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Persona Journey Mapping to Drive Equity During an LMS Transition

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Abstract

One way to achieve equitable design is to directly include users who will be impacted the most in the planning and facilitation of a project. Common financial, logistical, and/or temporal constraints reveal that direct inclusion of the people most impacted is not always possible. If this barrier arises, one promising alternative is the creation and use of personas. Using a vignette and case study qualitative methodological approach, three researchers at a large urban university in the Pacific Northwest detail personas and journey mapping as an equitable design practice during a LMS migration on a rapid development timeline. This paper details how personas were created using empirical data, how journey mapping impacted various teams, and how centering equity better prepared staff to support instructors throughout the migration while addressing the student learning impact.

Keywords

Equity, personas, journey mapping, equitable design, LMS transition, migration

Introduction

Technology systems that support learning–such as Learning Management Systems, or LMS's–can change frequently in higher education (Rucker & Frass, 2017). This frequent change creates significant challenges in how faculty support-staff serve instructors during the initial transition–or migration–period. When this migration occurs, "faculty members not only have to adapt their teaching patterns (e.g., new LMS tools/features) but also have to learn how to use the [new] system, often in a very short period of time" (Rucker & Frass, 2017, p. 260). To effectively address both of these pedagogical and technological adaptation challenges, faculty support-staff must also ensure that equity remains a top priority. However, when a focus on equitable practice is deprioritized during these times of rapid transition, there is a high chance that stakeholders will experience adoption resistance, putting the overall migration success and student experience at risk (Ekuase-Anwansedo et al., 2018).

Background

In 2021, a committee of instructor and student services representatives at a large urban University in the Pacific Northwest voted to change the institution's LMS, impacting thousands of students, staff, and instructors for the upcoming academic year. Over the course of the year-long migration, the department migrated over 27,000 course shells from the Desire2Learn LMS to the Canvas LMS. To accomplish this, four intra-departmental teams were formed: Migration (15 students and three to five full-time staff), faculty migration (two instructor co-creators and five full-time staff), banner integration (three to five full-time staff), and user experience (UX) (seven full-time staff and one part-time student). The researchers for this paper were on the (UX) team, which was tasked with providing equitable, student-centered design and implementation recommendations to the other teams. This was especially challenging given the often vastly divergent workflows, timelines, and goals of each team.

While many LMS transition contracts allow for a multi-year migration process, in this case, support-staff only had one year to do the same, with the official switch happening in the middle of an academic year. This presented complex usability, accessibility, and equity challenges for instructors. To name a few examples, many course materials (including hours of instructional video) referenced the previous system in both name and functionality; these would each need to be updated course-by-course. In addition, course settings for accessibility accommodations would need to be reset, relearned, and reverified.

As illustrated by past research, how instructors teach using online technology can positively or negatively impact student learning (Garrison et al., 2000; Robinson, et al., 2017). Therefore, the probability for a steep faculty learning curve heralded an uncertain future for instructors, staff, and especially students. In order to promote a positive impact on student learning, a clear priority emerged: With equitable, effective LMS adoption as our ultimate goal, it would then be critical to center an equitable, effective instructor experience during the migration process.

Equitable design often means understanding the intended users' experiences including their goals, needs, and possible obstacles (Costanza-Chock, 2020; Marshall et al., 2015). In order to center student and faculty voice while working within the time constraints for the LMS migration project, the UX team utilized persona creation and journey mapping to proactively identify barriers, highlight critical opportunities for departmental intervention, and elevate high-impact strategies for the LMS migration.

Literature Review

Defining Personas

Personas are individual fictional or archetypal characters based on real information about real end users (Kalbach, 2016); they are used as a method of person-centered design for bringing in user voice to the design process when live user participation is not feasible (Friess, 2012). Each individual persona is a synthesis of user experience data based on

research that usually differentiates between a person's goals and behaviors (Harley, 2015; Kalbach, 2016; Marshall et al., 2015). Marshall et al. (2015) noted that, "personas within the Inclusive Design process for any product or service can be a powerful tool for understanding and visualizing user goals, motivations, relationships with existing products and contexts of use" (p. 311). To make personas effective for wide-spread usage, they are typically given personal characteristics, a photo, and a story. A persona story will often include background information such as needs, struggles, or a problem they are experiencing.

Defining Journey Mapping

Because personas are fictional characters informed by data, they can be used to create a powerful user storyboard via a journey map (a type of visual narrative that describes a persona's experience of a process or service) (Kalbach, 2016; McCarthy et al., 2016; Samson et al., 2017). This can be helpful in understanding a team member's tasks, how to prioritize these tasks, and to reduce siloed thinking (Kalbach, 2016). A journey map can also identify sequences of events (also called touchpoints, checkpoints, or pain points) that highlight potential emotional and physical impacts of the user experience (Friess, 2012; Howard, 2014; McCarthy et al., 2016; Mucz & Gareau-Brennan, 2019; Ortbal et al., 2016; Rosenbaum et al., 2017; Samson et al., 2017). Journey mapping is most successful when completed collaboratively, allowing teams to approach complex projects holistically and creatively (Kalbach, 2016). By helping service providers relate to the mental and physical aspects of user experience (Cateriano-Arévalo et al., 2021; McCarthy et al., 2016; Samson et al., 2017), journey maps can guide improvements and inform critical changes to a process or service (Bernard & Andritsos, 2017; Ly et al., 2021).

Persona Usage in Higher Education

Although journey maps and personas have been used for market research since the 1960s (Bernard & Andritsos, 2017; Cateriano-Arévalo et al., 2021; Crosier & Hanford, 2012) and have since expanded to a variety of fields, including social and health sciences (Cateriano-Arévalo et al., 2021; Joseph et al., 2020; Ly et al., 2021; McCarthy et al., 2016; Samson et al., 2017), their application within faculty development and higher education is still in its infancy.

At its core, persona creation centers the human experience. Personas are used to elevate inclusive and equitable practices, encourage curiosity and engagement, drive meaningful change, and build trusting relationships (Friess, 2012; Howard, 2014; McCarthy et al., 2016; Samson et al., 2017). Personas "can be a powerful way of ensuring that inclusive design doesn't become overly focused on overcoming barriers to product use but instead focuses upon the creation of positive user experiences for all" (Marshall et al., 2015). In short, personas are a useful tool to identify unmet needs and barriers by implementing them as users within a design process.

Methodology

In order to bring personas into existing education research frameworks, we would like to draw attention to the similarities between the practice of creating user personas to vignette and case study methodology. Much like persona creation and journey mapping, "vignettes are incomplete short stories that are written to reflect, in a less complex way, real life situations in order to encourage discussions and potential solutions to problems where multiple solutions are possible" (Jeffries & Maeder, 2005, p. 20). The process of discussion and problem solving allows for multiple solutions/answers and is intended to encourage independent thinking and unique responses. In addition, case study is a well-respected qualitative research method that centers a narrative through the perspective of the research participants while acknowledging the impact of researcher bias (Merriam & Tisdell, 2016). Most importantly, case study is "interested in understanding the meaning people have constructed; that is, how people make sense of their world and the experiences they have in the world" (Merriam & Tisdell, 2016, p. 6). By connecting vignettes and case study to the practice of creating personas and journey mapping, the authors argue that personas and journey mapping align with existing qualitative practices and seek to recreate understanding in infinitely fluid, dynamic ways.

Project Details

Cocreating Instructor Personas

Instructor persona development took place over the course of several months and was led by a senior UX designer and a faculty member, using data from two sources: The National Survey of Faculty During COVID-19 (Fox et al., 2020) and [the home institution's] Disability Resource Center Faculty Survey from 2020. Taking care to utilize existing inclusive personas exemplar models including NNH personas, the InvisionApp, and Microsoft's Inclusive Design Kit to build the outline for each instructor persona case study (Kaplan, 2022; Microsoft, 2018; Tran, 2019), three instructor profiles were developed using the source surveys' demographic data and direct quotes. These three profiles describe their experiences in the migration and how they may respond to the process of moving their courses from D2L to Canvas. The profile names are: Fully Independent, Overwhelmed & Confused, and Curious & Communicative [see Figure 1].

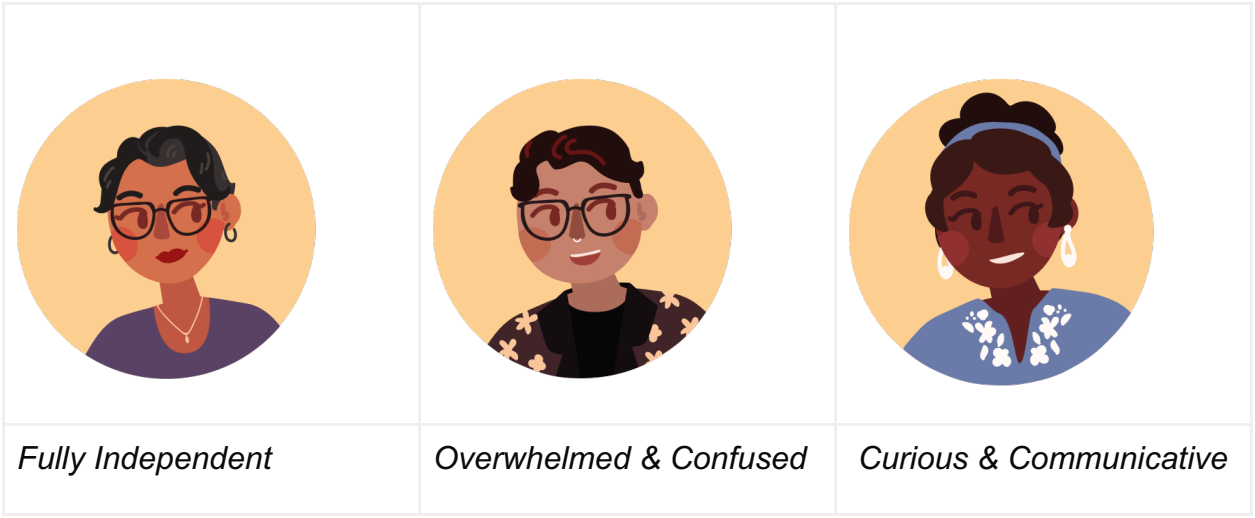

Figure 1

Instructor Persona Illustrations

Once the instructor personas were complete, we each used a qualitative vignette process to build detailed, expanded profiles, and stories. Each expanded profile and story included an overview about the instructor, faculty rank, an LMS-related problem they were facing, and potential interventions related to that problem. While these stories are ultimately fictional, they are based on both empirical data and our extensive individual experiences. Figure 2 is an example of one story:

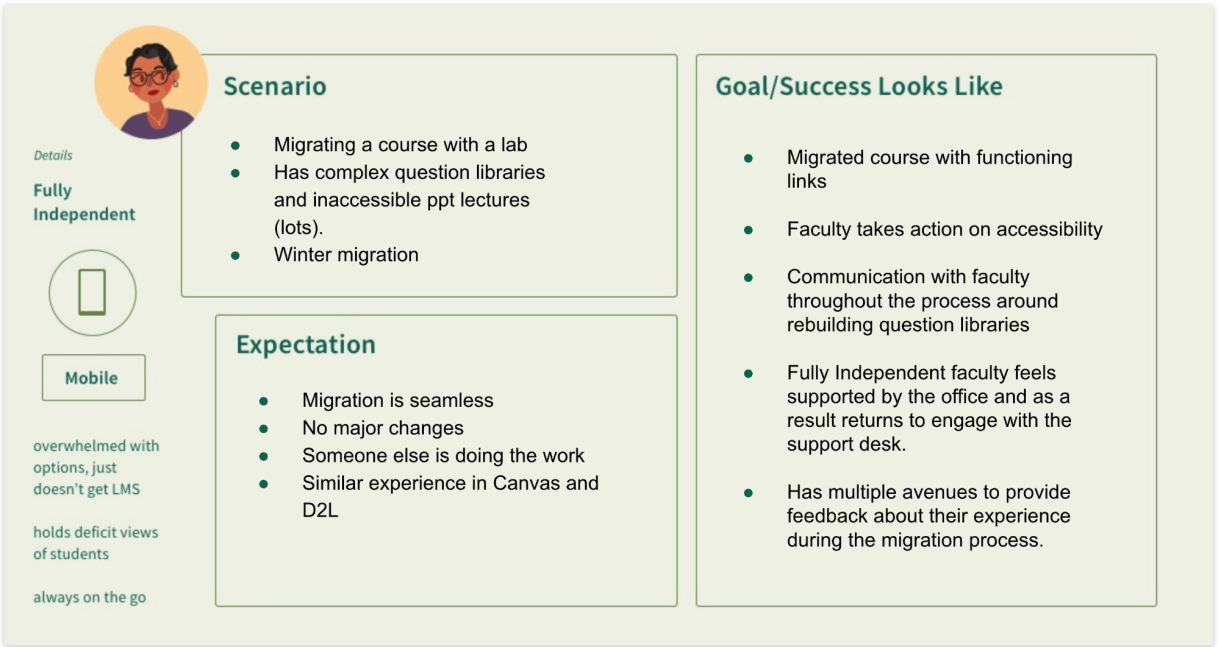

Figure 2-*Fully Independent Story*

Sharing Our Work

Once the personas and journey maps were drafted, our team's focus shifted to how best to share this work with the rest of the department. As many of our team members have not heard of or used personas or journey mapping before, we began by attempting to efficiently explain the "what" and "how" of employing personas to the larger team. Explaining the persons was a crucial step in our process as we planned to use the personas and journey maps to drive equity and inform project stakeholders. When we introduced this new approach with such a tight deadline, the implications of identifying potential barriers to project stakeholders about the instructor experience was an important motivator to this work.

We began our explanation of personas to project stakeholders by contextualizing how personas have traditionally been used in other fields. We then chose to explicitly activate prior knowledge of how personas had been used in our department's work in the past, such as student personas, permissions roles for the Canvas LMS, and the creation process for faculty personas. Finally, we shared how previous faculty personas informed the creation of the three specific personas for the Canvas migration.

Once we established this necessary background knowledge, we then focused our attention on how each instructor persona was more fully developed via: A full profile (see Figure 1), what success looked like for each persona during/after migration, key motivators and context, and key actions during each phase of migration. Additionally, we chose to present two possible pathways: a positive pathway, where our department successfully intervened and facilitated a (successful) migration for that persona, and a negative pathway, where our department did not successfully intervene and migration was unsuccessful for that persona (see Figure 3 and 4).

Figure 3

Positive Experiences of Instructors

Figure 4

Negative Experiences of Instructors

In short, we had two essential questions for this stage: At which points in the migration process would departmental contact be most impactful? Conversely, at which points in the migration process would a lack of departmental contact be most detrimental? The benefit of highlighting this stage, we hoped, would be to bring a pragmatist lens to the creative, narrative approaches of the initial persona mapping process and reduce a common issue on our teams of making siloed decision making.

After sketching out a detailed picture of each persona, their potential journeys through the migration process, and optimal intervention points, we saw a need to illustrate the "why" of persona mapping for our larger team. At this stage, we expanded on persona mapping as an equitable practice that centers the needs and experiences of people who have been historically excluded from decision-making in higher education, as well as one that will ultimately contribute to a consistent student experience in their courses. We took extra care to draw explicit connections between this work and equitable LMS implementation. We also took care to highlight that personas do not replace people, but rather a method for using data, collaboration, and lived experience to create a richer tapestry of understanding. We highlighted that when we could not have faculty in the room with us every day, personas were a powerful addendum.

Outcomes

For the authors, it was vital that persona mapping led to tangible change and not another theoretical thought exercise. To achieve this, we first posed several discussion prompts: What changes to process would have the greatest impact on faculty success? How could existing high-impact practices be amplified? And, perhaps most critically, how could personal connection with individual faculty and departments be embedded into their work? Finally, we ended our presentation to the larger staff with a call to action: Identify implications from the journey maps and intervention points for their work, and then enact them.

Overall, we observed the highest level of active engagement during the discussion section following each persona's profile and journey map, with particular team enthusiasm around identifying key intervention points in both the positive and negative pathways. Staff were most passionate about how their work could prevent faculty from continuing down the negative pathway. In turn, we saw team members increase their fluency at identifying key interventions with each subsequent persona.

We discovered that increasing the team members fluency of the LMS transition and what role they had in the impact of the intended users as an essential takeaway in our efforts to drive equity in our approach. By spotlighting the emotional and physical reactions of the LMS transition, team members were highly knowledgeable in their contributions of the project and the overall user impact. Figure 5 illustrates how our group marked the intervention points with a simple dot in the presentation slides as participants brainstormed and shared those with them afterwards.

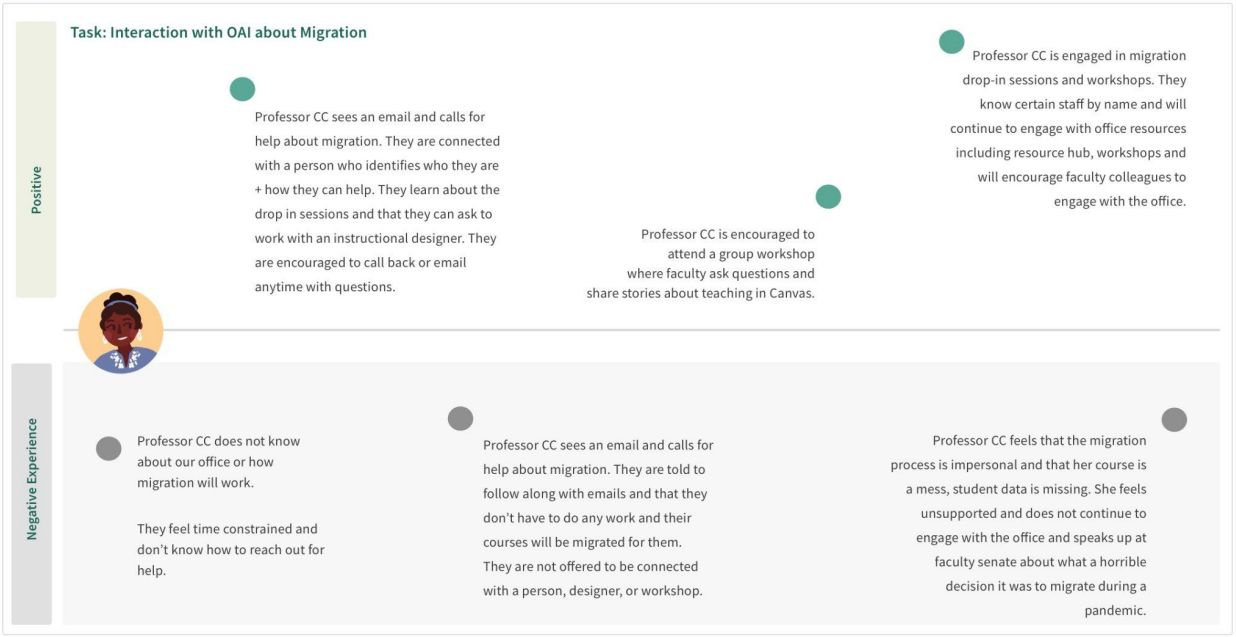

Figure 5

Intervention Dots on the Journey Map

Across teams, discussions around workflow changes focused on mapping our primary users (faculty/instructors) into distinct pathways for service. Instead of a one-size-fits-all approach to faculty support, our department could identify key indicators related to specific services and adjust their delivery accordingly. One feature that remained consistent across the tracking concept was personal connection. Each team highlighted the importance of intervention strategies, such as increasing direct communication with department chairs as opposed to mass emails and adapting communication timing and modality for adjuncts. Overall, teams found value in discussing the experiences of all three instructor personas by emphasizing three priorities: personalization, choice, and relationship-building. By centering these three priorities, the authors were able to influence an equitable design process that effectively humanized the LMS transition.

Ultimately, several systemic changes were made to the migration project based on the persona research, dissemination, and team discussions. The importance of personalized communication led one team member to pitch and adopt a departmental liaison role to their team. In this role, instructional designers were assigned to different colleges as a support liaison to facilitate more personalized communication and to connect faculty with the support services offered by our department. Although the liaison role started as a migration-specific support, it has remained and we continue to offer departments one-to-one contact with a designer. This role, while established during the migration, is now able to foster positive relationships between our department and academic units and cover a plethora of concerns beyond the migration.

Another systemic change teams made was being able to expand asynchronous resources based on common migration-related pain-points elevated by their faculty collaborators. In addition, this work also led the Migration team to increase direct communication touchpoints to better answer the most common questions aggregated from service tickets and guide faculty to individual support as needed.

Discussion

Given the time and resource constraints of our institution's LMS migration, persona creation and journey mapping fit our need to equitably design for historically excluded populations. The benefits of centering equity via personas were vast; they ensured team members focused their efforts and communication on the user rather than the product, minimized inaccuracies about the end user when tied to empirical data, challenged assumptions for the designers, and helped to define a clear purpose for the intended users. By capturing experiences and perspectives of some of our historically excluded stakeholders via personas, we were able to elevate their experiences in a manner that directly influenced a positive adoption of the new LMS. The campus community viewed learning the new LMS as an opportunity to align with our collective efforts towards an accessibility and equitable campus.

The journey maps were a helpful tool to educate project stakeholders. Team members were able to visualize the project in its full scope and ask relevant questions throughout the design process. They were able to help one another through their assumptions and biases throughout the process. It created an opportunity to talk openly about the barriers about the process and troubleshooting across siloed teams.

The journey maps and personas were a tool to help sustain engagement with the project as it helped to visual "why does this matter." It kept the instructor and student experience at the forefront during a pivotal point at our institution. The LMS transition occurred during the COVID-19 pandemic. The authors felt that it was imperative to drive equity throughout the LMS transition during a heightened time when engagement to a purpose and personal connection was needed most. This was particularly evident with the department liaison role, which fostered personal connection and helped to increase communication across a siloed campus.

With each presentation the authors had across teams about our persona mapping research, team members became curious and inquired about building their own internal personas and journey maps. We saw the need to highlight and explain more fully the equitable design process, which integrated empirical data that brought to the forefront the most impacted users. In other words, we were intentional about declaring our biases and keeping others accountable in the why and how we were using personas within the LMS transition.

Bias

In order to generate each persona's expanded profiles and stories, we utilized creative, narrative writing to craft a portrait of needs, desires, barriers, and motivators. This was by no means an exact, traditionally objective process, but is instead one that leveraged the lived experience of each of the primary researchers to create a dynamic character for each persona. In many ways, the subjective, inventive nature of persona creation and journey mapping leaves practitioners open to the impact of implicit bias. Without bias reduction checkpoints, personas can be problematic, especially when they are not used in a manner that fully represents the end user's contextual background. Historically, when personas are not informed by rich empirical data, inaccuracies exist and may cause problematic outcomes within a project such as creating a service or product that does not serve its intended audience (Friess, 2012). To counter this potential problem, our process was informed by a rigorous qualitative practice starting with analyzing two separate data sets that were relevant to the lived experiences of our audience.

We minimized bias and strengthened our research process through the use of triangulation (Merriam & Tisdell, 2016; Stake, 1995). Specifically, our process minimized bias because each persona was validated against empirical data, confirmed by our collective discussion, and informed by the researcher's individualized experiences and contributions. The personas we designed used demographic data based on an audience within a specific

community, and we argue could be replicated in future studies (Cateriano-Arévalo et al., 2021; Ortbal et al., 2016).

Biases inherently play a large role in effective persona creation and journey mapping because they were created by designers who engage in a process with ties to power and decision-making and is not typically conducted by those who are most impacted or risk the most harm (Cateriano-Arévalo et al., 2021; Davies et al., 2022). To further mitigate the impact of implicit bias, our team embedded an evaluation of how our personas and journey maps were created. We also made sure to include ample opportunities for other department staff to review and critique our process. These checkpoints ultimately strengthened the personas and journey mapping process and increased our ability to minimize our individual biases (Friess, 2012). While careful mitigation of personal bias is critical, this inherently human approach– and evidence-based practice informed by direct, practitioner experience can subvert systemic bias and preferential treatment that is often afforded to more traditional, positivist research methodology or unchecked persona and journey mapping methods. Balancing both participatory and transformative methods of inquiry is what makes persona work especially suited for the art and science of education.

Limitations

Journey mapping is described using a variety of names and has been referred to as customer journey mapping, customer experience mapping, user scenario mapping, user story mapping, customer lifecycle mapping, stakeholder journey mapping, and patient journey mapping (Davies et al., 2022; Kalbach, 2016; McCarthy et al., 2016; Mucz & Gareau-Brennan, 2019; Ortbal et al., 2016). Due to the variety of names used, the process for how to create an accurate and equitable journey map is subjective and open to interpretation. One area of debate is where the touchpoints should be and their impacts to the user (Ortbal et al., 2016). No specific guidelines exist in the academic literature to inform this work due to a lack of examples for authors to reference including a lack of diverse persona stories (i.e. demographic and situational data) (Davies et al., 2022).

Implications for Future Practice

Through this experience, our team emerged with several implications for future persona use in higher education. When personas are based on user research data they are a highly valid and important foundation in the inclusive design process. If personas are created without user research and data, they may simply validate pre-existing assumptions about the user's goals and motivations. Empirical data is needed to inform credible, accurate personas that address the end user within the appropriate context (Cateriano-Arévalo et al., 2021; Ortbal et al., 2016). Personas then, are only as useful as the data they are built on (Marshall et al., 2015). In our study, we used primary survey data to inform persona creation and overall validity; we see this as a critical practice for further persona use in higher education.

When equity is a critical driver on a higher education initiative involving different software, varying stakeholders, and includes a rapid training component for a large number of people with varying digital skills, persona creation and journey mapping can be a highly transformative design tool. When we cannot always have our most impacted users in the room, personas are a valuable and powerful addendum. By using an equitable design approach through the use of tools such as personas and journey mapping, our team at a large public university was able to improve the instructor and student experience during the transition from one software program to another by focusing on an approach of direct communication and personalization. This allowed for a positive adoption of the LMS, several shifts in workflow and service delivery, and overall success of the project.

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