
Persona Development and Use, or, How to Make Imaginary People Work for You

Jennifer L. Ward

University of Washington, USA

Abstract

In the spring of 2009, the University of Washington (UW) Libraries User Experience (UX) Group embarked on a project to create personas, which are “detailed descriptions of imaginary people constructed out of well-understood, highly specified data about real people.”¹ Although the Libraries regularly conducts assessments of its online services and shares the results of those efforts with staff, the UX group felt that a widely-shared understanding of the characteristics and motivations of the “Libraries’ users” could be achieved through the development, marketing, and use of personas.

This paper will provide an overview of personas, describe how they were created at the UW, and provide examples of how they have been used to improve our online services.

Introduction

The University of Washington (UW) Libraries has long had a strong assessment program and in 2000 a User Experience (UX) group was added to the Information Technology Services department to focus specifically on evaluating the Libraries’ online efforts.²⁻³ To date, the UX group has primarily focused on improving sites currently in existence through the use of heuristic evaluations, surveys, focus groups, interviews, and usability tests. Most projects are initiated by the Libraries’ Public Web Operations Group, which coordinates activities across the Libraries, formulates policies, and provides strategic direction for the University Libraries public Web presence.

Regardless of the type of library a user frequents, all library users span a wide range of disciplines and skill levels, but share certain fundamental goals and needs. By focusing on these essential characteristics, the personas embody our users and can help us make decisions about what will

best serve the entire patron population. Personas have become a widely used design tool to help decision makers more clearly visualize their target user groups. These personas were developed by incorporating UW Libraries staff knowledge during a workshop, and validating that information against quantitative and qualitative research.

The inspiration for the UW Libraries persona project came from a presentation by Cornell University Library staff at the 2008 Libraries Assessment Conference, who had recently developed personas of their own.⁴ For the author, personas were a tool that was missing from our UX toolkit. With them, we can make informed decisions about what will work for a user *as* we develop our online services—no need to wait for the more costly usability tests to get all the answers.

The personas project lead was Kathryn Whitenton. At the time she was a graduate student in the University of Washington’s iSchool working in the Libraries UX group on a .5 FTE appointment. She is now a User Experience Specialist for the Nielsen Norman Group.

Overview of Personas

In their book *The Persona Lifecycle: Keeping People in Mind Throughout the Design Process*, John Pruitt and Tamara Adlin describe personas as “detailed descriptions of imaginary people constructed out of well-understood, highly specified data about real people.”⁵ Kim Goodwin, Vice President of Design at Cooper “an archetype of a user that helps guide decisions about features, navigations, interactions, and visual design.”⁶

Why create personas?

By concretely representing the library user as a

real person rather than an abstract group, personas can help us see user needs more clearly as we make decisions about how to provide services. Usability testing is costly and doesn't help with the many decisions that go into the development of a service. The Libraries needed a tool that would help with the design/service building efforts, which was missing from our current toolbox. More importantly, we needed a way to create a *shared understanding of "Libraries users,"* as opposed to the view of "my users" that every library staff typically has. For many library web managers, creating a usable site is often a difficult task because staff have different views of "library users" and thus rarely agree on characteristics or motivations of the users for whom the site should be designed. Representations of "library users" are typically based on the *interactions* staff have with users, and as such doesn't include any information about the thousands of users they have never, and will never, personally interact with. Personas move us past "users" and "user-friendly" to thinking about designing the site for real people.

Personas can:

- *Guide decisions about features, navigation, and interactions*
Once created, personas can be referred to when faced with design challenges. Consistently looking at design options based on how well they serve specific defined personas helps eliminate moving targets and make discussions clearer and easier to evaluate.
- *Help stakeholders and designers keep the users in mind*
When you hear the name of someone you know, you automatically recall a whole host of details about them, including their characteristics and needs. By creating personas with a name and face that we can get to know, we'll be able to quickly recall and identify a particular set of user needs, and evaluate design questions based on how well they would satisfy that user.
- *Facilitate communication between stakeholders*
By ensuring that everyone has the same agreed-upon users and user goals in mind, conversations about design costs and benefits

become much simpler. Designers and stakeholders are better able to separate personal experiences and preferences, and make choices based on benefits to the identified users.

It's difficult to make an interface that is both simple enough for beginners and rich enough for expert researchers. When user needs conflict, personas can help support design choices by making the costs and benefits of different alternatives more apparent. Different user needs can be prioritized based on:

- The size of that user group
- The value of that particular feature to their goals
- The impact of their research goals on the University's mission

To be clear, personas do not replace existing processes for gathering feedback or testing whether design decisions were the appropriate ones to make for a certain user segment. They help us structure user-centered thinking throughout the design and development process and are yet another tool in our toolbox.

Persona Development

We used the book *The Persona Lifecycle: Keeping People in Mind Throughout the Product Design* by Pruitt and Adlin as our primary guide for persona development.⁷ The author attended a workshop on persona development in 2009 taught by Adlin; materials from that workshop largely duplicated what had been published in the book. For our first foray into persona development, we opted to gather assumptions about our users via a workshop with library staff, create assumption personas based on that information, validate our assumptions with secondary data sources, then create our final personas based on assumptions *and* data. This is certainly not the only method to create personas, but is one that we felt would work in our environment for a few reasons:

- Our institution is on a quarter system, which provides some challenges with the timing of projects. We simply didn't have the time or resources to conduct additional focus groups or research specifically for this project.
- We already have *a lot* of data about our users. In addition to all of the assessment data we capture, we use QuestionPoint for our online

reference services and that is a treasure trove of information about user needs and demographics.

- An office on campus provides statistics and other demographic information about students and staff on an annual basis.

Most of the users with whom we have a direct interaction are those who come to us with a need. Yet, our web statistics show that we're serving tens of thousands of users online, the majority of whom we never come in contact with. Thus, building personas based on what we think we know about our users is only scratching the surface. We need more information about our users than we'll ever get based on a limited number of interactions.

Gathering assumption data

We all have assumptions of library users and these assumptions "almost always reflect some misinterpreted, poorly recalled, and improperly combined aspects of original data, but they do contain some data and they do reflect the ways your company has digested and understands information about your users."⁸ To start building the shared understanding of our Libraries user, we wanted to bring together staff from across the system in a brainstorming environment to share their assumptions of users with us.

To gather our assumption data, we invited all library staff to participate in a session that we tried to promote as a fun event. We told them that no preparatory work was required and that we wanted them to come and tell us what they knew about users. We asked participants to think about the following questions:

- Describe one or two "typical" patrons
- Name and describe a person you know who is most similar to our typical patrons
- When and where do people use the UW Libraries?
- Because they have to? Or like to?
- Do we want to attract new or different types of people to the libraries? What types of people?
- What (besides use libraries) do our users like to do?
- What do patrons struggle with? What do they find frustrating?

- What are patrons' goals? What do they want to accomplish?
- What roles or actions do they take to achieve their goals?
- What specific tasks or activities are associated with different roles? What motivates these tasks or roles? What are patrons' attitudes and feelings towards these activities?
- How do patrons interact with each other and with existing tools?

To scope the discussion, we decided to spend the majority of the time focused on our primary users: current undergraduates, graduate students, and faculty at the UW. We also gathered information about secondary user groups who have a stake in the library: alumni, researchers from other institutions, community college students, K-12 teachers/students, and the general public.

All told about 30 people from across the system participated in the workshop, which lasted two hours. Librarians, staff members and students from different areas of the library (public services, technical services, etc.) contributed their knowledge to the session.

We used one of our conference rooms, which was cleared of furniture, and lined the walls with large sheets of blank paper, each of which had a type of user listed at the top. The only equipment we used were dozens of post-it note pads and boxes of sharpies. We highly recommend the super sticky post-its so you can easily move the big sheets of paper and the individual notes around without losing any of them.

Workshop participants moved around the room and for each attribute or bit of information that they wanted to share about a user they wrote it on a post-it and placed on the paper under the appropriate user type. This was very much a "braindump" session—we wanted staff to share with us what they knew without overthinking the issue. From the perspective of wanting to create that shared understanding of the Libraries user, it was interesting to listen as staff realized that their specialized researcher had similar motivations and needs as a researcher in an entirely different domain.

Once the workshop was over, for each user population we identified, we clustered similar

attributes together and posted the resulting posters in our staff lounge. Near the posters we had additional sticky notes and pens available, with the hope that staff who were unable to participate in the workshop would add their input to the posters. Unfortunately, we gathered no additional information.

While it is possible to build personas based entirely on assumptions, these are mostly educated guesses based on real-world experience and domain knowledge. Additional information about our users can be gleaned from any number of data sources.

Looking to the data

In order to create personas that were as life-like as possible, we turned to qualitative and quantitative data sources to validate, fill in holes from our assumption-gathering process, and determine which characteristics best represent our users. The data sources we used came from a variety of sources, including assessment surveys conducted by the UW Libraries, ethnographic research conducted at other academic libraries, national research projects focused on information literacy among college students, persona projects at other academic libraries, and usability studies of library websites. All of these research sources were evaluated based on the similarity of their population sample to our users, and were used to identify key elements from the assumptions workshop content that accurately represent Libraries' users.

For this part of the process, project staff read about three dozen articles or Web sites and noted key facts about user behavior, habits, and preferences. Each discrete piece of information was noted on a sticky note along with the data source. This information was later transferred to a spreadsheet that also contained the assumption data. With this mass of assumption and research-driven data, we were able to perform a research analysis to determine the critical dimensions to understanding different types of Libraries users.

Analysis

The UW Libraries serves a broad and diverse population spanning many different disciplines and levels of expertise. Despite the individual differences between users, many share certain fundamental traits, needs, and goals. While we

can't build a website for each individual library user, we can design for a few representative personas who embody these essential characteristics. Broadly speaking our findings fell into three categories: discipline, technology use, and frequency of use.

Academic disciplines at the UW fall into 5 major groups: Humanities/Social Sciences/Arts, Professional, Health Sciences, Natural Science, and Engineering. Since Health Sciences users are currently the primary audience for a separate Libraries website, the personas developed in this project focused on the other four discipline groups. Many different research projects have confirmed significant differences in library use between patrons working in the natural sciences, who focus primarily on journals, and Humanities/Social Science patrons, who make use of both journals and other library materials.

According to the most recent user research conducted by the UW's Learning and Scholarly Technologies Group, a few technologies - email, course or project Web pages, and Word-processing software—are broadly used across all sets of users. Several other technologies—wikis, blogs, videoconferencing, RSS readers, etc.—were used considerably less.

For each of the potential user groups, we considered the frequency with which we can expect that type of person to use the Libraries website. In an ideal world, the libraries website could be both simple enough for infrequent users to understand easily, and still filled with rich resources that are easy for experienced researchers to access. These two contradictory goals must somehow be brought into balance with the following assumptions:

- Experienced researchers are somewhat familiar with library terminology and have some sense of what resources exist (e.g., catalog, databases, journals)
- Infrequent users will likely always have difficulty navigating the site
- Novice students who are just beginning their academic careers but can expect to become regular library users are both a numerous group and have much to gain from design elements that match their expectations and guide them to appropriate resources

The validated user characteristics were then analyzed to determine which characteristics could be grouped around unique goals and motivations to form the basis of personas. Each of these goals formed the core of a distinct patron persona. Skeleton personas were developed which outlined the goals, needs, tasks, and pain points of each persona.

We then fleshed out each of the personas with details and images to add realism. These details were validated by briefly interviewing users who fit the persona profile. One young faculty member, one former doctoral student, and an MBA student assisted with providing realistic individual habits and details. The resulting information and posters were then validated by key stakeholders and workshop participants to make sure they were correct, contained information that was useful, and presented in a clear manner.

Each of our persona posters features the name of the person, a clear picture, a real quote that this person has provided us in some interaction (survey, online chat, email, etc.), key facts about the person (e.g., work preferences), her goals and pain points, and how she uses the libraries' website. Also included on the posters are brief "life histories"—their age, department, area of specialty, modes of access, and anything else that will make these people more real. The posters can be found on the UW Libraries User Experience site.⁹

Our personas are as follows:

- **Brooke the Beginner**

quote: "I'd rather use an online article that 'kinda works' than go to the hassle of finding a book in the library."

key facts:

- new to the research process and academia
- working on several assignments in different disciplines, but not an expert in any of them
- will take the first thing that's good enough

- **Richard the Researcher**

quote: "Accessing full-text articles online is my primary use of the library and is central to my research . . . but I still go to the library for some

reference materials that aren't online."

key facts:

- dedicated full-time student with significant knowledge in his area of study
- working on a long term, in-depth project
- will pursue all avenues to obtain materials related to his research

- **Sharon the Scholar**

quote: "I have to stay current on my field and do the research work—get the grant money, do the work, publish, etc. Those are the priorities at a research institution."

key facts:

- expert knowledge in her research area
- ongoing, in-depth projects using primary sources
- long term user who has already learned existing systems

- **Paul the Professional**

quote: "I feel like there's information in all of these drawers, and I don't know which drawer to open."

key facts:

- returning to school after several years, still working full time outside of school
- some subject matter knowledge and strong technology skills
- very little time on campus, so all research work is done remotely

- **April the Alumna**

quote: "I have a library card, why can't I use the research databases?"

key facts:

- former UW student who has access to some (but not all) library services
- remembers extensive resources at the Libraries and would like to use them for a personal project
- asks for help via email and phone

Using Personas

As a result of clearly knowing the persona's goals, our questions have shifted from "will this work for undergrads" to the much more goal-oriented: "will this help Brooke complete her class assignments (which we identified as a supporting goal)? and graduate (end goal)?" It's a subtle shift but one that focuses us in a slightly different way than we were before.

To help estimate the users that each persona represents, the persona poster contains corresponding population information from the UW Factbook. This correspondence does not always apply, for some undergraduate students may be quite experienced researchers, while some scholars may behave more like beginners when looking for something outside their area of expertise. However it is useful as a rough way of thinking about our patrons.

For most design choices relating to the website, Brooke the Beginner will be the primary persona. Students like Brooke, who are just beginning their academic careers, are a fruitful area for us to focus our design efforts. Aside from being the most populous user group, they stand to suffer the most from unsupportive systems, since they lack subject experience to know what research materials exist, and have little prior familiarity with library systems. Since they will need to use the library more and more over the next few years, they also stand to gain a great deal from a system that matches their expectations and guides them to appropriate resources.

More experienced library users, such as Richard the Researcher and Sharon the Scholar, already have some idea of what research materials will be available; for them, using the Libraries is often simply a matter of locating items they already know about. They will be able to successfully use any reasonable interface, even if it does not entirely conform to their expectations.

The personas are most heavily used by staff and groups when dealing with Web services. Ideally, they will be extended and used by other groups throughout the library. Individual persona posters are mounted above the desks of key staff and are regularly used to inform decisions about interface changes. Another set of posters are mounted in a shared conference room, which has generated much interest and use by other teams including ResearchWorks (institutional repository, digital collections, journal publishing) and a GIS services group.

Use case: LibGuides

As we need to make decisions about a particular service, we choose the persona or personas that are representative the primary user of that service.

Depending on the project, we may choose more than one persona.

For example, as we need to make additional tweaks to LibGuides we often turn to Brooke the Beginner, our novice user. LibGuides is primarily designed for users like Brooke, so that's an appropriate choice and the majority of decisions are made based on her preferences and background. However, all of our other personas (Richard the Researcher, Sharon the Scholar, Paul the Professional, and even April the Alumna) can and do use LibGuides so we need to make sure that we don't "break" the interface for those users.

Next Steps

Next steps with the personas at UW include a review to make sure they're still correct. We have new survey data to use in these efforts and some of the reports we'd referenced in 2009 have been recently updated with new information. In the true spirit of the conference theme, we have not done assessment on the personas or calculated their return on investment, but we can definitely say that they have been an effective, sustainable, and practical tool.

Conclusion

Personas have been a very useful tool for making informed decisions about whether a particular feature or service should be explored or implemented for Libraries users. Personas have guided decisions about features, navigation, and interactions; helped stakeholders and designers keep the users in mind; and facilitated communication between stakeholders. We look forward to meeting the demands of Brooke, Richard, Sharon, Paul, and April and thus improving Libraries services for them, and their friends and colleagues.

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Notes

1. John S. Pruitt and Tamara Adlin, *The Persona Lifecycle* (San Francisco: M. Kaufmann Publishers, 2006).
2. University of Washington Libraries Assessment, <http://www.lib.washington.edu/assessment/>.

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<http://www.lib.washington.edu/usability/>.
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<http://libraryassessment.org/bm~doc/proceedings-lac-2008.pdf>.
 5. Pruitt and Adlin.
 6. Matthew Klee, "Personas and Goal-Directed Design: An Interview with Kim Goodwin," User Interface Engineering—Usability Research, Training, and Events—UIE. January 01, 2001, http://www.uie.com/articles/goodwin_interview/.
 7. Pruitt and Adlin.
 8. Ibid.
 9. University of Washington Libraries User Experience.

