is a nonprofit organization in the United States that coordinates service-learning opportunities for those who seek to gain experience in creating instruction to support important social causes. In 2016, Designers for Learning coordinated a 12-week course on Canvas Network, a massive open online course (MOOC) platform. During this service course, MOOC participants voluntarily engaged in a real-world, authentic instructional design project that centered on the design and development of OER for adults without high school diplomas. In this project-based course, designers gained instructional design experience, while developing instructional materials that were made available for free to adults without high school diplomas and adult basic educators in the Adult Learning Zone group on OER Commons.

As a design team, we worked together to construct six authentic personas that would help designers take an empathic design approach in developing instructional materials. Moving forward we identify ourselves by our first names—John, Jennifer, and Eric.

DESIGN PURPOSE

The MOOC consisted of seven modules (Figure 2). The authors—John, Jennifer, and Eric—were directly responsible for designing and developing Module 1—Analyze Your Learners & Instructional Opportunity—which is the focus of this design case. In Module 1, MOOC participants began to identify with their learners through empathic design. Designers explored the needs, goals, and constraints of the instructional opportunity. They discovered the six personas and began to engage with the 4-phase cycle of empathy (Figure 3). MOOC participants considered why adult learners

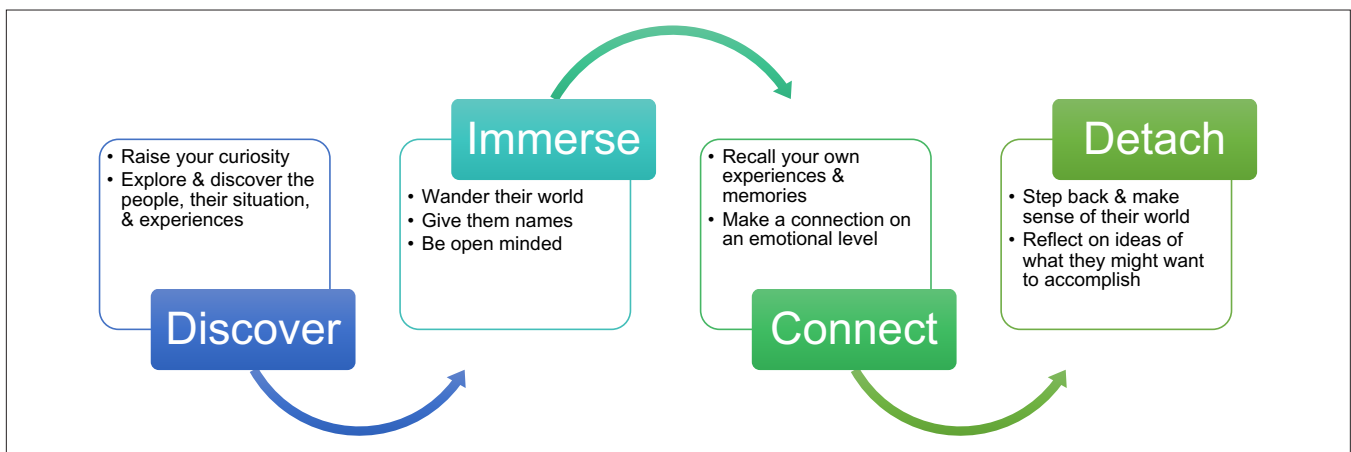


FIGURE 1. The 4-phase framework of empathy in design practice (from Kouprie & Visser, 2009).






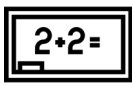




Course Content	
 <p>Help Forums</p>	 <p>Live Webcast & Recordings</p>
 <p>Module 0: Let's Get Started!</p>	 <p>Module 1: Analyze Your Learners & Instructional Opportunity</p>
 <p>Module 2: Synthesize Your First Design Decisions</p>	 <p>Module 3: Synthesize Designing the Instructional Experience</p>
 <p>Module 4: Simulate Drafting Your Design Proposal</p>	 <p>Module 5: Simulate Developing a Prototype</p>
 <p>Module 6: Evaluate Refining Your Design in Formative Evaluation</p>	 <p>Module 7: Decide Submitting Your Final Deliverable</p>

Image Credit: Icons made by [Freepik](#) from [www.flaticon.com](#)

FIGURE 2. The MOOC consisted of seven modules. Eric and John were responsible for designing Module 1—Analyze Your Learners & Instructional Opportunity.

may pursue Adult Basic Education (ABE) and reflected on the instructional context and how personas fit in that context.

We felt that it was important that the MOOC participants understood the relevance of Module 1 to design practice. Through exercises, reflections, and discussions, we emphasized that understanding and focusing on the learner during the design process to be essential to the success of the

final product. We helped designers experience how persona construction places us in our learners' shoes and is an ongoing activity throughout the design and development process.

For example, in a Module 1 reflection exercise (Figure 4), we asked a designer to select one of the six personas that resonated with him/her and then reflect on each phase of the 4-phase framework of empathy. For example, for the Discover phase, we prompted a designer to:

Raise your curiosity. Enter the world of this person. Explore and discover this potential learner, his or her situation, and experiences. Take 1-2 minutes to do this, and type a brief reflection in the text box below about what you discovered about this potential learner.

Why design six personas to help MOOC participants in their design process? In addition to wanting the designers to focus on adult learners and take an empathic design approach, we understood the constraints (e.g., time) of Module 1 would not allow designers to efficiently develop their personas. Vestergaard et al. (2016) noted that personas are a valuable design tool when designers are unable to participate with the intended audience. Lastly, in practice, John effectively has used persona construction with other projects. He has seen firsthand how personas can help stakeholders make design decisions in light of the impact on the targeted audience. John shared lessons learned with Jennifer and Eric in the preparation of a persona construction approach.

STAKEHOLDERS

Some stakeholders were crucial to the design and construction of the six personas. These stakeholders' roles and participation will be discussed in the Design Process section. Here we provide an overview of the important stakeholders.

Module 1 Designers

John and Eric designed and developed the 4-part Module 1. Although we worked closely together, John focused on Part 1—Discovering Your Learners and Part 4—Filling in the Gaps while Eric concentrated on Part 2—Learner Needs and Part 3—The Context.

Module 1 Developer

Jennifer developed each MOOC module in the Canvas Network. For example, John and Eric designed Module 1 using a Google Doc. They then gave the Google Doc to Jennifer who then built out Module 1 in Canvas Network.

Once Jennifer developed Module 1, John and Eric worked with Jennifer to revise Module 1.

ABE Subject Matter Experts

Four ABE subject matter experts (SME) provided invaluable feedback on early persona versions. Their feedback played an essential role in designing and developing authentic personas.

MOOC Participants

When designing and developing Module 1, our audience was the MOOC participants (OER designers). The MOOC participants engaged in the 12-week course with the intent to develop instructional materials that were made available to adult educators and learners in the Adult Learning Zone on OER Commons.

Adult Learners and Educators

The MOOC participants' audience was adult learners preparing to pass a high school equivalency exam. With the assistance of stakeholders, the six personas represented these adult learners who would benefit directly from the instructional materials. Related to the adult learners, adult educators

benefit from the instructional materials as the adult basic educators use the materials in preparing adult learners. To keep Module 1 clear and efficient, we focused the persona discovery and empathic design on the adult learners rather than dealing with two interrelated yet separate audiences.

DESIGN PROCESS

In developing six authentic personas, we went through four rounds of design. Table 1 summarizes the key design decisions made during each round. Before sharing our journey through each round, it is important to discuss our goal of designing and developing personas that were authentic.

Authentic Personas

How did we ensure that the six personas appear realistic to the people they were supposed to represent? Although we will fill in rationale and reasoning as we discuss each round, as an overview to provide context, we reviewed personas that had been developed for a similar project, reviewed the results of a subject matter expert survey, researched adults preparing for a high school equivalency exam, had ABE SMEs review early drafts, and examined the persona literature. In a previous Designers for Learning project, four personas

The screenshot shows a course page with a sidebar on the left containing 'Inbox', 'Help', and 'Course Catalog' icons. The main content area has a title 'What is persona discovery?' followed by a paragraph explaining the importance of understanding the end user. Below this is a section titled 'Persona Discovery: Your Learners' with another paragraph. At the bottom, there is a grid titled 'Learner Personas' containing six entries, each with a person icon and a name: Meet Crystalle, Meet Geoff, Meet Jamie Ann, Meet Malcolm, Meet Mary, and Meet Robert. Navigation buttons for 'Previous' and 'Next' are visible at the bottom of the grid.

FIGURE 3. In Module 1, MOOC participants discovered the six personas.

Question 1



Persona Photo

Scan the Internet for a photo to represent the persona you selected. There are no right or wrong answers. Select a photo that represents your perception of the persona. Cut and paste the link to the photo in the text box below. If you are having trouble finding a photo, you can search for openly licensed photos on the [Creative Commons website \(https://search.creativecommons.org/\)](https://search.creativecommons.org/).

Your Answer:

Based on the persona you selected, please reflect on each of the prompts below:

Question 2

Discover

Raise your curiosity. Enter the world of this person. Explore and discover this potential learner, his or her situation, and experiences. *Take 1-2 minutes to do this, and type a brief reflection in the text box below about what you discovered about this potential learner.*

Your Answer:

FIGURE 4. In a Module 1 Reflection Exercise, MOOC participants chose a persona and reflected on the 4-phase framework of empathy.

ROUND	KEY DESIGN DECISIONS
1	<ul style="list-style-type: none"> Started with four personas developed for a previous Designers for Learning project Developed Robert to represent a student who is incarcerated Added an image to each of the five personas Wrote persona narratives in the first person
2	<ul style="list-style-type: none"> Guided by the literature, changed persona narratives to the third person Used Creative Commons to edit persona images Shared the five personas with adult basic education subject matter experts
3	<ul style="list-style-type: none"> Reflected on SME feedback on all five personas Threaded SME feedback into the existing five personas Developed Mary as the sixth and final persona Used Flickr, under Creative Commons License for Commercial Use, to find images that evoked empathy of real people in real situations
4	<ul style="list-style-type: none"> Removed images from personas so OER designers could find images as a reflection exercise in Module 1 Completed all Module 1 reflection exercise so designers would work through the 4-phase framework of empathy

TABLE 1. Summary of key design decisions.

had been developed by an instructional designer familiar with persona construction and an ABE SME. These personas were focused on adults who had a desire to complete their general equivalency degree. These four personas provided a starting point.

In preparation for the MOOC development, Jennifer issued an online subject matter expert adult learning survey. Eighteen ABE SMEs completed the survey. SMEs responded to Likert-scale questions and open-ended questions. The survey data offered much insight into the world of our learners. For example, respondents shared that:

- Rural areas have little ABE resources and are starving for anything that can support instructors and learners.

- ABE students have not been successful in traditional school for some reason and the traditional school approach should be avoided.
- ABE students are underserved.
- The ABE context can vary greatly, including for the desperately underserved group of incarcerated students. As one SME commented, "I have taught both in and out of a correctional setting, so there needs to be understanding about the differences with teaching in that type of arena."

Other survey comments that helped to clarify ABE students' hopes, fears, and dreams and what they want to accomplish included:

- "...taking 'tests' is usually a source of anxiety..."
- "If an adult learner is attending an adult Ed class, I'd say motivation was high enough to get him there..."
- "Attitude toward formal education may be negative..."
- "Most of our students didn't experience success while they were in school!"
- "...lack of familiarity and comfort in educational contexts, fear of failing or being embarrassed..."
- "...lots of life experience..."
- "...has to be more than 'it will help you pass the GED'..."
- "They are busy and don't always see education as a priority: they are smarter than our educational system has allowed them to show..."

John was intrigued about incarcerated ABE students and began researching these learners. He found a newspaper article regarding an ABE program at a Texas County Jail. The story of one learner helped John develop Robert; a learner in the Corner Bend County Jail.

As the endpoint to Round 2, John provided four SMEs persona drafts. Their insightful and constructive

feedback, which will be detailed below, drove Round 3 persona construction.

We incorporated effective principles (i.e., providing direction that we interpreted, applied, and adapted situationally in context; Patton, 2011) from the persona literature in designing and developing the six personas. These principles will be described below. For instance, we used the third person instead of the first person. We gave each persona a name and had designers select an image. We tied each persona to the 4-phase framework of empathy in design practice.

Round 1

We received our initial design spark from the results of the SME survey and the four personas developed for a previous

Designers for Learning project. We reviewed Crystalle, Geoff, Jamie Ann, and Malcolm.

CRYSTALLE—A 19-year-old single mom who was expelled her junior year. Reads at seventh grade level and does well mastering material at her own pace

GEOFF—A 54-year-old man who grew up in a rural area. Has fought drug addiction and sees a GED as a way for a meaningful future. Knows he is not dumb but it takes time for him to understand things.

JAMIE ANN—A 31-year-old intelligent mom who has battled emotional problems and dropped out of school in her senior year. Struggles taking criticism and is missing background information that a high school graduate should have.

MALCOLM—Now 24 years old, he has been on his own since he was 16. After a 2-year prison stint, now part of a residential program which requires him to prepare for a GED. Does well when the instruction is connected to the real world.

From the SME survey, John was interested in responses centered on ABE students from rural areas and students currently incarcerated. These were ABE students that were not on his radar. From the four personas, Geoff represented an ABE student from a rural area. However, there was no persona that represented a student currently in prison or a county jail. John saw a need for a fifth persona. Using a newspaper story about a county jail ABE program, John developed Robert.

Working from the original four personas, John made two significant changes to the personas which carried over to the design of Robert. Influenced by the persona literature (Nielsen, 2012; Vestergaard et al., 2016; van Rooij, 2012), John added an image to each persona. The personas were already named, and the addition of images enhanced the personas' authenticity. Anticipating revisions to the early persona construction, John searched Google for images that could be used as placeholders. John wanted each persona to tell his/her story. The thought was that an engaging story would help designers walk in the shoes of the learners. To make the original personas more personal, John decided to change the persona narratives from the third person to the first person, and added more details to bring the personas to life. For example, Geoff now grew up in rural Nebraska instead of some general rural community. Figure 5 is the Round 1 version of Geoff and Figure 6 is the Round 4 version of Geoff, which became the final version less the image.

We discussed an appropriate number of personas. For John, going from four to five was starting to push the limit. Although the persona literature does not define a "right" persona number, John's prior experience with persona construction had shown that stakeholders can negotiate five

personas. We kept in mind that we wanted the designers to keep the personas in the forefront as they designed. If there were too many, we could not expect the designers to keep track of the personas. We had to balance having enough personas to accurately represent the learners while ensuring we did not overburden the designers. From his previous experience, John was steadfast that five personas were pushing the upper limit.

At this point, John and Eric began to brainstorm on how they would incorporate the five personas and engage the designers in the 4-cycle process of empathic design into Module 1. It was not practical to have designers develop their personas. We felt that there was not enough time and that designers would not have the resources to develop authentic personas. Our discussions focused on how to engage the designers with the personas within the context of Module 1.

Round 2

As John and Eric reviewed the five initial personas, Eric questioned how we stay away from stereotyping our learners. Eric's question was insightful. It is easy to wrongfully stereotype people preparing for a high school equivalency exam. In developing personas, stereotyping is a concern especially since humans naturally stereotype as a way of categorizing conceptions of others (Macrae & Bodenhausen, 2001). We wanted to avoid stereotypes as we felt this would take away from our goal of authentic personas. One way to avoid stereotyping was to ensure our personas were presented in narrative style, rather than written in bullet-point, and to ensure we differentiated our personas through their goals, motives, and expectations (Macrae & Bodenhausen, 2001; Turner & Turner, 2011). It was Geoff's specific story of heading up the family farm not a description of an ABE student in a rural community. It was Crystalle's story of struggling as a young single mom not a general description of a pregnant high school dropout.

Using Creative Commons, we reviewed and edited our images to ensure that we represented male and female and different ethnicities. Although crucial to personas, images would continuously come up as a contested discussion point. We share these discussions in depth in Rounds 3 and 4.

John had written the narratives in the first person. He felt that Geoff, Crystalle, Jamie Ann, Malcolm, and Robert telling their stories would be engaging. It would be a testimonial. Listen to my story. However, in reviewing the persona literature, first person narratives can take away from authenticity. It can be unrealistic for a person to have certain insights about him or herself (Bell, 1997). John reviewed the Round 1 personas to see if there were insights that would be unrealistic for a persona to have about him/herself. For example, Geoff (Figure 5) says, "I thought of myself as slow



www.twitter.com

GEOFF

My name is Geoff, and I am 55 years old. I grew up in a rural Nebraska community and was a quiet boy who was good with machinery but not very good in school subjects requiring a lot of reading. With five brothers and sisters, I was overlooked a bit. I sort of drifted away from school starting at about sixth grade. I vaguely remember the teachers and principal were unhappy about this and maybe spoke to my parents a couple times. It did not matter. I hardly went to classes anyway and failed a couple grades before getting old enough that I could quit going completely. I had been happy to stop because I found school difficult and it did not seem to relate to real stuff. My parents had not minded because I moped when I had to go to school. My down moods could get bad enough to be noticed and it worried mom and dad. Everyone needed to pitch in and it was better for me to be up and around so that I could help with things.

When I was a young man, I liked spending time all over the county where everyone recognized me as a fix-it man and appreciated my ability to keep farm equipment, cars, and trucks running well. I could put up a pole barn faster and sturdier than most guys. I just generally helped anyone with anything they needed. I did a good job at it. I was not a planner or a record-keeper though. I got, and lost, a job at the local hardware store. Although I was dependable and good natured, I was a little too quiet to be an effective salesman; more importantly, I could not keep track of inventory or handle money transactions quickly and correctly. After that, I went back to odd jobs – some of them paid pretty well because of my self-taught skills.

At 24, I moved to a city nearby where I found a job as a mechanic at a truck stop. I met and moved into an apartment with Aileen, who was a waitress there. I guess

Aileen got bored with me as she left me and went away with one of the independent truck drivers.

When Aileen left, I sank into a depression. Without her income to help pay for the apartment, I had to move to a cheap rooming house. Soon afterward, I was injured when I was changing a tire for a friend's tow truck. The jack broke, catching my right arm and hand under the truck wheel crushing my forearm and nearly cutting off my hand. Since the accident was not on the job, I was not covered by worker's compensation. To make matters worse, the injury did not heal properly, leaving me with a nearly useless hand for mechanical jobs. I had a lot of medical bills I could not pay, lost the room I was renting, and lost out on public benefits I might have received because I was too depressed to find out about them or apply for them. I am ashamed of it now. I became addicted to the pain killers prescribed after my injury. I lived on the streets for a number of years picking up odd jobs for a dollar here or there and drifting from one soup kitchen to another. When I could pay for pain killers I did. A number of times, though, I panhandled near the bus stops downtown for enough change to buy coffee, oxy and sometimes enough cheap wine to help him sleep through rainy or cold nights.

Recently, a social worker at one of the shelters connected with me and put me into a program that provides depression counseling, drug counseling, and a place in a residential facility. As my general and mental health have improved, I have reconnected with my parents and a sister and her husband. My brothers have all left the county for jobs elsewhere, but my parents want me to return home, care for them in their old age, then inherit and run the farm. They know, as I do, that farming is not the same as it used to be. I will have to be able to plan a budget, keep financial records, apply for government programs, make reports to the county using a computer-based system, and keep up with important information from many sources.

As part of the year-long residential program, I have to stay off drugs and alcohol. Plus I have to take GED preparation courses, take the GED, and apply for jobs. I see the GED as key to my plan for a meaningful future. I hope that as a 55-year-old man I will have more patience for studying now than I did in school. I certainly have a focused goal, but I am also concerned I might not succeed. I was tested at 8th grade reading and at 9th grade math. I thought of myself as slow for so long; I know I am not dumb but it takes me time to understand things and I hope it will not take me too long. When I interact with anyone, I feel that they are waiting impatiently for me to understand, to get what they are saying, and to respond. I have also missed out completely on the computer age, and I am, going to have to learn how to use a computer from the beginning. I am pretty sure using a computer is nothing like fixing a tractor or truck. I feel you have to be quick to use computers. The fact that I have spent many years in depression is also a challenge for me. I do not focus well for long periods. I expect the worst from myself. In spite of this, I am committed to giving the GED prep program my best try. The opportunity to go home, hold my head up high, help my parents and be a part of the community is strong motivation for me.

FIGURE 5. Round 1 version of Geoff using first person.



Retrieved from Flickr Creative Commons: Kenagy_Profile_520
https://www.flickr.com/photos/nrcs_oregon/

GEOFF

Geoff is 51 years old. He grew up in a rural Nebraska community and was a quiet boy who was good with machinery, really good in math, but not very good in school subjects requiring a lot of reading. With five brothers and sisters, he was overlooked a bit. He sort of drifted away from school starting at about sixth grade. He vaguely remembers the teachers and principal were unhappy about this and maybe spoke to his parents a couple times. It did not matter. He hardly went to classes anyway and failed a couple grades before getting old enough that he could quit going completely. He had been happy to stop because he found reading-based subjects very difficult and it did not seem to relate to real stuff. Geoff's parents had not minded because he moped when he had to go to school. His down moods could get bad enough to be noticed and it worried his mom and dad. Everyone needed to pitch in and it was better for Geoff to be up and around so that he could help with things.

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FIGURE 6. Round 4 version of Geoff which became the final version less the image.

for so long. I know that I am not dumb but it takes me time to understand things and I hope it will not take me too long.” Would Geoff come to this insight about himself? Changing to the third person narrative (Figure 6), this important insight is more authentic. “He thought of himself as a slow reader for so long. He knows he is not dumb, but it takes him time to understand things, that he reads.”

John found other examples that led him to reverse his previous design decision in Round 1, and he changed all the personas back to the third person narrative. In describing how she learns, Jamie Ann noted, “The problem for me is that I assume I understand everything once I learn a little, so I often race to another topic before I have fully grasped the current one.” In Round 2, this was changed to, “The problem for her is that she assumes she understands everything once she has learned a little, so she often races to another topic before she has fully grasped the current one.” We felt that third person narrative would enhance the persona authenticity.

A constraint emerged in Round 2. Canvas Network requested a completed module to review. Jennifer asked Eric and John if they could complete Module 1 (including personas) so it could be presented to Canvas Network. We were up to the task with a bit of trepidation. Although we were confident in our instructional design abilities, we were not so confident with our subject matter expertise. Subject matter expertise became a turning point in our design and development of the personas and Module 1.

Eric had been adamant that we needed SME input for our module. None of us were confident in our knowledge of ABE. In an online design conference for the first time in the design process, Jennifer invited adult basic education SMEs to provide feedback. Although the call was to review the status of all modules, with the upcoming Canvas Network review, the focus was on Module 1. The SMEs were intrigued with our personas and appreciated that we were providing a face and story to the ABE students. As a call to action, John emailed each SME the five personas. SMEs reviewed and then provided feedback via email.

Round 3

Having ABE SMEs participate in the online design conference was helpful. The conference marked the first time that Jennifer was able to organize and bring SMEs together. To this point in the persona construction, we did not have SMEs to review the personas. Overall, the four SMEs were enthusiastic about the five personas. Via email, they provided invaluable, detailed, and constructive feedback that helped our goal to construct authentic personas. Highlights of their feedback are as follows:

CHERYL—There needs to be a student who has a discrepancy in abilities between reading and math. Students will be

high in one area and very low in the other. The discrepancy could have a lot to do with why they could not be successful in school.

ANNELEISE—Need the student who hated school and dropped out. She was bored sitting in class and dealing with idiot kids and teachers. Two years later, “Wow, that was a mistake. I need my GED so I can make more money.”

HEATHER—Missing a student who has a high school diploma based on social promotion and not academic mastery. Student is now attending a GED prep program because when he took the community college placement exam, he scored so low that he was referred to the GED program. If he doesn’t attend the program, he is forced to pay for remedial math and English classes.

KEYA—Need to add an 18-22-year-old who has experienced interrupted schooling due to migrating to the United States to find work in harvesting crops. The student may have low levels of English language proficiency or may be illiterate. She is unable to meet high school requirements for lack of proficiency in math, technology, and English. Possessing poor academic skills because of interrupted schooling (or no schooling), her academic needs include support in developing conversational English and academic literacy (academic reading and writing).

Although we appreciated the great feedback, we found ourselves in a design dilemma. John was adamant that five personas were enough. With the SME feedback, we were looking at a potential of nine personas. Nine would be too many. Upon further reflection on the feedback, it was decided that Keya was the only SME who described a new persona. The other feedback could be threaded into the existing persona narratives. John revised Crystalle to include Heather’s points. Anneleise’s recommendations aligned nicely with Jamie Ann. We had already settled on Jamie Ann as highly energetic with concentration difficulties. Finally, to incorporate Cheryl’s reactions, we noted that Geoff (Figure 6) was tested at a 6th-grade reading level and a 10th-grade math level. The sixth-grade reading level fit well with Geoff’s challenges in needing time to understand things that he reads.

Inspired by Keya’s response, Mary (Figure 7) became our sixth and final persona. Her family migrated from Mexico when she was 12 years old. After seven years, the family finally can settle down. Although Mary is somewhere in the middle on the illiterate to low-level English language proficiency scale, she is bright, talented, and very artistic often sketching the landscapes she has experienced on her travels.

We continued to struggle with images for our personas. We understood the importance of giving each one a face. We just could not find what we believed were the right faces. John returned to the persona literature for guidance. Images



Retrieved from Flickr Creative Commons: Cordelia Persen
<https://www.flickr.com/photos/25061723@N00/>

MARY

Mary is 19 years old. When Mary was 12 years-old, she and her family migrated to the United States from Mexico. Her mother, father, and older brother found work harvesting crops throughout the west and southwest – California, Arizona, New Mexico, and Colorado. Once Mary was old enough, she also began working in the fields. The family has always been mobile, moving, seasonally, to where the work is. Although Mary regularly attended school in Mexico, in the U.S. her schooling has been interrupted at best, and non-existence at worst. Moving from place to place made attending school regularly difficult and finishing high school impossible.

Finally, after 7+ years, it appears that the family will have an opportunity to settle down in one place. Mary is a bright and talented woman. She is very artistic, often sketching the landscapes she has experienced on her many travels. Mary would like to drastically improve her English, get a driver's license, and find a job where she can use her artistic talents. Witnessing firsthand her parent's health issues, she wants healthcare. Mary sees preparing for and completing a GED as an opportunity to reach her immediate goals.

Mary is somewhere in the middle on the illiterate to low level English language proficiency scale. As of right now, she is unable to meet high school requirements for lack of proficiency in math, technology, and English. Her poor academic skills are a direct result of her interrupted schooling. Mary loves to read history and short stories and write poetry. She is eager to learn. Mary needs to develop proficiency in conversational English as well as academic literacy in reading and writing.

FIGURE 7. Round 3 version of Mary.

evoke empathy of real people in real situations (Nielsen, 2012). Therefore, we looked to place Geoff, Crystalle, Jamie Ann, Robert, Malcolm, and Mary in a context that said something about their everyday life. Mary is standing where we can put ourselves in her shoes. We can relate to her and her family traveling and finding work in California, Arizona,

New Mexico, and Colorado. Geoff (Figure 6) is standing in the fields of the family farm.

Our other challenge was where to find images of real people in real situations. Recommended by the literature (Nielsen, 2012), John went to Flickr, under Creative Commons License for Commercial Use. Flickr provided an opportunity to search additional images.

Round 4

We continued to tweak Module 1 reflection and discussion activities. With the help of the SMEs, we were confident that Geoff, Malcolm, Mary, Robert, Crystalle, and Jamie Ann were authentic personas. However, we still had difficulty finding the most authentic persona images.

Jennifer and John had a long discussion regarding the persona images that we agreed on in Round 3. We both agreed that images were critical. At the same time, we realized that choosing an image for a persona is very difficult. It is a strange feeling to go to Flickr, choose an image, and decide that the image is Geoff or Robert, or Mary. We were not comfortable with being the judge of what our six personas would look like. Our uncertainty with persona images resulted in an opportunity to involve MOOC participants in the persona construction.

From the beginning, our goal was to have the MOOC participants focus on adult learners and take an empathic design approach. We understood the constraints (e.g., time) of Module 1 would not allow designers to develop efficiently their personas. Jennifer proposed that, in Module 1, we introduce Geoff, Robert, Malcolm, Mary, Crystalle, and Jamie Ann without images and then have the OER designers find an appropriate image (Figure 3).

In a Module 1 reflection exercise (Figure 4), we directed the designer to select one of the six personas that “most resonates with you.” We then led the designer as follows:

Scan the Internet for a photo to represent the persona you selected. There are no right or wrong answers. Select a photo that represents your perception of the persona.

In Module 2, we provided a lesson on open source images. For this Module 1 reflection exercise, we directed the participants to the Creative Commons website to cut and paste a photo or photo link into a text box.

As described earlier, the reflection exercise continued with designers working through the 4-phase framework of empathy in design practice (Figure 4). Our goal was to provide an engaging environment where the OER designers could discover, immerse, connect with the persona and then detach to come up with ideas to help ABE students.

REFLECTIONS AND CONCLUSION

Our goal was to design and develop six authentic personas that represented adults with a desire to prepare and pass a high school equivalency exam. Guided by authentic personas, OER designers could wear their learners’ shoes and view design decisions from the learners’ perspective. To design authentic personas, we benefitted from the four previously developed personas, results from the SME survey, ABE SME feedback, and the persona literature. We were able to draw

from multiple resources. Drawing from these resources, we ensured that Geoff, Robert, Malcolm, Jamie Ann, Crystalle, and Mary appeared as realistic representations.

Through our four rounds of iteration, we worked hard to make the personas authentic. The 4-phase framework of empathy in design practice provided a step-by-step approach for designers to discover, immerse, connect with personas and then come up with ideas to help the ABE learners. Because we pulled from multiple resources, we were confident that our personas were authentic. However, were our personas engaging? We told the personas’ stories and included images to evoke empathy of real people in real situations. To avoid stereotyping, we presented in narrative style, rather than written in bullet-point. We differentiated our personas through their hopes, dreams, and fears. We wrote in third person as it can be unrealistic for personas to have specific insights about themselves. The proof though would be in how the designers used the personas. If designers engaged with the personas as they designed, then, yes, the personas were engaging. In essence, time would tell. By having MOOC participants choose persona images, we were more confident that we had developed an engaging environment.

Forty MOOC participants posted a completed learning resource to OER Commons (<https://www.oercommons.org/groups/adult-learning-zone-a-designers-for-learning-proje/626/>). In each module except for Module 6, through a reflection exercise, participants identified a persona(s) that continued to be their focus as they considered the audience for their instruction. For every module where designers identified the persona used, Crystalle, Geoff, Jamie Ann, Malcolm, Mary, and Robert were used. We found it interesting that in every module there were designers who focused on more than one persona. In light of the SME feedback that we received in Round 3, we could see why designers would consider more than one persona. Except for constructing Mary, most of the SME feedback was threaded into the existing persona narratives. If a designer was focusing on an adult learner who has a discrepancy in abilities between math and English, he/she might have connected with Geoff. However, the designer may not have had the intention of designing OER for an adult living in a rural community like Geoff does. Therefore, this may have led the designer to revise Geoff or construct a new persona.

In addition to reflection exercises, designers participated in discussions in Modules 1–6. In Module 1, with the persona chosen, participants were asked: how can you provide opportunities for this learner to engage in learning experiences and activities that can prepare this learner for his or her goals? In subsequent module discussions (e.g., Module 2—Your first design decisions, Module 3—Designing Instructional Experiences, and Module 5—Prototype Showcase), although not directly prompted to discuss their

personas, the 40 designers who completed and posted open education resources often referenced their persona(s) and how the OER was designed in light of the impact on the persona. We were encouraged by this as our goal was to develop authentic personas that would help designers take an empathic approach to designing instructional materials.

For example, in reflection responses, designers commented that personas appeared realistic to the people that they are supposed to represent. One designer wrote, "I've known many people like Geoff—generally loners—but they want to connect with others, be part of a greater community. Competent, but humble." Another designer reflected, "I chose Geoff, simply because I grew up surrounded by such folks in rural Ohio, and his path was one I could have easily found myself following."

One designer decided to change Mary's name so it would make her appear more realistic. She clarified, "Maria (she is, after all, Mexican—surely her name was Maria until she came to the US and people started to call her Mary) has led a very unstable life so far as far as education and home."

Working with stakeholders was both gratifying and challenging. We have discussed the five most relevant stakeholder groups. Also, Jennifer had to work directly with the Canvas Network team and we all had to work with the other volunteer MOOC designers and facilitators. Each MOOC module was designed by a different person or team. Eric and John had to ensure that Module 1 set the stage for the other modules. We had to make sure that the other module designers embraced the empathic design approach. We accomplished this during our online design conferences. With all the module instructional designers together on the online conference, we all discussed how we would interweave the empathic design process through all the modules.

What ultimately helped us accomplish our design goal was our 3-person design core. Driven by his experience using persona construction and an empathic design process, John led the persona design and development. Jennifer had the pulse of the stakeholders especially the subject matter experts who played such a critical role in the final

personas. Eric was a great voice of reason. His questioning on how we stay away from stereotyping our personas and his persistence that we needed SME input resulted in increased confidence that we developed authentic personas. Together, we worked effectively and efficiently to embrace stakeholder perspectives and design and develop the six personas.

REFERENCES:

- Baek, E. O., Cagiltay, K., Boling, E., & Frick, T. (2008). User-centered design and development. In J. M. Spector, M. D. Merrill, J.J. van Merriënboer, & M. F. Driscoll (Eds). *Handbook of Research on Educational Communications and Technology* (3rd ed., pp. 659-670). New York, NY: Routledge.
- Bell, M. S. (1997). *Narrative design: Working with imagination, craft, and form*. New York, NY: W. W. Norton & Company, Inc.
- Dahl, D. W., Chattopadhyay, A., & Gorn, G. J. (2001). The importance of visualisation in concept design. *Design Studies*, 22(1), 5-26. [https://doi.org/10.1016/S0142-694X\(99\)00028-9](https://doi.org/10.1016/S0142-694X(99)00028-9)
- Kouprie, M., & Visser, F. S. (2009). A framework for empathy in design: stepping into and out of the user's life. *Journal of Engineering Design*, 20(5), 437-448. <https://doi.org/10.1080/09544820902875033>
- Macrae, N. C. & Bodenhausen, G. V. (2001). Social cognition: Categorical person perception. *British Journal of Psychology*, 92, 239-255. <https://doi.org/10.1348/000712601162059>
- Nielsen, L. (2013). *Personas-user focused design* (Vol. 15). London, UK: Springer Science & Business Media. <https://doi.org/10.1007/978-1-4471-4084-9>
- Patton, M. Q. (2011). *Developmental evaluation: Applying complexity concepts to enhance innovation and use*. New York, NY: The Guilford Press.
- Turner, P., & Turner, S. (2011). Is stereotyping inevitable when designing personas? *Design Studies*, 32(1), 30-45. <https://doi.org/10.1016/j.destud.2010.06.002>
- van Rooij, S. W. (2012). Research-based personas: Teaching empathy in professional education. *The Journal of Effective Teaching*, 12(3), 77-86.
- Vestergaard, L., Hauge, B., & Hansen, C. T. (2016). Almost like being there; the power of personas when designing for foreign cultures. *CoDesign*, 12(4), 257-274. <https://doi.org/10.1080/15710882.2015.1127385>