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Research Article

Understanding Adult Learners Through the Development of Persona Profiles

Jen Vanek, World Education, a division of JSI Research and Training Institute

Jill Castek, University of Arizona

Kathy Harris, Portland State University

Gloria E. Jacobs, Independent Researcher

Abstract

The information conveyed in this manuscript includes figures published in a research report and on presentation slides previously shared in research and practitioner conferences. However, the manuscript is made up of original writing not previously published or under review.

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Understanding Working Learners Through the Development of Persona Profiles

This research uses an empirical methodology of persona profile development, based on pooled qualitative data, to examine the experiences of adult working learners who participate in employer-supported education and training initiatives. Three descriptive, data-driven persona profiles are offered as examples to illustrate that working learners are diverse in their experiences and backgrounds. Persona profiles humanize learners and illustrate that adult education programs benefit when educators appreciate learners' challenges and competing priorities in their lives. Showing how persona profiles were developed offers researchers and adult educators' insight into learner experiences, revealing who adult learners are, what assets they bring, and the goals they set for themselves.

Understanding Adult Learners Through the Development of Persona Profiles

Learner experience encompasses learners' needs, goals, lived realities, and challenges, as best expressed in their own voices. Learner experience research is important in adult education for developing learner-centered approaches that inform policy and shape programs to meet the diverse needs of adult learners in a rapidly changing world. Yet gaining a holistic view of learner experience can be challenging.

This paper introduces an empirical methodological approach for capturing learner experience. We demonstrate how developing composite profiles

Correspondence: jcastek@arizona.edu, harriska@pdx.edu, glojacobs@gmail.com

called personae (plural of persona) can help adult educators understand their learners' motivations and challenges. In our multi-year 21st Century Learning Ecosystem Opportunities (21CLEO) research initiative, we examined the real-life experiences of adult frontline service workers engaged in employer-supported adult education and training (hereafter, ESAET, for brevity), a type of adult education programming. We define ESAET as the range of educational activities offered to workers by their employers, including workplace English for Speakers of Other Languages (ESOL), computer literacy, tuition reimbursement, and industry-specific technical training. Conducting research to develop data-driven persona profiles allowed us to capture the breadth and depth of learner experience. The audience for this paper includes researchers and those who design programs for adult learners, especially, but not exclusively, for employer-supported education and training programs, as well as anyone who works with adult learners and would benefit from a better understanding of their learners' experiences.

Historically, research on ESAET has focused primarily on the employer's perspective, emphasizing how employer investments in education yield returns on investment and boost workforce productivity (Deloitte & Aspen Institute, 2015; National Research Council, 2012; Rho et al., 2020; Shechtman et al., 2016). While these economic and bottom-line viewpoints are important, they often overlook learners' voices, failing to reveal learners' needs, values, motivations, and experiences with these programs (Castek et al., 2022). This can leave a gap in the understanding necessary to develop meaningful educational opportunities that may lead to actual career advancement and wage gains for adult learners. Moreover, the gap may limit the potential for successful education and training for employees. To mitigate this shortcoming, our study highlights findings that describe learners' perspectives and characteristics to better understand how adult learners engage with, benefit from, and are affected by ESAET programs.

We collected qualitative data, conducted a rigorous analysis, and developed persona profiles. Grounded in user experience research (Kouprie and Visser, 2009), our expanded data-driven process involved reflexive iteration and careful consideration of ESAET contexts. We developed data-driven persona profiles from detailed, relational descriptions of learner archetypes drawn from our pooled qualitative interview data. These personae served three purposes: to illustrate the persona development methodology, to describe who working learners are, and to identify program features that promote their persistence and success.

What Are Personae?

Personae are "detailed descriptions of imaginary people constructed out of well-understood, highly specified data about real people" (Pruitt & Adlin, 2006, p. 3). A persona represents a collective identity, offering a vivid portrayal of an individual with defined characteristics. The persona profile methodology fosters a shared understanding of learners. Alan Cooper popularized the use of personae in the 1980s, describing them in *The Inmates Are Running the Asylum* (1999) as fictional characters representing user archetypes derived from user research and interviews. Ward (2010) interpreted personae profiles to help librarians better understand their patrons. In engineering design, Kouprie and Visser (2009) argue that personifying individuals enables a better understanding of and anticipation of their needs, goals, and challenges. The term persona, meaning mask in Greek, underscores the idea that designers must reflect on the experiences and perspectives of the individuals they serve.

While persona development has been used since the mid-1990s across disciplines, this process is not commonly used in adult education research. Some qualitative research in education has employed a similar approach, using composite case study or composite narrative methods, in which data from multiple individuals are synthesized into a single, illustrative narrative that represents broader perspectives (Baaki et al., 2017; Johnson et al., 2023; Sanders et al., 2024). Given that the research literature offered few details on how to use data to create personae, we documented our adaptations, carefully articulating the analysis steps we worked through to create empirically derived, data-driven relational examples as findings.

Recognizing the Needs of All

We undertook a methodology driven by persona development in this study, taking into account the needs of institutions that offer ESAET, adult education providers, and learners themselves. We recognize that complex relationships and competing priorities exist for each

group. For example, institutional needs may center on return on investment, while learner needs may focus on economic advancement anchored in learning. Learners may feel a need for higher pay or a different or better job within the institution as a result of participating in a learning experience. There may indeed be mutual benefit for both learners and providers/institutions; however, we prioritized learners' voices and experiences to advance equitable, relatable, and responsive ESAET.

Theoretical Framework

We adopt an ecosystem lens (21CLEO Research Team, 2019a) to explain the complex interactions described in this study. Just as the natural environment is made up of interconnected components, an ecosystem perspective views learning experiences as connected across place and time and across a range of contexts. The idea of the ecosystem has been taken up within the social sciences and human development (Bronfenbrenner, 1979) as a way to understand how the many pieces of the human experience fit together. The purpose of an ecosystem metaphor, like any model, is to represent a complex system in a straightforward way. However, Chang and Guetl (2007) highlight that the components captured within an ecosystem can themselves include highly complex interactions and are further complexified when seen as an interactive system. While applying an ecosystem lens is not without its limits, its application as a theoretical frame offers opportunities to think through aspects of a complex system, how they interrelate, what elements converge, and which diverge. An ecosystem lens offered useful framing for this study, as complex interactions and systems provided a conceptual model for understanding institutional and learners' needs at multiple levels. Woven into the fabric of learning ecosystems lies an additional lens that framed the way we created personae, that of relationality (Hickey & Riddle, 2023). Relationality adds an essential human dimension to an ecosystems lens because it centers relationships that form an essential part of complex learning interactions.

Literature Review

To contextualize our focus on learner experience and the use of persona development to amplify learners' voices, we begin by reviewing relevant literature. We examine the characteristics and challenges of frontline service workers and then outline the ESAET landscape, including those located in the workplace and beyond. Finally, we explore the barriers that inhibit learner participation and persistence in these programs. Taken together, these bodies of literature position our research within current discussions about access, equity, and learner-centered design in ESAET, especially for those whose lived, learning, and professional experiences are often overlooked in ESAET activities.

Front-Line Service Workers

Frontline service workers are employees who directly interact with customers or clients; they often serve as the first point of contact for the public and play a key role in delivering services (Bergson-Shilcock, 2017). At the time of our data collection, the literature suggested that approximately 40% of frontline service workers were employed in the retail, healthcare, food service, or hospitality sectors. The majority earned less than $30,000 annually, reflecting the prevalence of low-wage positions within these industries. About 30% of this group were under age 35, indicating a relatively young workforce. Notably, between 60% and 70% faced job-limiting challenges due to foundational skill gaps in literacy, numeracy, and problem-solving, which can hinder career advancement and long-term economic stability (Constantakes & Noakes, 2019). Twenty-nine percent spoke a language other than English as their first language (Bergson-Shilcock, 2017). Although they are often viewed as unskilled workers, they handle tasks that require strong interpersonal and problem-solving skills (Aspen Institute, 2015). During the pandemic, it became apparent that frontline service workers had limited flexibility for remote work, resulting in higher exposure to workplace risks (Nyashanu et al., 2020).

More recent analyses show that frontline jobs are disproportionately held by women, people of color, and immigrants. A 2020 Center for Economic and Policy Research labor market analysis (Rho et al., 2020) illustrates this pattern. Women account for 64.4 percent of frontline workers, with especially high representation in health care (76.8 percent) and childcare and social services (85.2 percent). People of color make up 41.2 percent of frontline workers overall and are heavily

represented in building cleaning services and care-related occupations. Immigrants make up 17.3 percent of frontline workers, with substantially higher concentrations in building cleaning services (38.2 percent), warehousing and storage (22.5 percent), grocery wholesalers (23.9 percent), and home health care (23.9 percent).

Employer-Supported Adult Education and Training (ESAET)

ESAET encompasses a wide array of formal and informal learning opportunities. Workplace learning constitutes a substantial component of these activities, delivered within the employment setting. Structured on-the-job training programs, including apprenticeships, internships, and occupational training, align with employer hiring needs and often result in the attainment of certificates or industry-recognized credentials (Bergson-Shilcock, 2017; Magee et al., 2018; Upskill America & Fall, J., 2017; US DoL, nd). Additionally, workplace ESOL classes (Jain & Vázquez, 2021) are available in some places.

ESAET also extends beyond the workplace. These formal initiatives are available through community colleges, four-year institutions, adult learning centers, and community-based organizations. These programs may confer degrees, certificates, or adult secondary education credentials. When integrated with adult basic education, formal learning may focus on developing foundational academic skills and providing literacy instruction. However, employer-sponsored tuition assistance for formal degree and certificate programs remains limited, with only a small percentage of service-sector employees receiving financial support for postsecondary education (Bergon-Shilcock, 2017).

Learners engage with any of these options for diverse reasons, including learning foundational skills (e.g., workplace ESOL or digital skills), advancing along a structured, credentialed career pathway (e.g., progressing from home health aide to certified nursing assistant), meeting job-specific requirements (e.g., demonstrating understanding of HIPAA or workplace safety), earning a degree (tuition reimbursement or payment for college courses leading to a 2- or 4-year degree), or learning for personal interest or future (e.g., digital literacy) (21CLEO Research Team, 2019b).

Barriers to Participation

Despite the availability of various learning opportunities, frontline workers face barriers similar to those adult learners encounter in other settings, most notably engagement and persistence. We draw on Cross (1981) and Patterson (2018), who identify dispositional, situational, and institutional barriers in adult education programs. Dispositional barriers stem from attitudes or beliefs that influence motivation and participation; situational barriers reflect life circumstances that affect learners' ability to engage; and institutional barriers—such as a lack of employer-supported release time, training costs, and limited buy-in or support from immediate supervisors—impede participation. Logistical challenges, including limited time and resources, scheduling conflicts, and family responsibilities, are also frequently cited by frontline workers seeking educational opportunities (Bergson-Shilcock, 2017).

Condon et al. (2025) identified additional barriers for adults with literacy needs. Of the 2,000 adults surveyed, awareness of adult learning opportunities was limited: "80% of respondents did not know about available adult education programs in their community" (p. 9), and more than half believed these opportunities were available only at high cost. Amid expanding learning options and persistent barriers, understanding the working learner is essential to designing impactful, flexible learning opportunities that meet their needs.

Our Focus

Much of the existing literature on ESAET privileges employer perspectives, offering limited insight into learners' experiences. Our research addresses this gap by examining the characteristics of ESAET that support learner engagement and success, grounding the analysis in the lived experiences of frontline working learners. Central to this effort was developing a methodological approach that relationally represents learner perspectives, shifting from employer-centric narratives to learner-centered understanding.

To this end, we adopted persona development as an innovative, data-driven methodological tool for capturing and conveying participants' experiences. This research-based approach enabled us to examine how learners navigate educational opportunities within complex

personal and professional contexts and how instructional design and programming might better align with their needs. Our study demonstrates that data-driven persona development is a useful and innovative methodology for capturing and illustrating learner experience.

Methodology

Grounded in qualitative analysis and user-centered design, a persona-based approach enabled us to synthesize individual learner narratives into composite representations that highlight key motivations, challenges, and contextual factors shaping participation in ESAET. In the next sections, we describe the study participants, outline the multi-phase process for developing the personae, and detail the focus groups conducted to assess their relevance. Each step reflects our commitment to centering learner voice and provides a practical framework for communicating findings to educators, employers, and policymakers.

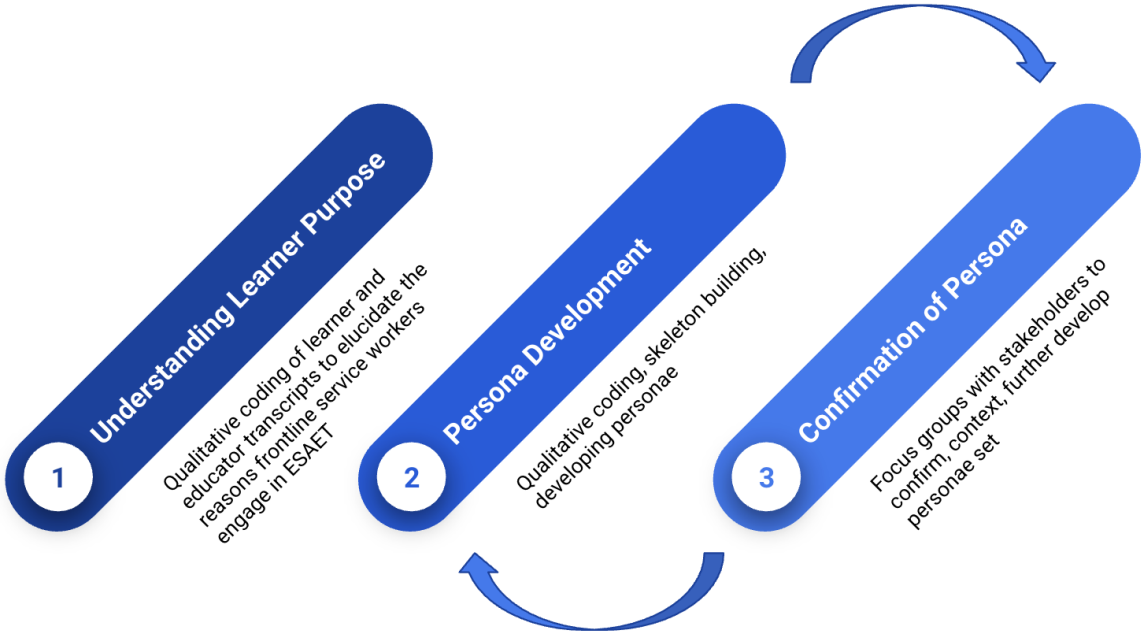
Participants

Study participants were drawn from eight geographic locations across the United States. Each region included multiple sites offering work-based educational programming, shaped by instructors, support service providers, and employees. We focused primarily on participants working in retail, hospitality, restaurants, and healthcare, while also including individuals from other fields referred through workplace development programs, adult education providers, or immigrant and refugee support services. Participants included 27 working learners and 16 adult education instructors, support service providers, and employees who helped shape educational programming.

Data Collection

Over three years, we interviewed 43 individuals across eight sites. Twenty-seven were working learners, each interviewed by two researchers. Most interviews were conducted in person, with video calls used when necessary. Interviews were audio-recorded, transcribed, and verified by research team members to ensure accuracy. In our initial qualitative coding pass, we examined why participants engaged in ESAET; our inductive process identified four purposes: 1) foundational skill development to return to a prior career, 2) foundational skill development to start a new career, 3) required training to remain in a current position, and 4) earning a degree or certificate. In a subsequent step, we revisited the dataset to examine participants' experiences within ESAET as they worked toward these goals.

FIGURE 1. Research process.



The full sequence of research activities is shown in Figure 1. This paper focuses on steps 2 and 3. Persona profiles and the analysis process for developing them are intertwined. The process itself is a human-centered approach that centers the voices of our participants and shapes the presentation of our findings.

Developing Working Learner Personae

We crafted our persona guided by the work of Jacobs, Dreessen, and Pierson (2008), who argued that personae can deepen understanding of research findings and motivate action based on those findings. Their process consists of: 1) identifying the different kinds of learners; 2) gathering and analyzing data (e.g., demographic information, interviews) to reveal patterns of behavior, expectations, and motivations; 3) creating a 'skeleton,' or a bulleted list of characteristics; 4) prioritizing the listed characteristics by relevance; 5) transforming the 'skeleton' into descriptive personae with names, faces, socio-demographic information, goals, competencies, tasks, expectations, and relationships; and 6) returning to the data to evaluate how accurately the personae reflect the learners, revising as needed to improve accuracy.

Building on this framework, our systematic process ensured that the personae were firmly grounded in data collected from our participant sites. To address our research questions and support persona development as an analytic and representational strategy, we employed a layered qualitative analysis. Rather than a single linear coding pass, analysis proceeded through multiple iterative phases, each aligned with a distinct analytic purpose in constructing the personae. This approach allowed us to remain grounded in participants' accounts while progressively organizing the data around the conceptual components needed to develop analytically robust and usable persona profiles (Jacobs et al., 2008). The following steps outline the specific process we employed.

Phase 1. Initial Tagging Guided by Research Questions

The research team began by reading interview transcripts, conducting an initial coding pass guided by the study's research questions and the overarching goal of understanding learners and their experiences in ESAET. This initial phase focused on broad analytic dimensions needed to interpret learner experience and support subsequent persona development. The primary analytic dimensions included:

- Learner characteristics
- Learning opportunity description
- Reasons, goals, feelings, emotions (regarding the learning they were doing)

These dimensions served as inclusive organizing lenses rather than fixed analytic endpoints and were leveraged to include all potentially relevant aspects of learners' experiences captured in early analysis.

Phase 2. Sorting Transcripts by Primary Learning Purpose

Next, we divided learner transcripts into three groups based on the primary purpose learners reported for participating in the ESAET discussed in the interviews:

- To learn foundational skills
- To satisfy a job-specific requirement
- To earn a degree or certificate (without identifying a specific career goal)

Again, this sorting was analytic rather than a final and definitive classification, allowing us to revisit transcripts and reconsider classification as our analysis progressed.

These initial two phases align with Jacobs et al.'s (2008) emphasis on identifying different types of learners as a precursor to persona development. They can be placed within Activity One in Figure 1.

Phase 3. Inductive Coding to Elaborate Persona-Relevant Dimensions

After the initial sorting, we reread and reanalyzed each set of transcripts using an inductive coding process. This phase focused on identifying patterns and dimensions that would later form the components of a persona skeleton, including work context, learning preferences, technology access, supports, barriers, and career orientation. Rather than limiting analysis to pre-established categories, the research team documented and discussed emergent insights, refining, combining, or rearticulating codes as needed to surface patterns that would support persona construction.

For example, within the analytic dimension of learner characteristics, we grouped codes such as current position, family, learning preference, and technology

access and use (see Table 1 for additional examples). This phase aligns with Jacobs et al.'s (2008) second step, which emphasizes analyzing patterns of behavior, motivations, and expectations in relation to participants' demographic and work contexts to inform persona development.

Phase 4. Elucidating Persona Dimensions and Defining Categories

We reviewed the analytic categories and codes associated with each persona dimension across the three learning-purpose groupings. The goal of this phase was to identify recurring configurations of characteristics, motivations, and constraints that meaningfully differentiated groups of learners. These configurations became the defining categories that shaped each persona, representing the core components required to describe learners' goals, contexts, and experiences within ESAET. This stage can be considered the initial

TABLE 1. Example of analytic dimensions and categories used to inform persona development

TAG - Persona Dimension	Analytic Category	Codes (illustrative data feature)
Learner Characteristic	Work	Current position
Learner Characteristic		Job tasks
Learner Characteristic		Work preferences
Learner Characteristic		Prior work: What is your person's professional background?
Learner Characteristic	Learning	Making learning fit into
Learner Characteristic		Larning preference
Learner Characteristic		Prior learning experience
Learner Characteristic	Career Mind-Set	Talking about career preference
Learner Characteristic		Credentials, certification, degrees
Learner Characteristic		Knows the system
Learner Characteristic		Experience meets opportunity
Learner Characteristic		Description of career path
Learner Characteristic	Technology	Tchnology access and use
Learner Characteristic	Supports	Family
Learner Characteristic		Support at work
Learner Characteristic	Barriers	Immigrant experience
Learner Characteristic		Individual needs
Learner Characteristic		Personal challenge
Learner Characteristic		Taking on too much
Learner Characteristic	Personal Drivers	Self-efficacy
Learner Characteristic		Success strategy
Learner Characteristic		Personal attribute
Learner Characteristic		Self-Awareness

development of a persona "skeleton," as suggested by Jacobs et al. (2008, p. 83).

Phase 5. Developing Persona Skeletons and Narrative Profiles

We created a spreadsheet to document persona dimensions, analytic categories, and codes, along with analytic notes and representative excerpts from the interview transcripts. This synthesis enabled the research team to examine how patterns manifested across participants within each learner grouping, ensuring that persona development was informed by collective evidence rather than by individual cases. We then developed narrative descriptions that captured how these patterns appeared across the full set of transcripts within each grouping.

Throughout this iterative process, we regularly returned to the original transcripts to verify interpretations and ensure that analytic categories and defining characteristics remained grounded in the data. This back-and-forth between synthesis and source data helped keep persona development aligned to participants' experiences. Table 1 provides an example of the analytic dimensions, categories, and codes used to inform persona development. These were iteratively developed and refined through multiple passes through the data by four researchers working both individually and collaboratively.

It is important to note that rather than a strictly linear process, there was constant iteration as we checked and refined the coding to develop the personae. For example, we initially focused on two of the three learning opportunity categories: a) foundational skill development and b) satisfying a job requirement. Further analysis revealed that the foundational skills development category required a more detailed description to reflect trends in the data, leading to the creation of an additional persona profile within this category.

Midway through the analysis, we reassessed our interpretive approach in light of the COVID-19 pandemic and broader conversations about social and racial inequity. This reflection prompted deeper consideration of how our backgrounds and perspectives as researchers, with lived experiences different from those of many frontline service workers, shaped our interpretations. In response, we foregrounded factors such as economic vulnerability and disparities in access when shaping two of the personae shared below (Regina and Dani). This reflexive process underscores the importance of researcher positionality in qualitative analysis. Through ongoing interrogation of our insights and attention to personal bias, we arrived at a comprehensive set of categories and characteristics, strengthening the persona profiles to reflect the full range of learner experiences in our dataset.

Through this reflexive process, we reached analytic thematic saturation (Saunders et al., 2017) and agreed that further analysis would not yield additional themes. We ultimately developed a persona "skeleton," a core set of characteristics used to shape each persona (see Figure 2).

FIGURE 2. Persona Skeleton



Finally, we wrote narrative descriptions for each persona, drawing on demographic and participation data from our dataset. Phases three through five described above fall within Activity Two in Figure 1. Throughout this process, the research team worked collaboratively to mitigate bias and remained mindful of the potential risk that personae

could contribute to sweeping generalizations about a population. Collaborative discussion supported research objectivity; we diligently kept our insights tightly focused on the data, aiming to accurately reflect the voices of the study participants. The resulting personae highlight that working learners are not a homogeneous group; each learner has a unique story, yet there are identifiable patterns across these individual stories that can be used to evaluate the relevance of ESAET design.

Working Learner Personae

We offer three exemplar personae to illustrate the end product of the process and to show how pooled data can be compiled into snapshots of a diverse group of participants, highlighting their backgrounds, motivations, barriers, and experiences at work and within ESAET.

Alimayu: College-Educated Retail Worker Learning English

Alimayu represents many of the working learners interviewed who were highly educated in their home countries and are English language learners in the US, building the language skills needed for workplace or career advancement. Alimayu holds a four-year university degree in information systems from his country of origin and currently works in retail. He embodies the perspectives and experiences of individuals seeking to enhance their English proficiency as a steppingstone to better-paying jobs and meaningful work.

His employer offers a weekly on-site English class, which he attends. Importantly, his supervisor ensures that his work schedule and class time align so that he is paid for his participation and does not need to make a separate trip to the workplace for class. Alimayu uses English regularly with customers and co-workers in his retail job. He is particularly focused on mastering American English pronunciation to prevent misunderstandings. He views improved English skills as essential to returning to his desired career path in information systems.

Alimayu faces time and financial constraints. He works two jobs, often 16 hours a day, leaving him with limited free time. He also faces financial constraints as he supports his family and sends money to relatives in Ethiopia. His attempts to enroll in affordable English classes at a local Adult Basic Education program were unsuccessful due to scheduling conflicts with his work hours and the expense and time required to commute to the classes. Alimayu actively uses the internet for self-directed learning on his computer or smartphone, benefiting from Wi-Fi access at home. However, he expresses frustration when encountering paywalls for online educational resources. Despite his demanding work schedule and financial responsibilities, Alimayu demonstrates agency by allocating time to independent learning, highlighting the proactive role that working learners often take in their education. The completed persona skeleton is pictured in Figure 3.

FIGURE 3. Alimayu's persona skeleton as pictured in 21CLEO Research Team (2021a).



Neberu: Working to Feel Comfortable Interacting with English Speakers

Neberu represents frontline service workers focused on improving their foundational English skills to increase their comfort with English in workplace interactions in monolingual English settings. His experience illustrates the challenges and motivations of individuals who need English proficiency to succeed on the job, even in roles with limited customer interaction.

Neberu works full-time as a cook at a fast-food restaurant in a multi-business food court and part-time as a prep cook at another restaurant. Both positions are primarily 'back of the house,' with limited, regular customer interaction. However, when customer interactions are necessary, Neberu does not feel comfortable communicating in English. Unlike Alimayu, Neberu has not yet completed a secondary credential. Neberu aims to improve his English as a steppingstone toward less physically demanding work, possibly even launching his own business.

The organization that operates the food court offers a weekly on-site English class for employees across its restaurants to support their upward mobility within the organization, including transitions to front-of-house positions that require greater English proficiency. Neberu's supervisors encourage his attendance and adjust his schedule so he can participate during his off time, meaning he is not compensated for his class time. Neberu identifies the limited opportunities to speak English at work as a significant barrier to his language development. He expresses a desire for more frequent and longer English classes.

Like Alimayu, Neberu engages in self-directed learning on his computer (using home Wi-Fi) and smartphone. However, he wishes he had stronger computer skills to support his independent learning. Despite not being compensated for class time and having limited English practice at work, Neberu demonstrates agency by proactively seeking learning opportunities in his personal time, highlighting the dedication of many working learners. See Figure 4 for the completed skeleton.

FIGURE 4. Neberu persona skeleton as pictured in 21CLEO Research Team (2021b)



Regina: Healthcare Worker Seeking to Establish a Career

Regina represents frontline healthcare workers who are striving to earn a degree or certificate as a pathway to a stable career. Her experience highlights the challenges of balancing work, education, and family responsibilities while navigating complex systems for career advancement.

Regina is a high school graduate who held various entry-level jobs before securing a position at a retirement facility. She took advantage of an employer-sponsored training program to become a Certified Nursing Assistant (CNA), a benefit that attracted her to the job and encouraged her to

recommend it to her friends. Regina is bilingual in Spanish and English, but she feels constrained by her current English proficiency and computer skills. Regina's short-term goal is to build skills that enhance her performance as a CNA. Her long-term goal is to identify and pursue a career in the healthcare sector, ultimately earning a bachelor's degree. She understands that the required job training is insufficient for her long-term career aspirations, so she is seeking additional educational opportunities.

In addition to the mandatory CNA training, Regina is taking English and financial literacy classes. She is also using financial aid to enroll in preparatory classes at the local community college, which will enable her to pursue credit-based healthcare courses. However, she has not yet decided on a specific field (e.g., registered nurse, phlebotomist, pharmacy tech, or pharmacist). Access to a computer and the internet is crucial for Regina's coursework. She uses a laptop and home internet for non-work-related studies and occasionally uses computers at the community college library. She uses her employer's computer for mandatory training and has not encountered significant technological barriers.

Regina's most significant obstacles are a lack of time, money, and confidence. She feels considerable fatigue from her full-time job and studies. Regina relies on her religious faith and the support of her mother and grandmother to persist through her demanding schedule. A career navigator has also been vital in guiding her through the system, identifying beneficial learning opportunities, and providing encouragement. She practices positive self-talk and is highly motivated to create a better life for her child. See Figure 5 for the completed persona skeleton.

FIGURE 5. Regina's persona skeleton as pictured in 21CLEO Research Team (2021c)



Why Personae Are Helpful

These persona profiles illustrate the ways in which working learners are a diverse population with varied backgrounds, motivations, goals, and aspirations. They actively exercise agency in their learning journeys, making strategic decisions about how to allocate their time and financial resources based on their circumstances and ambitions. They do so in the hope that participating will lead to more meaningful and well-compensated work.

Confirming Our Process and Persona; Deepening Our Understanding

To further confirm the relevance of the developed personae, the research team convened an advisory board (activity three shown in Figure 1). This board consisted of practitioners and professionals who were a subset of the total participant pool. They were characterized by diverse backgrounds, including working learners, individuals who work directly with frontline workers, adult educators, workforce development professionals, and representatives from research and advocacy organizations. Feedback from this advisory board during these convenings provided valuable insights into the utility and limitations of the developed persona. Attendees generally recognized the working learners they had supported in the past within the presented persona set, noting that the descriptions

helped them visualize specific individuals. However, their deep knowledge and experience also enabled them to identify what was missing both within and beyond the resulting set of personae.

Gaps and Tensions in Existing Personae

The advisory board also identified gaps in the developed personae, noting the lack of explicit descriptions of learning styles and learning disabilities, family economics, digital access and skills, and the curriculum content used in training programs. These characteristics were not consistently captured across all participants' data, limiting their inclusion in the personae. Additionally, while some supports that facilitated learning were mentioned, attendees called for more detailed descriptions of these enabling factors. A key observation was that many education and training opportunities are designed to support a specific type of learner, potentially overlooking the needs of others. The persona of Dani (see Figure 6) was often cited as representing an 'ideal learner' who might be the target of many ESAET initiatives but is not necessarily representative of the broader population of working learners. Similarly, the rare instance of paid time for ESL classes (as experienced by Alimayu) was noted as uncommon in advisory board members' experiences.

The convening attendees also recognized that, although the developed personae were based on pooled data and careful analysis of working learner experiences, they are composites and therefore have inherent limitations. Although designed to be concise and to represent a firsthand perspective, the personae could benefit from more detailed information on support systems, curriculum content, personalization, and the role of teachers. The researchers also acknowledged the need for more comprehensive data to provide a fuller perspective encompassing these characteristics. While recognizing that the personae are not generalizable to a wider population beyond the study participants, the advisory board members agreed that they could serve as a valuable starting point for designing more effective ESAET initiatives.

Convening attendees suggested additional personae to more comprehensively reflect the range of frontline service workers engaged in ESAET. One suggestion highlighted the unnecessary burden immigrant workers face in demonstrating English language proficiency for employment and advancement, even in skilled trades where English proficiency might not be essential. Another suggestion focused on creating a persona of an adjudicated youth striving to connect with training initiatives and better employment opportunities, emphasizing the resilience and self-efficacy inherent in their efforts to enter the workforce. While the researchers acknowledged the value of these suggestions, they noted that without interviewing individuals with these specific characteristics, they could not introduce these personae grounded in their existing data.

The Importance of Contextual Factors

The convenings revealed both the strengths and limitations of the personae, depending on how closely they aligned with the real learners that participants had supported, taught, or designed programs for. These discussions reinforced the importance of considering contextual factors when interpreting learner experiences. In particular, one persona, Dani, highlighted how external influences, such as access to mentoring, supervisor encouragement, and awareness of the potential outcomes of ESAET, shape a working learner's participation.

Dani: Hourly Front-Line Supervisor. Dani is a college-educated front-desk supervisor at a major hotel chain, where she has advanced from an entry-level role over many years. A woman of color, she represents frontline supervisors who are pursuing certification to transition into salaried management roles but face limited advancement opportunities within their organizations.

Motivated and proactive, Dani pursues multiple training opportunities, including online hospitality courses from her employer, a supervisory certification program at a local community college, and LinkedIn Learning courses funded by her local workforce office. She completes coursework on her own time, using her personal laptop and home broadband, and is confident troubleshooting technical issues with resources like YouTube. Her learning in interpersonal skills and conflict management directly enhances her current job performance.

Dani benefits from emotional support at home and has no caregiving responsibilities, giving her flexibility to pursue professional growth. However, her primary barrier is the lack of internal networks and visibility within the company. Although her immediate supervisor is supportive, advancement may require external mentorship, insider

knowledge, or even a job change. She also prioritizes free training options to avoid debt.

FIGURE 6. Dani's persona skeleton as pictured in 21CLEO Research Team (2021d)



Dani's experience underscores that training alone is not enough. Career progression also depends on access to mentorship, networks, and equitable advancement pathways. Her persona highlights systemic and contextual barriers that hinder the upward mobility of skilled and motivated workers from underrepresented backgrounds. Our advisory board focus group participants also noted that, although the personae were developed to elevate learner voice and experience, these voices are deeply shaped by context, that is, the systemic and workplace conditions that learners must recognize and navigate.

Discussion and Implications: Relevance of Our Process and Resulting Personae

The development of these working learner personae was motivated by a recognition that existing literature often portrays working learners as a homogeneous group and in relatively passive terms. Nisulu and Metso's (2019) research on vocational training programs in Finland demonstrated the importance of a positive climate and support for learner success, a challenge to achieve if training is not designed with an understanding of learners' perspectives. The 'persona skeleton' we created offers insight into learner characteristics. These personae elucidate a nuanced reality that, if recognized, might lead to more relevant and fruitful education and training experiences. This includes understanding who working learners are, identifying factors that support their persistence in employer-supported learning, and clearly communicating those findings to interested parties with a hand in shaping participant experience in ESAET.

Persona profile development is a research tool that can add depth and relatability to work that centers the learner experience. Persona profiles humanize learners and show that programs function more optimally when they see, understand, and appreciate learners' challenges and competing priorities in their lives. Thoughtfully considering ways to listen actively and get to know learners offers exponential benefits in supporting their learning. Not all adult learners are the same; learners must be considered in the design of programs meant to support their learning.

The research revealed that the investigated programs for working learners are often best suited to particular types of learners, and the personae highlight the tensions and alignments that exist for different individuals. For instance, learners like Alimayu and Regina adapt to make learning feel relevant and useful to their specific situations. For learners like Dani, extensive investment in learning may not translate into career advancement within her company, and those like Neberu may participate in ESOL classes that do not fully meet their language learning needs. Understanding these dynamics is crucial for identifying the

characteristics of learning opportunities that truly meet the needs and expectations of working learners.

Ultimately, educational programming must align with the diverse motivations and goals of institutions and prospective participants to prevent a mismatch between learners' aspirations and employers' objectives. Such mismatches can incur high costs, leading to missed opportunities for working learners and underutilization of their potential by employers. Furthermore, a narrow focus in program design can inadvertently worsen systemic inequality, as those who can easily take advantage of employer-sponsored learning may differ demographically from those who cannot, perpetuating exclusionary systems despite good intentions.

Limitations

The personae developed from this research are not intended to be translated and applied into direct practice recommendations. For example, we recognize that the persona categories and profiles we offer are not sufficient to guide all instructional decision-making. By creating approachable representations of aggregated interview data, personae served as both a tool for internal understanding of the research data and a means of sharing findings with the broader field. This approach speaks directly to learner experience and addresses our research goals of illustrating the empirical persona methodology. Personae can inform but cannot comprehensively shape instruction. Instead, we developed personae as a tool to illustrate how different adult learners engaged with available learning opportunities in distinct ways and for varying purposes, thereby tangibly demonstrating the importance of considering learner experience. We acknowledge the limitations and barriers many adult education programs may face in addressing learner experience, as well as the learner-centered changes the research suggests.

We acknowledge the limited generalizability of the research, as practitioners may lack the time or resources to enact it. Still, illustrating the persona process advances methodological innovation. The methods need not be replicated exactly by practitioners; instead, they should be understood more deeply as reflective of learner experience. Principled adaptations could be made to developing personae that reflect a streamlined process that could fit into practitioners' busy schedules, given their competing priorities. We recognize that research conducted with specific populations often fails to be directly translated into practice. We do not ascribe to a simple view of research implementation, and we are realistic about the effort, time, and resources necessary to engage in enacting personae.

Conclusion

The persona development process undertaken in the 21CLEO research provides valuable insights into the experiences and perspectives of adults participating in ESAET initiatives. By moving beyond monolithic descriptions and centering these individuals' voices, the research highlights the critical need for a more nuanced, learner-centered approach to workforce development. The exemplar personae, Alimayu, Neberu, Regina, and Dani, vividly illustrate the varied motivations, challenges, and aspirations of working learners, underscoring that they are agentive individuals who make strategic choices in pursuit of education and career advancement.

Data-driven persona profile development is a useful methodology for researchers seeking to elucidate learner experiences in adult education and support program development. Feedback from working learners, practitioners, and professionals who served on advisory boards further validated the utility of the persona methodology as a tool for understanding and interpreting the experiences of working learners. Discussions also highlighted important gaps in the current set of personae. Still, the data-driven persona profiles offered a useful lens for capturing the complex realities of the working learner population.

Ultimately, the success of employer-supported adult education and training hinges on its ability to effectively meet the diverse needs and goals of the working learners it serves. By embracing a learner-centered perspective to foster deeper understanding, stakeholders can work toward creating more equitable, relevant, and impactful learning opportunities that benefit both workers and employers, contributing to a more skilled and engaged workforce.

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