

Creating Personas on Which to Build Services for Latinx Users: A Proof of Concept

Denice Adkins, Heather Moulaison Sandy & Edwin Nii Bonney

To cite this article: Denice Adkins, Heather Moulaison Sandy & Edwin Nii Bonney (2019) Creating Personas on Which to Build Services for Latinx Users: A Proof of Concept, Public Library Quarterly, 38:1, 50-71, DOI: [10.1080/01616846.2018.1528573](https://doi.org/10.1080/01616846.2018.1528573)

To link to this article: <https://doi.org/10.1080/01616846.2018.1528573>



Published online: 08 Oct 2018.



Submit your article to this journal [↗](#)



Article views: 1312



View related articles [↗](#)






View Crossmark data [↗](#)



Citing articles: 3 View citing articles [↗](#)



Creating Personas on Which to Build Services for Latinx Users: A Proof of Concept

Denice Adkins ^a, Heather Moulaison Sandy ^a, and Edwin Nii Bonney ^b

^aSchool of Information Science & Learning Technologies, University of Missouri Columbia, Columbia, Missouri, USA; ^bEducational Leadership and Policy Analysis, University of Missouri Columbia, Columbia, Missouri, USA

ABSTRACT

The current article presents a proof of concept wherein personas were created that could support library services and collections for Latinx community members in the Midwestern United States. Personas are first described and their use in the library literature is explored. The reproducible method employed in creating the personas is then presented in detail, followed by a short discussion of the results of the persona creation. Next, a high-level discussion of the project is presented, as well as reflections on how librarians can adapt this process in efforts to design products and services to meet the needs of specific groups.

ARTICLE HISTORY



Received June 2018
Accepted September 2018

KEYWORDS

Latinx users; personas;
public libraries; user
experience; user research

Public libraries have the responsibility to serve their clientele, even if they may not be familiar with those potential users or understand the library and information needs those potential users have. The IFLA Manifesto directs that “Specific services and materials must be provided for those users who cannot, for whatever reason, use the regular services and materials” (IFLA 1994, para. 6). This presents a challenge for public libraries, particularly those in areas experiencing new immigration patterns. Public librarians may not know what services and materials are needed by new communities, and this may present a barrier to their ability to serve those communities.

Persona design is one strategy that has been used to familiarize designers with the users of their products and services. A persona is a fictional user based on case histories of multiple real people (Sinha 2003). The set of personas capture the goals, needs, and desires of members of a particular group to aid designers in developing a service or product. The temptation for designers is to create a product that either meets the needs of the designers themselves, or that includes features simply because the features are possible; personas allow designers to focus, instead, on understanding a few archetypical users and on building products to meet their needs and address their concerns (Cooper 2004).

CONTACT Edwin Nii Bonney  enbnq6@mail.missouri.edu  Educational Leadership and Policy Analysis, University of Missouri Columbia, 202 Hill Hall, Columbia, MO 65211

Published with license by Taylor & Francis. © Denice Adkins, Heather Moulaison Sandy and Edwin Nii Bonney

In this respect, personas might be useful to public libraries trying to develop those “specific services and materials” needed by their populations. Persona design, however, is not regularly used by libraries for designing their products and services. As Holgersson, Alenljung, and Söderström (2015) point out, when designing e-government services, personas can make “it possible to have a more equitable representation of citizens in the public e-service development process” (6). When personas are designed for libraries, they tend to represent relatively mainstream populations (e.g., music listeners, undergraduates, single men; see for example Lee and Price 2015; Thompson 2017; Zaugg and Rackham 2016) not focusing on diverse or multicultural populations. Previous research on information behavior of racially or ethnically diverse populations suggests that these users’ behaviors can differ from mainstream white populations’ information behavior (c.f., Japzon and Gong 2005; Koontz 2005; Whitmire 2003). Personas developed by or used by libraries could easily represent underserved community members when librarians seek to devise services for non-mainstream users. The present research project, presented here as a proof of concept, sought to understand if the persona design process could be used to provide realistic personas for a non-mainstream population that would be useful for public libraries. Additionally, it sought to create a template for the persona design process that could be used by public library personnel for their own projects seeking to address the needs of specific user groups, including members of non-mainstream communities.

Literature review

What are personas and how are they used?

As mentioned above, a persona is a construct – it is a fictional, archetypical *character*, based on information representing real people, combined in a way that is representative and created for the purposes of understanding user needs and motivations. A persona, therefore, is not a single (real) person. To make the persona seem more real, it is given a name (or a *type*, e.g., “Busy Single Guy” (Thompson 2017)), a photo, and a narrative (Miaskiewicz and Kozar 2011). Because building a product or service for an unknown population is challenging, personas help concretize the population in question. “Personas add details about interests, emotions, settings, and needs, including the goals of the people in using the software, thus providing additional insight into user needs” (Crowston 2015, 3). Personas put a human face onto design goals, helping designers understand who will use their products and what needs they might have; instead of representing simply demographic data points (Thompson 2017), they support an understanding of priorities and likely include “details about interests, emotions, settings, and needs,

including the goals of the people in using the software, thus providing additional insight into user needs” (Crowston 2015, 3). The difference between Pew Research Center (<http://www.pewresearch.org/>) data and personas might be that Pew data shows trends among lots of people, but personas will distill that information down to be reflected in a few representative individuals, and will also explain the thoughts, feelings, and motivations of these fictitious characters from which designers can extrapolate when faced with creating new systems or features (Cooper 2004).

Personas were first developed in marketing (Johannsen 2015; Pruitt and Grudin 2003) before being adopted by Cooper (2004) as the foundation for interaction design. In interaction design, a product might serve millions of people, each of whom have unique preferences and differences. Kevin O’Connor notes that “as the marketplace shifts from a mass manufacturing to a mass customization model, customers [sic] needs and desires are more accurately identified through the development of personas rather than through demographic data” (O’Connor 2011, para. 1). A large mass of demographic data presents challenges for understanding users’ needs. While the mean is the most accessible summary descriptor for a large data set, the mean is not an adequate descriptor of the various individuals included in that data set. To overcome this, product and service designers collect quantitative or qualitative data on a sample of their target group (Pruitt and Grudin 2003). With this data they create “a cast of personas” that reflects the needs of their target (Sinha 2003).

Referencing research in the field, Holgersson et al. note “A typical persona should have first and last name, a photo, and a narrative text including, e.g., work role, a typical day, household and leisure activities, main tasks, encountered problems, demographic attributes, concerns, technology attitudes, and communication preferences” (2015, 3). The personas then serve as a guiding frame in designing products and services to meet the needs of their target group, along with demographic data. “Personas used alone can aid design, but they can be more powerful if used to complement, not replace, a full range of quantitative and qualitative methods” (Pruitt and Grudin 2003, 3). Effective personas are realistic and representative of the target group. While a few personas “do not cover every conceivable user”, they highlight the main needs and expectations of the target group (Pruitt and Grudin 2003, 10).

Personas serve a variety of purposes in technology- and market-based research. They are used to highlight the needs of consumers and their consumer behaviors. They help designers focus on a specific target, so that it becomes clear “who is and consequently who is not being designed for” (Pruitt and Grudin 2003, 10), that is, that design is being done to meet the needs of a specific population – not the designer, and not a stereotype or the designer’s view of that population (Cooper 2004). “They can amplify the effectiveness of other methods. Personas might help a designer focus.

However, their greatest value is in providing a shared basis for communication” (Pruitt and Grudin 2003, 3). At least one researcher found that when his students used personas in their design process, the end product was more user-focused. The personas made the needs and expectations of the target group clear and explicit (Long 2009).

A number of freely accessible resources exist to guide both experts and novices in the creation of personas (e.g., Calabria 2004; “How to Create Personas” 2017; “Personas” 2018) as well as paid options (see Appendix A for examples). Specifically, one straightforward and freely available web resource that includes examples is the United States’s usability.gov website (<https://www.usability.gov/how-to-and-tools/methods/personas.html>). The steps to persona creation outlined are the following:

- **Conduct user research:** Answer the following questions: Who are your users and why are they using the system? What behaviors, assumptions, and expectations color their view of the system?
- **Condense the research:** Look for themes/characteristics that are specific, relevant, and universal to the system and its users.
- **Brainstorm:** Organize elements into persona groups that represent your target users. Name or classify each group.
- **Refine:** Combine and prioritize the rough personas. Separate them into primary, secondary, and, if necessary, complementary categories. You should have roughly 3–5 personas and their identified characteristics.
- **Make them realistic:** Develop the appropriate descriptions of each personas background, motivations, and expectations. Do not include a lot of personal information. Be relevant and serious; humor is not appropriate (Personas 2018, “Best Practices”).

Also included on the usability.gov webpage is a series of questions persona developers should ask themselves, a list of elements to be included in the personas, and an example taken from the U.S. Department of Agriculture’s (USDA) Economic Research Service (ERS) (Personas 2018).

Finally, some developers are endorsing the notion of repurposing their personas for other uses or projects. Personas are normally designed for specific interaction design projects. The researchers working for the data sharing service Data Observation Network for Earth (DataONE) created 11 personas to describe users of their system. They realized, like Holgerson et al. (Holgerson, Alenljung, and Söderström 2015), that these personas might be helpful for other services or projects. “While these personas were developed specifically for DataONE, the descriptions are of research work and lives more generally. As such, they may be useful for others developing systems or programs for those involved in research data management” (Crowston 2015, 7). Personas are often written generally enough that they might be useful for multiple systems with

differing goals but which nonetheless serve the same core user demographic. In this way, although personas will likely be created as part of the design process, they also have the potential to be borrowed from existing projects that have already done the work laid out above.

Personas as the basis for library products and services

Personas have been used in library projects for designing services and tools, understanding the needs of users, and marketing library services to those users. Researchers at the University of Washington, for example, built personas to support improvements to commercial music information retrieval (MIR) systems. They found that previous studies had relied either on user studies that grouped users based on demographics or on their use of a particular system, instead of focusing on individuals who might use a variety of platforms. Personas were seen as a way to approach design of systems more holistically than standard approaches that relied largely on shared demographics (Lee and Price 2015). Holt Zaugg and Scott Rackham, librarians at Brigham Young University, worked with advanced undergraduate students to analyze and collect data and formulate coherent personas describing undergraduates who visited the library, with the goal of designing services for those undergraduate students. Their personas were created by undergraduate students who used assessment data and then additional methods such as interviews and focus groups to gather information. They further describe how the personas were implemented by librarians in developing and refining library services (Zaugg and Rackham 2016).

In libraries, personas can help address how to make the library accessible to different target groups. Spenser Thompson (2017) considers personas to be an excellent tool for marketing library services. The use of personas in the marketing process “contrasts with approaches that start with ‘product-first’ thinking or an exclusive reliance on demographic groups” (17). Thompson advocates a two-step process when creating personas for libraries. First, he suggests library employees focus on observing (he describes this as a “highly qualitative process” (18)), and then focus on deciding the answers to specific questions as a group, asking questions like “How do we reach Busy Single Guy when he is a stranger? Or how do we get him to be more engaged with our library than he is (meaning, what additional services can we get him to use)?” (18).

Personas in design for non-traditional users

Information professionals and information scientists have also used concepts loosely related to personas (along with the idea of archetypes) to explore topics ranging from training and continuing education (Landis 2006) to how best to understand medical patients at different stages in their therapy to

improve coaching (Achterkamp et al. 2018). Personas can also be used in the creation of e-services in any organization wanting to employ user-centered design methodologies for developing web services for external users (Hjalmarsson, Gustafsson, and Cronholm 2015). Research was carried out in Sweden, for example, in the e-government sector to understand how municipalities would react to using personas for the creation of e-services. After explanations of how personas work and might capture aspects of non-traditional user groups, the response of municipality employees was positive (Holgersson, Alenljung, and Söderström 2015).

In the United States, the Latinx population has been steadily on the rise (see Flores 2017). *Latinx* is a gender-neutral term used to refer to men (Latinos), women (Latinas), and non-gender-binary people of Latin American descent living in the United States; these people generally are of a number of racial and ethnic backgrounds – many speak Spanish (and are referred to as “Hispanic” along with Spanish-speakers from other parts of the world such as Europe) and are descended from the indigenous peoples of the Americas; some speak indigenous languages or English; Latinx people may be of any race. Populous states in the southern part of the United States and along the coasts are home to most of the country’s Latinx population, with California, Texas, Florida, New York, Illinois, Arizona, New Jersey, Colorado, New Mexico and Georgia identified as the top 10 states in terms of Latinx population (Flores 2017). Because of the large Latinx populations in these areas, the bulk of the research on Latinx people is carried out in these states. Relatively little research has been conducted on the information needs of Latinx people in the centrally-located and low-population density Midwestern United States such as Illinois (which is largely rural outside of Chicago), Iowa, Kansas, Missouri, and Nebraska. Particularly in rural areas of these states, Latinx people are construed to be a non-traditional user population. Library and information needs of the United States Latinx population have been written about extensively, but most of that literature focuses on areas with traditional and long-established Latinx populations, such as the ones in California, Texas, and New York (Adkins and Moulaison Sandy 2017). The current research project puts forth the idea that personas for Midwestern Latinx community members may help librarians in these areas recognize unique needs and design services accordingly. The same may be true for other populations in other areas, be they recent immigrant communities, linguistically diverse communities, or culturally diverse communities.

Research questions & objectives

The current project began as a grant funded research initiative, an OCLC/ALISE (Association of Library and Information Science Education) research project to create personas representing Midwestern Latinx community members and their use of the mobile, social web for information seeking. Given

that persona design methods have been used successfully in industry, in information science research, and in academic libraries (Johannsen 2015), we believe that it might also be useful for public libraries, and particularly for making harder-to-reach populations more relatable to public librarians wishing to build services and collections in support of the community.

The research questions we addressed with this project were 1) How can the persona design method be used to describe non-mainstream populations?, and 2) How might the persona design method serve as a useful contribution for public library services? Our unit of analysis was the persona design method itself, as documented in the literature and as we experienced it. On the assumption that, if successful, this process could be used for diverse and unique populations, our research objective was to create a template for designing such a process. An additional objective was to share our personas and our persona design process with public librarians for their own use, including providing ideas for services and marketing strategies to reach the user base we studied.

Methods

Researchers at the University of Missouri undertook to research and develop personas to support the creation of services for Latinx Midwesterners through public libraries; specifically, this project wanted to incorporate aspects of information behavior and information seeking and use as mediated through web-enabled devices. This project engaged in a series of replicable steps that supported industry-consistent approaches to persona design using data from a series of interviews with Latinx informants located throughout the Midwestern states of Illinois, Iowa, Kansas, Missouri, and Nebraska. This article work done as a proof of concept; it reports on the steps as a kind of *descriptive case method*, since it presents the persona design process as a model with the potential to be applied and subsequently assessed. “Case method is an instructional technique whereby the major ingredients of a case study are presented to students for illustrative or problem-solving purposes” (Merriam 1985). The current project is presented to *librarians* in the context of the scholarly communication process, in lieu of to students in a classroom, to illustrate the potential for creation and use of personas in practice. The contribution of this article to the library literature is the exploration of the method specifically within public libraries and the value of personas for clarifying the needs of diverse user groups. We are not looking at Latinx informants or even the personas *per se*, so much as the feasibility of the creation and use of the personas and the potential for their utility in public libraries.

Persona design method adopted

Phase 1: gathering initial data

The first step of our project was a thorough review of the literature related to our population of interest, which we divided into three sections: the population of interest, the geographic area of interest, and the topic of interest. Our population was the Latinx population, both immigrant and native to the United States. Our area of interest was the Midwestern United States, particularly rural areas. Our topic of interest was the use of libraries and information and communication technologies (ICTs). In isolating these three sections, we were able to envision what our eventual personas would look like: they would represent Latinx people, living in the urban and rural Midwest, as they used (or did not use) libraries and ICTs to meet their information needs.

The literature covering these areas was extensive, so the research team divided coverage of specific topics, with one member focusing on each aspect. Considerable overlap among articles emerged, so in order to reduce duplication of effort, team members created brief summaries of the research areas and indicated how individual articles might contribute to the larger project.

In addition to published literature related to the topics, several data sets were identified that provided some background information, including data sets available from the Pew Research Center, the University of Missouri's Cambio Center, and the United States Census Bureau. This data served to contextualize the population. For instance, Pew reports of national Latinx social media use could be broken down by region, allowing the team to isolate Midwestern respondents' use in developing a snapshot of trends in usage.

After the literature review and investigation of available data, a gap was identified in the knowledge base regarding how Midwestern Latinx community members might use ICTs and libraries to meet their information needs, and there was a further gap in discussing the information needs of the relatively new Latin American immigrant population to the Midwest. The University of Missouri's Cambio Center, a center that facilitates faculty and student research with the Midwestern Latinx population as part of the continuing documentation of Latin American immigration into the Midwest, was identified as a partner in this project. As Phase 1 data collection was wrapping up, the researchers began planning for subsequent stages of the project. Part of that planning included securing funding through the form of the small research grant, as mentioned, that was awarded by OCLC/ALISE.

Phase 2: planning for data collection

Gathering data and information in Phase 1 provided a certain amount of insight used in developing personas; it also helped in identifying questions and data points to explore further. The researchers decided that the best strategy was to

interview members of the population of interest. A draft interview protocol was designed, based in part on the questions that remained after the review of the literature, to elicit information relating in particular to information and technology use. Because the investigation would involve human subjects, approval was required from the University of Missouri's Institutional Review Board (IRB) before any interviews could take place. Immediately after funding was secured and the budget was approved, the research team began to secure IRB approval, a process that ultimately took a number of months due to the infrequent meetings of the campus IRB committee.

The next major step was to begin work with partners at the University of Missouri's Cambio Center. Cambio Center personnel helped identify geographic areas for interviews (large cities, small towns, etc.) with Latinx communities of varying sizes and where members had lived for different lengths of time in the United States (these were criteria identified as important during initial phases of the project). Cambio Center staff also helped identify specific interviewee traits to provide the widest understanding of this potentially diverse group including age and primary language, but also country of origin and language. They also provided contact with gatekeepers, who would gather five or six people to be interviewed at the locations they identified across the Midwest. Since personas do not represent individuals, it is not possible to take data from, for example, a single interview and create a persona simply based on an interviewee. Multiple participants were instead needed for the interview portion of data collection. A total of 30 interviews took place throughout the states mentioned over the course of seven months as part of this project.

Based on this input and with the facilitation of the Cambio Center, a semi-structured interview protocol was devised, with questions designed to elicit the information sought from participants. The interview protocol was piloted with two student volunteers from the Cambio Center. Based on those pilot tests and feedback from the students about their uncertainty in answering specific questions, the interview protocol was revised and finalized.¹ Since the population of interest was likely to speak Spanish, the interview protocol was translated into Spanish and translators were recruited to assist with note-taking and interviewing.

Phase 3: data collection

The Cambio Center put researchers in contact with gatekeepers in various communities across the Midwest. Travel dates to the communities of interest were finalized, and the gatekeepers recruited participants for the designated days. Both gatekeepers and participants were compensated for their participation and their time.

Interviews took place between November 2016 and June 2017. This was a time of considerable uncertainty in the Midwestern Latinx immigrant

population, with increased political animosity directed toward immigrants after the November 2016 elections. The use of gatekeepers to make contacts aided the project, since the participants were unknown to the researchers. Another benefit to using gatekeepers for this process is that the gatekeepers provided or facilitated the interview locations, ensuring that participants were interviewed in a neutral and non-threatening location where they felt safe. The interviewees were completely unknown to the researchers.

Each interview followed more or less the same pattern. Two members of the research team were introduced by the gatekeeper to the research participant. At that point, the gatekeeper either stayed in the interview room or went to another room nearby. The research team introduced the project, read the informed consent document and provided it to the participant, gave the participant the cash participation incentive, and then began the interview. The interviews were *semi-structured*; they generally followed the interview protocol relatively closely, but when a participant mentioned something interesting or talked about something meaningful to that participant, the research team often explored that topic in greater detail with the participant. During the interviews, the researcher and translator took detailed notes of the conversation.

Phase 4: post-interview data manipulation

Researchers' interview notes were transcribed and gathered in a centrally stored location, in our case, a password-protected installation of Box.com, software that is approved for cloud storage by the university, and that was approved by the IRB for secure data storage. In order to protect this potentially vulnerable population, all personally identifying information was removed from transcripts prior to uploading. Based on the transcribed notes, the research team created a spreadsheet to record various factors for each interviewee, such as their country of origin, gender, age, family, occupation, the mobile devices and computers they owned, and their level of internet connectivity (see [Table 1](#)). The research team also read over the transcripts repeatedly, and discussed various factors that seemed relevant or important to highlight. Finally, the spreadsheet and transcripts of interview notes were shared with the Information Experience Lab for initial persona development.

Phase 5: Persona design

The Information Experience Lab (IE Lab) is a usability laboratory at the University of Missouri. It is staffed by graduate students, under the leadership of a faculty mentor and a lab manager who provide guidance and mentorship to those students. The IE Lab has a protocol for the persona design process, which is in accordance with the best practices documentation mentioned in the beginning of this article. The steps as carried out by the IE

Table 1. Spreadsheet data generated for each interviewee.

Data	Information Recorded (when available)
Pseudonym	A pseudonym was created for each respondent; this allowed for researchers to discuss particular interviews while maintaining complete anonymity.
Gender	
Age Range	Exact age or age range if unsure
Status	Immigration status, if volunteered.
Type/Current City	Not all respondents were living and working in the location where they were interviewed – of residence
State	Also of residence
Notes	Observations about the interview that could be relevant
Language	Not only the language of the interview, but also language of communication and information seeking and use, as relevant
Family	Immediate as well as extended, and their locations
Cell Phone	
Tablet	
Computer	
Apps	The focus of the interviews was on apps for information seeking and use; apps for entertainment were also noted if mentioned
Internet Access	
Phone	
Text Messaging	
Internet Information	
Search Tools	
Library Use	
Library Frequency	
Library Books	
Trusted Information	Including sources of trusted information, such as family.
Health Insurance	
Health Care	
News	
Trump/Elections/Politics	Although no formal question on these topics appeared in the interview protocol, the topic came up often enough that an entry was created here.
Privacy	Any concerns about privacy were noted here.
Other	
Online Purchases	
Electronic Resources	
Human Resources	Help that respondents used in meeting their information needs, including school counselors, medical professionals, etc.
Quote	“Juicy quotes” that might exemplify priorities, interests, emotions, etc. (Crowston 2015)

Lab as part of this project are summarized here as Phase 5 of the larger project.

First, the faculty mentor and the manager of the IE Lab met with members of the research team to establish parameters and goals for the personas; this step took place over several meetings, where the purpose and function of personas were discussed and a shared consensus was explored. Additionally, the goals of the overall project, including the future use of the personas was communicated to the IE Lab representatives, and timelines were established. The research team subsequently shared the spreadsheet and anonymized transcripts with the IE Lab. Next, IE Lab representatives reviewed the spreadsheet and transcripts to compare identified patterns of behavior or practice and to map behavioral patterns of ICT and mobile device use. They used the spreadsheet to summarize individual interviews, looking for recurring characteristics or features.

The next steps they took go beyond what is required to create personas. After identifying the recurring characteristics or features discussed by interviewees, IE Lab staff then created affinity diagrams (see [Table 2](#) for an example) for each interviewee as a kind of precursor to the eventual personas that would be created. *Affinity diagrams* are ways to organize and present large amounts of data, and the IE Lab staff used them to help define what the eventual personas would look like. To clarify what they saw as natural relationships, IE Lab staff then created clusters based on the data in the affinity diagrams. A behavioral cluster structure was created by taking overarching categories of use cases for ICTs and mobile devices and sorting participants' behaviors and practices into those categories (see [Table 3](#)). IE Lab staff also created an additional cluster related to tools and technologies used by the participants, including hardware, software, and apps used.

From those diagrams and clusters, each of the three IE Lab members working on this project was assigned to create two different personas. They compared and refined those personas through several rounds of editing and consultation, reducing overlap until three personas were finalized, with one

Table 2. Affinity diagram, example 3 (Mostowfi et al. 2017).

Name	Samuel
Age	55
Gender	Male
Status	First generation immigrant
Languages	Speaks Spanish and English with wife
Hardware	Cell phone: texting, calling Computer: Facebook
Software	Facebook
App usage by participant to consume news	Facebook, TV
Library Usage	Rarely goes to library
Information Resource	Use home Wi-Fi Double-checks information for accuracy

Table 3. Clusters across interviewees’ data (Mostowfi et al. 2017).

Communication	Entertainment	Information Source	Internet information
Sending Email	Listening to music	Information from Wikipedia is not reliable	Google for school assignments
Texting with friends	PC games	Do not trust Google Translate	Using YouTube for watching videos
Access to social media	Watching videos	Do not trust outdated information	Search for recipes
Keeping in touch with family members	Children’s game	Definition of words on dictionary and thesaurus	Searching for information about repairs
Talking	Online shopping	Double-check information accuracy	Using Facebook to find used tools for sale
Texting in WhatsApp			How to fix things on YouTube
Contact with family in Mexico			Searching for addresses
			Checking news
			Home Remedies

each of three immigration-related categories identified by the IE Lab: born in the United States, immigrated to the United States, but lived there longer than six years, and recent immigrant to the United States.

In August 2017, the IE Lab provided those three personas to the research team. The researchers’ review of the interviews and data led to the expansion of the personas provided and the addition of a fourth. The expansion developed by the core research team was based on additional data that extended beyond the text of the interviews, and that included published data sets that informed some of the questions asked, our understanding of the LIS literature on human information behavior, information seeking needs of immigrants or other outsiders, mobile, social computing rural uses of information and communication technologies (ICTs) and Latinx people as consumers of information. During this step, the types of information librarians would want to know was also supplied, including the use of different communication technologies by the personas and the purposes for that use. The fourth persona was intended to cover additional patterns identified by the research team but which the IE Lab did not include.

Concurrently, work began to build a webspace to house information about the project and to make the personas available once completed.

Phase six: “sanity check”

Persona creation is an iterative process, and before personas are implemented, there is a final step in their creation – what researchers at Microsoft call a “sanity check” (Pruitt and Grudin 2003). This is a high-level confirmation of the low-level details of the personas. Because the persona design process “utilizes multiple data sources, many of which are not directly comparable or inherently compatible” (Pruitt and Grudin 2003, 6), ensuring that the

personas are internally consistent and realistic is a necessary additional step. In order to assure that the personas created as part of this project were accurate depictions of Midwestern community residents' realities and needs, the Cambio Center supported a "sanity check" (Pruitt and Grudin 2003) by facilitating a focus group of 11 undergraduate and graduate Latinx students. Focus group participants first learned about the goals of the project and were asked to review the personas, checking them for accuracy and providing feedback to the researchers on what did not make sense. Focus group participants were not paid, but a meal was provided while they met.

Focus group participants were interested in understanding even more details about the personas than what was presented, including how they came to be in the position they were in. This indicated that the draft personas contained enough information for them to seem real to this focus group and, by extension, to carry out their purpose: supporting interaction design. Since the goal of the research project was for librarians and library service creators to feel these personas are real, this process provided some positive reinforcement. In fact, the focus group helpfully brainstormed several ideas about how libraries could meet the needs of these personas during the focus group session.

However, comments from the focus group helped to clarify that the community members interviewed as part of this project may not be entirely representative of the average Latinx Midwesterner. Participants interviewed for this project may have been more successful, better educated, or more engaged with using technology, and because they had been contacted through gatekeepers, they can be assumed to enjoy increased social connections. Because these were the participants interviewed, they directly informed the resulting personas (along with the literature in the field, census data, Pew data on Latinx populations, etc.). The focus group indicated that they expected to see some personas who faced additional cultural and linguistic struggles. Focus group members provided a number of comments and feedback, including the need to create an additional two personas for a total of six.

Phase seven: sharing personas

After our personas' "sanity check," the team made changes to the personas, including designing two more as directed by the focus group; all six personas were available on the project website in June 2018.

The project's personas had originally been created by the IE Lab using a free version of the Xtensio! software (<https://xtensio.com/user-persona/>), which provides a structured format and display for personas. However, no funds had been allocated to purchase software for web-based persona display, and Xtensio! allows only one persona to be displayed per free account. As a result, the decision was made to move to local webspace that would be free to use. A website to house the project was created using a free, customizable

template from Templated (<https://templated.co/>) licensed under a Creative Commons Attribution license. The personas were reformatted to look attractive in a less-structured HTML environment; in the process, some of the information that Xtensio! displays graphically was lost. During the process of moving to HTML, draft personas were corrected for believability (as described above) and consistency, and stock images were secured to provide an increased sense of reality, per standard best practices. It is worth noting that, like John Pruitt and Jonathan Grudin (2003), we found the images in the stock photo galleries to be too “slick” (6), but we were unwilling to solicit community members to sit for photo shoots. The two additional personas directed to be created by the focus group were designed directly using the HTML template for the other personas. The final personas along with some additional information about personas and with suggestions for implementation are available through the project website: <http://personae.missouri.edu/>.

Reflections on the persona design process

The persona design method employed in this project consisted of seven phases: initial data gathering, preparing for data collection, data collection, data manipulation, persona design, sanity check, and persona sharing. After reviewing the entire process, several areas emerged where scaling back in future implementations would be feasible, and which public libraries undertaking persona design may not wish to pursue. A single public library might do interviews to create personas (e.g., Holgersson, Alenljung, and Söderström 2015), but would likely not do interviews across multiple states, so would not need as much travel planning or travel support. Although this project used the services of the IE Lab for persona design, we still found that a number of adjustments needed to be made to the personas to make them more usable in public library environments. Originally, only three personas were provided by the service; a fourth persona was created for the initial draft, and after meeting with the focus group, two more were added. Core members of the research team probably could have done all of the persona building without outsourcing it to the usability experts. The focus group testing would still have surely caught the inevitable errors or misrepresentations. One benefit of bypassing the creation of personas by usability experts unaffiliated with public libraries is that researchers would have designed directly for librarians, and would have directly included more information about difficult to reach community members, such as non-speakers of English and non-users of libraries.

However, we did find some elements of our process to be useful, and recommend these practices for future persona design projects. Since we worked with an isolated and linguistically diverse population, the use of gatekeepers to make contacts with our research participants helped ensure that we were able to access and communicate with more diverse groups

than those we could have found on our own. Using monetary incentives, and specifically using cash instead of gift cards, allowed us to compensate our participants for their time in a tangible way, and may have motivated some of our participants to be involved. While one of the original research team is Spanish-bilingual, having a translator share interview duty proved invaluable for taking interview notes and noticing nuances in communications that might otherwise have been missed. The “sanity check” focus group helped to demonstrate logical inconsistencies in the personas as presented, which was especially since the researchers were somewhat blinded to the nuances of the personas by that point because of their close work with building them and formatting them for the web. The focus group also helped identify additional traits and characteristics that were missing from the original set of personas; this sort of feedback was the kind that helped make the persons more real. We were lucky in that the focus group was incredibly invested and wanted to help; one of the most satisfying moments was when a number of focus group members told us that the persona for Marisela really spoke to them, and reminded them of their aunts.

The use of the IE Lab as an external support for persona development was not necessary, but in some sense, it was helpful. The members of the research team who had done the interviews had difficulty separating the interview participants from the personas. Having the IE Lab design initial personas allowed a sufficient respite for the researchers to genericize the results instead of personalizing them to particular interviewees.

Because this project was grant-supported, participant interviews were able to cover multiple states. Support could be provided for interviewees, gatekeepers, travel, and professional services such as the IE Lab. Although having access to funds was helpful, and some monies were required to carry out the project as envisioned, not all projects where persona are created need to have extensive funding. In fact, monies to pay respondents for their time and travel to the library, as well as monies to incentivize community connectors and/or translators to put librarians in touch with members of the target community and to provide feedback on draft personas, would be sufficient if librarians are able to carry out the other tasks of the persona design process.

If a public library chooses to share the personas they have developed, we recommend setting aside some funds for using dedicated persona software and web space to host the personas. We realized after the fact that reserving funding to license a user-friendly web interface to house the finished product would have been helpful, as would the earmarking of funds to support the licensing of stock photos. If personas are used internally, however, this particular consideration might not be necessary.

Discussion

After our experiences with the persona design method, we believe we have a partial answer to our first research question, *how can the persona design method be used to describe non-mainstream populations?* We worked with one specific non-mainstream population, Latinx residents of the U.S. Midwest, and this experience has helped define some of the challenges and opportunities involved in building personas for diverse and unique populations who may not be traditional library clientele and may be culturally different from librarians and library employees. The use of gatekeepers greatly facilitated reaching diverse community members, and was vital in reaching a potentially vulnerable population. Moreover, the design of personas allowed us to look at the information needs of this population from their viewpoints, rather than from a library viewpoint, and allowed us to engage in different modes of thinking about what this community needs and what they may already have access to. We recognize, however, that there may be additional challenges in researching diverse communities that we did not experience and therefore have not addressed.

This project focused on the creation of personas to support the design of library services and possibly collections, marketing initiatives, and other outreach. As mentioned, personas can be used to support interaction design, and once personas for a particular demographic have been established, there is precedence for re-using them to design different services. Like the researchers in e-government in Sweden (Holgersson, Alenljung, and Söderström 2015) and at DataONE in the U. S. (Crowston 2015), we see strong potential for the personas presented here to be reused outside of the library, i.e., for uses beyond their original scope. Schools in the Midwest might seek to use these personas when developing dashboards for Latinx parents and grandparents or other caregivers to use when interacting with teachers and school administrators about the progress of their children. Personas are widely used in medical informatics as well (e.g., Achterkamp et al. 2018), and Midwestern clinics and doctors might find these personas to be useful as well for reaching out to Latinx patients and caregivers.

Our second research question was *how might the persona design method serve as a useful contribution for public library services?* We maintain that the persona design process can be useful to public libraries attempting to understand their users and design services that meet their needs. The method for persona creation described is replicable – and does not require large sums of money or a huge grant. It does require *some* monies, however, and a significant investment in time. Librarians involved in this process will need time to learn the craft of persona creation, carry out the literature review, assess existing data, devise interview questions, pilot-test questions, identify and reach out to members of the community for interviews, conduct those interviews, and then devise the personas.

For more mainstream populations, though, persona creation may not require interviews and ethnographic methods. A number of institutions

successfully create personas based on their own data alone (e.g., Zaugg and Rackham 2016), or in combination with publicly available data such as the Pew data described in this article. Further, this project's reliance on an external usability lab for the creation of the personas freed the time of the researchers to an extent, but not completely; it was ultimately a luxury afforded by the grant, but not a necessity. The process can be simplified, especially if the creators of the personas already have extensive knowledge of the population. One example might be services for senior citizens already using the library. Devising personas of a known group will still require librarians to follow the basic process outlined above, and will have the benefits of allowing them to work to address the needs of specific archetypes, without potentially requiring extensive research to arrive at the end-product.

An additional, related question could be asked, and that is, "What distinguishes creating personas from writing up what we know about members of a target user group, and distilling that information down to a few profiles?" A short answer is that the persona is written from the design perspective, and is used to help designers see how real people might use the products and services they design. In that respect, creators of persona want to address the following questions as they work: "Who are [these] users and why are they using the system? What behaviors, assumptions, and expectations color their view of the system?" (Personas 2018, "Best Practices"). The *system* or the end product could be books, library programming, or library apps, and anyone reading the personas, once they have been established, should come to roughly the same conclusions about features that the product will need to contain to meet the needs of the persona presented. Using existing data and supplementing with interviews of key participants may be all that is needed to be able to supply information that can answer these questions and guide designers in their work (e.g., Zaugg and Rackham 2016). Alternatively, using personas designed for other projects might be possible, with some re-scripting of the persona data to reflect the current need for which persona are being designed.

For marginalized populations, however, the answer is more nuanced simply because the groups' members will be less understood. Existing data may be biased, presenting a limited or deficit-based view of the population being researched. There may be little existing data, in the case of some populations such as immigrants from Latin America who are members of indigenous populations and speak indigenous languages, or, in our case, Latinx users in the Midwest, especially in rural areas or areas not densely populated in the first place, but where a substantial Latinx population is not currently residing. Additionally, of that data that does exist, it might not address behaviors, information needs, or technology uses that need to be explored and understood to develop a product a library would like to provide. To support the creation of personas for marginalized populations, somewhat extensive work may need to be done to collect the data that address the questions to support design.

Additional help may be needed to write a sensitive persona, and ensure that the persona presents a valid and affirming representation of the population's needs; special care will need to be given to the "sanity check" process where personas are evaluated by members of the target group through focus groups.

In short, when considering how to best understand their users, as part of the design process, libraries might turn to personas as a way to visualize specific, representative (i.e., archetypical) users for whom they would like to design a specific product or service. As demonstrated in the review of the literature and as part of the brainstorming process that accompanied this particular project,² personas can inform the development of a number of products, including services (e.g., Lee and Price 2015; Zaugg and Rackham 2015), and how best to market them (e.g., Thompson 2017).

Conclusion

Building personas is one of many ways librarians can consider designing for diverse user groups, especially those who are not frequent library users and who differ culturally or linguistically from members of the library staff. This article details the importance of personas to interaction design – a principle that can be applied in the creation of services for particular groups of people. This article lays out how personas were created for this particular project, focusing on persona creation activities and the refinement of these personas throughout the drafting process. It does so in a way that is reproducible, if librarians are interested in building their own personas for potential implementation.

Ultimately, personas help libraries assess existing services and design new services using a patron's viewpoint. True to the original spirit of personas, they might be used as an aid for interaction design for library web sites and electronic services for or about their unique user groups, be they Latin American immigrants or another group. They might also be used to assess services from the patron's point of view, looking at what sorts of services appeal to what sorts of patrons, and noting disconnects. A library might base its marketing strategies and practices based on personas designed around its user population. Personas help libraries put a human face on impersonal user data or demographics, reminding them that their services are used by and designed for people, not statistics.

Notes

1. The interview protocol for gatekeepers is available: http://personae.missouri.edu/Gatekeeper_interview-protocol.pdf; the interview protocol for community informants is available: http://personae.missouri.edu/Informant_en_interview-protocol.pdf.
2. Each of the personas from this research project is listed out, with suggestions for marketing and services, on the project website: <http://personae.missouri.edu/about.html>.

Funding

This work was supported by the OCLC-ALISE Library & Information Science Research Grant.

Notes on contributors

Denice Adkins is an associate professor at the School of Information Science & Learning Technologies at the University of Missouri. Her research interests include information needs of Midwestern immigrants, library services to diverse audiences, and public libraries. She is a co-investigator on the ALISE/OCLC grant funding this project.

Heather Moulaison Sandy is associate professor at the iSchool at the University of Missouri. Moulaison Sandy's primary research focus is the organization of information in the online environment, leading her to investigate areas related to access to information and technology use. She is a co-investigator on the ALISE/OCLC grant funding this project.

Edwin Nii Bonney is a doctoral student in Educational Leadership and Policy Analysis at the University of Missouri. His research interests includes recognizing and valuing the cultures and experiences of immigrant groups as a way to improve equity in education. He is a researcher as part of the Strengthening Equity and Effectiveness for Teachers of English Learners (SEE-TEL) project.

ORCID

Denice Adkins  <http://orcid.org/0000-0002-0023-9914>

Heather Moulaison Sandy  <http://orcid.org/0000-0001-7783-7069>

Edwin Nii Bonney  <http://orcid.org/0000-0002-3537-7188>

References

- Achterkamp, R., M. G. H. Dekker-Van Weering, R. M. H. Evering, M. Tabak, J. G. Timmerman, H. J. Hermens, and M. M. R. Vollenbroek-Hutten. 2018. Strategies to improve effectiveness of physical activity coaching systems: Development of personas for providing tailored feedback. *Health Informatics Journal* 24 (1):92–102. doi:10.1177/1460458216653242.
- Adkins, D., and H. Moulaison Sandy. 2017. Information seeking among Latinos in the Midwestern United States. *Proceedings of the Association for Information Science and Technology* 54 (1):483–86. doi:10.1002/pra2.2017.14505401052.
- Calabria, T. 2004, March 2. An introduction to personas and how to create them. Step Two. http://www.steptwo.com.au/papers/kmc_personas/.
- Cooper, A. 2004. *The inmates are running the asylum: Why high tech products drive us crazy and how to restore the sanity*. Indianapolis, IN: Sams Publishing.
- Crowston, K. 2015. "Personas" to support development of cyberinfrastructure for scientific data sharing. *Journal of eScience Librarianship* 4 (2):e1082 (pp. 1–8), article 2. doi:10.7191/jeslib.2015.1082.
- Flores, A. 2017, September 18. How the U.S. Hispanic population is changing. Pew Research Center. <http://www.pewresearch.org/fact-tank/2017/09/18/how-the-u-s-hispanic-population-is-changing/>.

- Hjalmarsson, A., E. Gustafsson, and S. Cronholm. 2015. Exploring the use of personas in user-centered design of web-based e-services. iConference 2015 Proceedings. https://www.ideals.illinois.edu/bitstream/handle/2142/73633/110_ready.pdf?sequence=2&isAllowed=y.
- Holgerson, J., B. Alenljung, and E. Söderström. 2015. User participation at a discount: Exploring the use and reuse of personas in public e-service development. ECIS 2015 PROCEEDINGS: ECIS 2015 Research-in-Progress Papers. Accessed June 6, 2018 <http://www.diva-portal.org/smash/get/diva2:823500/FULLTEXT02>.
- How to create personas. 2017, November 17. HubSpot Academy. Accessed June 6, 2018. <https://knowledge.hubspot.com/contacts-user-guide-v2/how-to-create-personas>.
- IFLA (International Federation of Library Associations & Institutions). 1994. IFLA/UNESCO Public Library Manifesto 1994. Accessed June 6, 2018. <https://www.ifla.org/publications/iflaunesco-public-library-manifesto-1994>.
- Japzon, A. C., and H. Gong. 2005. A neighborhood analysis of public library use in New York City. *Library Quarterly* 75 (4):446–63. doi:10.1086/502786.
- Johannsen, C. G. 2015. *Library user metaphors and services: How librarians look at their users*. Berlin: De Gruyter Saur.
- Koontz, C. M. 2005. Neighborhood-based in-library use performance measures for public libraries: A nationwide study of majority-minority and majority white/low income markets using personal digital data collectors. *Library & Information Science Research* 27 (1):28–50. doi:10.1016/j.lisr.2004.09.003.
- Landis, W. E. 2006. Personas and archetypes: Envisioning the 21st-century special collections professional. *RBM: A Journal of Rare Books, Manuscripts, and Cultural Heritage* 7 (1):40–48. doi:10.5860/rbm.7.1.255.
- Lee, J. H., and R. Price. 2015. Understanding users of commercial music services through personas: Design implications. 16th International Society for Music Information Retrieval Conference. Accessed June 6, 2018 <https://pdfs.semanticscholar.org/5658/c9055b009a93af21dfb8834246213850fc7f.pdf>.
- Long, F. 2009, May. Real or imaginary: The effectiveness of using personas in product design. Proceedings of the Irish Ergonomics Society Annual Conference, vol. 14. Dublin: Irish Ergonomics Society. Accessed June 6, 2018. [https://s3.amazonaws.com/media.loft.io/attachments/Long%20\(2009\)%20Real%20or%20Imaginary.pdf](https://s3.amazonaws.com/media.loft.io/attachments/Long%20(2009)%20Real%20or%20Imaginary.pdf).
- Merriam, S. B. 1985. The case study in educational research: A review of selected literature. *The Journal of Educational Thought* 19 (3):204–17.
- Miaskiewicz, T., and K. A. Kozar. 2011. Personas and user-centered design: How can personas benefit product design processes? *Design Studies* 32 (5):417–30. doi:10.1016/j.destud.2011.03.003.
- Mostowfi, S., K. Atiso, F. Demir, N. Current, and I. Jahnke. 2017. *Persona development: Latino use of social media and mobile technologies for information seeking*. Columbia, MO: Information Experience Lab. Technical Report.
- O'Connor, K. 2011. Personas: The foundation of a great user experience. *UX Magazine*, Article 640. Accessed March 25, 2011. <http://uxmag.com/articles/personas-the-foundation-of-a-great-user-experience>.
- Personas. 2018. Usability.gov. <https://www.usability.gov/how-to-and-tools/methods/personas.html>.
- Pruitt, J., and J. Grudin. 2003. Personas: Practice and theory. Proceedings of the 2003 Conference on Designing for User Experiences, 1–15. ACM. <https://www.microsoft.com/en-us/research/wp-content/uploads/2017/01/personas-practice-and-theory.pdf>.
- Sinha, R. 2003. Persona development for information-rich domains. CHI'03 Extended Abstracts on Human Factors in Computing Systems, 830–31. ACM, Ft. Lauderdale, Florida, USA, April 5–10.

- Thompson, S. 2017. Watching the movie: Using personas as a library marketing tool. *Reference & User Services Quarterly*. 57 (1):17–19. doi:[10.5860/rusq.57.1.6437](https://doi.org/10.5860/rusq.57.1.6437).
- Whitmire, E. 2003. Cultural diversity and undergraduates' academic library use. *Journal of Academic Librarianship* 29 (3):148–61. doi:[10.1016/S0099-1333\(03\)00019-3](https://doi.org/10.1016/S0099-1333(03)00019-3).
- Zaugg, H., and S. Rackham. 2016. Identification and development of patron personas for an academic library. *Performance Measurement and Metrics* 17 (2):124–33. doi:[10.1108/PMM-04-2016-0011](https://doi.org/10.1108/PMM-04-2016-0011).

Appendix A. Software and Resources for Building Personas

- Cole, N. 7 Free Online Persona Templates [blog post]. September 27, 2016/May 9, 2018. *Conversion Uplift*. <https://www.conversion-uplift.co.uk/7-free-tools-to-create-buyer-personas/>
- Jamison, K. 10 Customer Persona Tools & Templates [blog post]. N.d. *Content Harmony*. <https://www.contentharmony.com/blog/customer-persona-tools/>
- Personas. 2018. *Usability.gov*. <https://www.usability.gov/how-to-and-tools/methods/personas.html>
- UserForge: <https://userforge.com/>
- UXPressia: <https://uxpressia.com/personas-online-tool>
- Xtensio! <https://xtensio.com/user-persona/>