



CREATE
Adult Skills Network

Collaborative Research for Educating
Adults with Technology Enhancements

Diversity, Equity, Inclusion, and Accessibility in Adult Foundational Education

The field of education has heightened its awareness of the need to focus on issues of diversity, equity, inclusion, and accessibility (DEIA). As in all areas of education, these concepts help shape adult foundational education (AFE), namely education and training services that aim to improve literacy, numeracy, language, digital understanding, and other core skills. We use the term “adult foundational education” to encompass the system of programs and classes often referred to as “adult literacy” or “adult (basic) education,” which provides foundational skills programming, English language instruction, family literacy, and high school diploma/equivalent preparation. Centering DEIA as a goal has implications for access, quality, participation, and outcomes of the learner experience, particularly as the field shifts to further integrate technology with instruction. Understanding DEIA within the context of AFE is important for practitioners, policymakers, researchers, advocates for AFE, and for adult learners themselves.

Produced by the Equity in Adult Education Research work group of the Institute of Education Sciences–funded Collaborative Research for Educating Adults With Technology Enhancements (CREATE) Adult Skills Network, this brief intends to shed light on DEIA conditions, opportunities, and challenges as they manifest in AFE. As a network, we are particularly interested in the application of technology to promote foundational skill development and the implications of centering DEIA in this process. Having insight into the DEIA context of AFE is important for researchers as they approach their work, especially those who are relatively new to this area of education. As generators of new knowledge and as contributors to enhancing extant knowledge in AFE, researchers play an important role in capturing the AFE landscape to inform policy and practice. We encourage researchers to integrate a DEIA lens into their work, recognizing that such integration requires some background on DEIA issues in the particular context of AFE. We therefore offer this paper to researchers, as well as policymakers, practitioners, advocates, and others, to increase understanding of DEIA in AFE. Subsequent CREATE publications will address a DEIA-focused approach to research in more depth.

Our work group comprises the experience and perspectives of instructors, advocates, policymakers, researchers, and AFE learners. Together, we recognize that adult learners bring tremendous skills and experience as they pursue continuation of their education through AFE. We share a belief in the power of AFE to transform the lives of individual learners, their

families, and their communities. As authors, we recognize that most members of our work group come from backgrounds of privilege with resources and access to educational opportunity, a status that shapes and may bias our perspective in writing this paper.

Why DEIA Matters for AFE

Special attention to DEIA in AFE has implications for individual adult learners; the larger social structure in which these learners are educated, trained, and enabled to pursue work opportunities; and the economy as a whole. Namely, DEIA in AFE has the potential to (a) promote a just and equitable society, (b) improve learner outcomes to support the achievement of their goals, and (c) advance equitable economic development practices.

AFE plays a critical role in providing systemically underserved adults with supports for developing their knowledge and skills. Adult learners come from a range of backgrounds and have a variety of needs to be successful in pursuing continued learning experiences.¹ Ensuring that AFE is inclusive and accessible to all learners, including those from diverse backgrounds and those with disabilities, is essential for promoting social justice and reducing disparities in educational outcomes.²

Attention to DEIA in AFE is critical to supporting learner progress. Research has shown that inclusive and equitable learning environments can enable learners to improve their outcomes, including academic achievement, motivation, and engagement.³ For example, cultural responsiveness—that is, “having an awareness of one’s own cultural identity and views about difference, and the ability to learn and build on the varying cultural and community norms of learners and their families”⁴—is a key factor in improving outcomes⁴ for adult learners in AFE programs. Culturally responsive instruction can help AFE learners feel more valued and engaged in the learning process, which can lead to improved academic outcomes.⁵ For example, several studies have examined the impact of a culturally relevant curriculum on the academic success of Black learners in AFE programs. Researchers found that a culturally responsive curriculum, which includes the experiences and perspectives of Black adult learners, improved those learners’ academic outcomes and heightened their sense of belonging in the learning environment.⁶

¹ Friend & Cook (2009); Kirsch & Jun (2017)

² CEDEFOP (2014); Rose & Meyer (2002)

³ Johnson et al. (1998); Ladson-Billings (1994); Wlodkowski & Ginsberg (2017).

⁴ New York State Education Department (2017)

⁵ Rhodes (2018)

⁶ Morrison et al. (2008); Moses & Cobb (2011); Reyes et al. (2017)

In addition to improving learner academic outcomes, attending to DEIA concerns in AFE contributes to equitable economic opportunity and growth, which benefits individual learners and society at large. Participation in AFE has been shown to offer economic benefits.⁷ Consideration of DEIA in AFE can help ensure that the economic benefits associated with participation in AFE⁸ are shared and experienced broadly among the range of adult learners who seek services.⁹ As a key component of workforce development, AFE that is inclusive and accessible to all learners can help support more equitable economic development by providing services that support adults in developing the skills and knowledge they need to be successful in the workforce.¹⁰ Increasing adults' access to education, including AFE, can lead to a more skilled and productive workforce, which is essential for economic growth.¹¹

Achieving diversity, equity, inclusion, and accessibility in AFE is a complex and multifaceted task, involving multiple stakeholders and addressing a range of barriers in the different stages of the education process.

Diversity

Approaching diversity in AFE calls for a broad definition, such as that used by Ascend Public Charter Schools:

Diversity encompasses all the different characteristics that make one individual or group different from another. Diversity is not a quota. It recognizes everyone and every group as part of the diversity that should be valued. A broad definition includes not only race, ethnicity, and gender—the groups that most often come to mind when the term "diversity" is used—but age, national origin, immigration status, religion, disability, sexual orientation, gender identity and expression, socioeconomic status, education, marital status, language, and physical appearance, among other characteristics. It also involves diversity of thought, ideas, perspectives, and values.¹²

⁷ Reder (2014a)

⁸ Reder (2014a)

⁹ Reder (2014b)

¹⁰ Chapman et al. (2016)

¹¹ Reder (2010)

¹² Lawrence (2020)

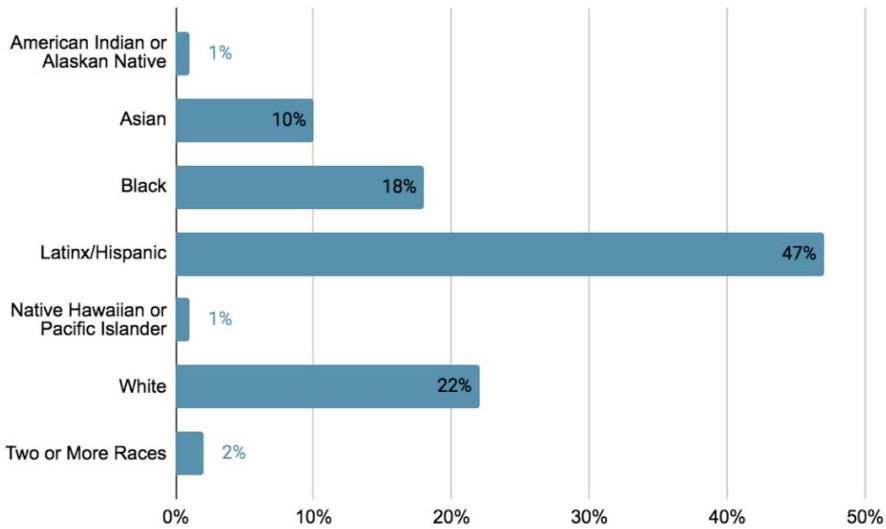
Learners may also be diverse in their work, education, and life experiences; purposes for pursuing adult education; learning preferences and abilities; and experiences of trauma, within and outside educational settings. In the United States, “adult learners” range from those who left school prior to completing a high school diploma to those who graduated from high school without the foundational skills required to help them achieve their goals. Among adult learners developing their English language skills (39% of the AFE learner population in 2019–2020),¹³ experiences can range from never having participated in any formal schooling to holding a college or advanced degree from another country, from recent arrival in the United States to having been in the in this country for years. While these differences among learners can create rich learning environments in which adult students can learn from one another, it can be challenging for teachers to address the needs of diverse learners. Programs may also lack adequate resources to offer classes and support to specific subgroups of learners. Despite such challenges, it is important for educators to understand the diversity of learners who enroll in AFE so that these educators can do their best to meet learners’ needs.

One way that learner diversity manifests is in race, ethnicity, gender, and age groups represented in AFE populations. The figures below show the demographic breakdown of learners in AFE in 2019–2020 data from the U.S. Department of Education Office of Career, Technical, and Adult Education.¹⁴ We used 2019–2020 data in this brief because the COVID-19 pandemic caused significant disruptions in more recent enrollments—making these earlier data more representative of typical participation trends. The following figures present enrollments by race/ethnicity, age and gender, and race and gender. As the Figures 1–3 show, the vast majority of AFE learners are learners of color, between the ages of 25 and 54 (core working age), and women.

¹³ National Reporting System for Adult Education, Program Year 2019–2020 (n.d.), Table 3, cohort period: 07/01/2019–06/30/2020)

¹⁴ National Reporting System for Adult Education, Program Year 2019–2020 (n.d.). Note that percentages in the figures represent the percentage of learners in each demographic category in relation to total participants served (cohort period: 07/01/2019–06/30/2020).

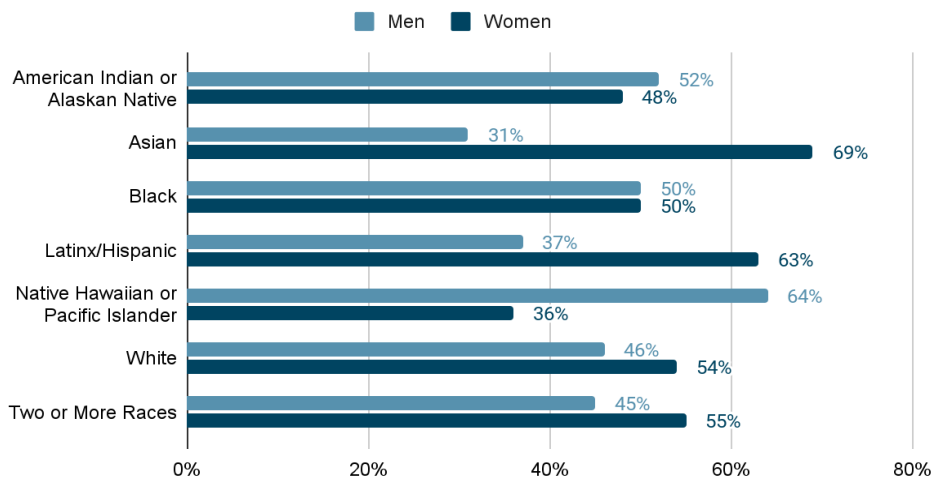
Figure 1. Share of AFE Learners, by Race and Ethnicity (2019–2020; N = 1,100,210)



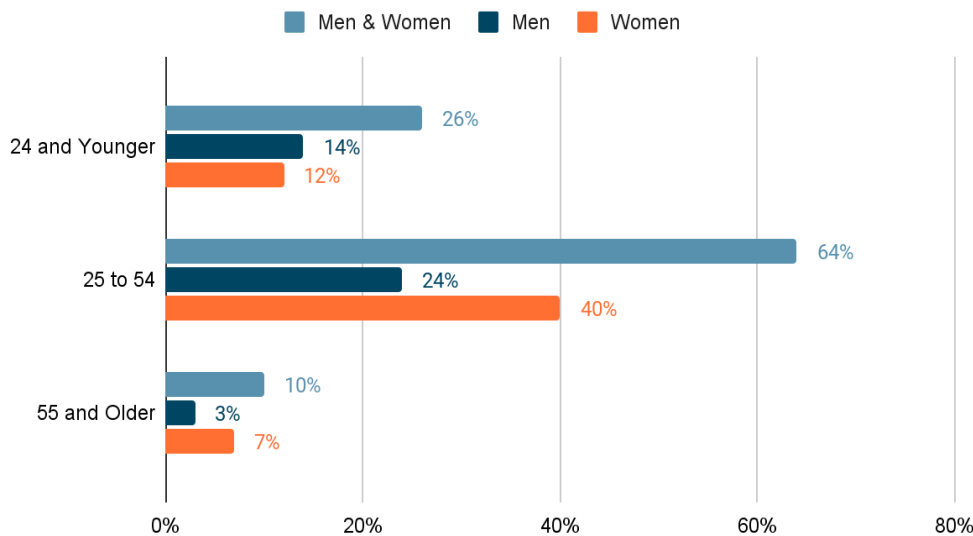
Note. Adapted from CREATE Equity in Adult Education Research work group analysis of U.S. Department of Education National Reporting System for Adult Education data (2019–2020), Table 2: Participants by Age, Ethnicity, and Sex.

Women comprised the majority of AFE learners in 2019–2020, at 59%, while men were just 41% of total enrollments.

Figure 2. Share of AFE Learners, by Gender and Race/Ethnicity Category (2019–2020; N = 1,100,210)



Note. Adapted from CREATE Equity in Adult Education Research work group analysis of U.S. Department of Education National Reporting System for Adult Education data (2019–2020), Table 2: Participants by Age, Ethnicity, and Sex.

Figure 3. Share of AFE Learners, by Gender and Age Group (2019–2020; N = 1,100,210)

Note. Adapted from CREATE Equity in Adult Education Research work group analysis of U.S. Department of Education National Reporting System for Adult Education data (2019–2020), Table 2: Participants by Age, Ethnicity, and Sex.

AFE learners vary considerably, not only in static individual characteristics but in educational interests and pursuits, readiness and competencies, and prior educational and work experiences.¹⁵ The [Adult Learner Model](#), developed by Digital Promise’s Learner Variability Project, posits that adult learners are “experts of their own experiences” and that AFE faculty and educational providers need to take the critical first step toward understanding AFE learners in order to collaboratively design meaningful learning opportunities.¹⁶ Thus, personalized learning contexts via differentiated instruction, for example, are key to promoting and enhancing the quality of the learning experience.¹⁷

Diversity also applies to technology, as learners enter programs with differing levels of digital literacy skills and resilience,¹⁸ a wide range of experiences with and access to technology tools, and varying degrees of trust with regard to technology. Some individuals only have smartphones or Chromebooks, whereas others have desktops or laptops.¹⁹ Some have restricted access (especially in correctional settings), and others have access to the full,

¹⁵ Pape (2021); Tomlinson & Imbeau (2013)

¹⁶ Pape (2021)

¹⁷ Boelens et al. (2018)

¹⁸ “Digital resilience” is the “awareness, skills, agility, and confidence to be empowered users of new technologies and adapt to changing digital skill demands” (Digital US Coalition, 2020).

¹⁹ Belzer et al., 2020 and 2022

unrestricted internet. Some depend on Wi-Fi hotspots or internet plans with low data caps, whereas others have unlimited data plans and high-speed internet connections. Some can afford to subscribe to expensive learning management systems or educational software packages, but others depend on low-cost or free open educational resources. Some learners can access necessary assistive technology; others do not have access to or familiarity with such tools. It is worth noting, however, that a person's relationship to technology is not static. Rather, an individual's access to and comfort with technology may continue to evolve, depending on the context in which that person is living (e.g., if the community has broadband) or receiving services (e.g., if the library has computers).

In addition to the diversity of learners, elements of the AFE systems vary. Learning takes place in multiple settings, including learners' homes, public school buildings, community-based organizations, community colleges, church basements, public libraries, workplaces, and prisons. Adults learn through in-person, hybrid, and fully remote models, as well as hybrid-flexible ("HyFlex") delivery that allows learners to choose to attend synchronous (in-person) class sessions or to engage in learning online.²⁰ This range of settings makes AFE services more accessible to learners in their communities and allows the system to be more responsive to these learners; yet this range could also create disparities in the resources available for instruction, such as accessible broadband internet. These disparities can be further exacerbated by differences in state and federal investments, as well as in the availability of supplementary sources of funding.

AFE educators' ability to effectively respond to all the ways in which adult learners are diverse also vary considerably. AFE educators come from professional backgrounds that range from years of K–12 teaching experience, master's degrees, and certifications, to no formal teaching preparation. More than any other segment of our education system, the AFE system also relies on volunteer educators who may have little or no training. Adult educators vary in their knowledge and skills, including in the ways to help adults learn to read, write, and do math. These educators also vary in cultural competence, knowledge of language acquisition theory, and experience with trauma-informed instruction. At a time when technology is increasingly applied to education, adult educators also differ in their experience and ability to employ technology tools in their daily lives and for learning and teaching.

These variations in learner background, delivery modes, and instructor background have multiple implications. For example, learner diversity suggests the need to develop a more

²⁰ University of South Carolina, Center for Teaching Excellence (n.d.)

diverse adult education workforce with respect to race/ethnicity and gender. Although diverse in professional backgrounds, the AFE teaching workforce is largely white and female.²¹ Learners would benefit from having more diverse instructors with a broader range of experience and perspectives that better reflect learner populations.²²

Adult educators require professional development to support their ability to design and implement interventions and class activities that account for variability among learners and modes of delivery. Instructors need training to teach multilevel classrooms, whether in person, online, or in hybrid approaches.

As the AFE field experiences an increasing need for technology integration, accelerated by the pandemic, the field must also pay attention to its role in responding to the diversity of learners and instructors. The evidence is clear that AFE learners vary substantially regarding their backgrounds, cognitive capabilities, and socioemotional factors.²³ In line with [Digital Promise's Adult Learner Model](#), a holistic approach to enhancing the adult learner experience—taking into account various learner levels of literacy, cognitive abilities, socioemotional needs, and backgrounds—is critical in the development of learner-centered, personalized instruction that incorporates the rich and deliberate use of digital technologies.²⁴ With their own varied levels of comfort and experience with technology, adult educators require support to successfully utilize technology tools to improve and augment their instruction to address diverse learner needs. As technology developers play a significant role in the integration of technology into AFE and other areas of education, they need to work closely with adult educators to create tools that recognize and accommodate the diversity of adult learners and their technology needs.

Research can acknowledge diversity within AFE by exploring a range of questions, such as how and why outcomes may differ for different students, and examining ways to effectively serve diverse learner needs with limited resources. Researchers should consider the diversity of student backgrounds when developing tools like surveys, and any examination of instructional implementation should take into account the diversity of teacher backgrounds.

Equity

A consideration of equity in AFE must anticipate issues of access, experience, power, and resources. There is a lot of variation across the United States in the way equity is portrayed and

²¹ Cronen et al. (2015)

²² Gershenson et al. (2021)

²³ Tare et al. (2020)

²⁴ Cacicio et al. (2022)

potentially supported within education systems. Our work group’s approach to defining equity aligns with that expressed by the Minnesota Adult Education Office, which recognizes “the historical conditions and barriers that have prevented opportunity and success in learning for learners based on their race, class, and other identities.”²⁵ The Minnesota office equates equity with being able to exercise power and voice in “positive and effective learning environments” free of “institutional policies that uphold oppressive systems of power and privilege;” equitable AFE systems promote “opportunities for self-reflection, growth, and change” and “dismantle hierarchies of human value.”²⁶ Equity also necessitates a distribution of resources that allow all learners to access high-quality services to pursue their learning goals. As we consider the application of technology to AFE, we must also pay attention to digital equity, which the National Digital Inclusion Alliance defines as a “condition in which all individuals and communities have the information technology capacity needed for full participation in our society, democracy, and economy,” a condition that they note is “necessary for civic and cultural participation, employment, lifelong learning, and access to essential services.”²⁷

To understand equity in AFE, it can be helpful to consider issues related to systems, programs, staff, and learners. At both the federal and state levels, AFE does not have the same status as other systems of education. In terms of investment, for example, the Coalition on Adult Basic Education reports that adult education receives only \$580 of federal investment per learner compared with an average of \$10,000 for elementary education.²⁸ In most states, adult education systems are housed within other domains, such as elementary and secondary education, community colleges, and workforce development. By placing AFE within other government units, states reflect variable perspectives on the value and purpose of AFE. This can create even more inequitable funding and resource allocation, depending on the capacity and competing priorities of the units. Federal investments in AFE serve to supplement state and local allocations, which vary dramatically. A recent study of Michigan’s adult education system examined differences among a sample of state investments by looking at the ratio of state and other nonfederal spending on adult education to federal funding provided to a state. Among the seven states examined, the authors noted a range from 1.2:1 to more than 5:1.²⁹

Inequities in levels of state funding for AFE cascade to the program level, affecting the program offerings and resources available. When programs lack funding, they need to limit the outreach

²⁵ Minnesota Adult Basic Education (n.d.)

²⁶ Minnesota Adult Basic Education (n.d.)

²⁷ National Digital Inclusion Alliance (n.d.)

²⁸ Coalition on Adult Basic Education (n.d.)

²⁹ Graber et al. (2023). Note: States included in the analysis were Arizona, California, Florida, Massachusetts, Michigan, Minnesota, and Texas.

and programming they can offer. They may need to rely on more volunteers and use easy-to-implement curricula that do not require a lot of training or other resources for staff. This can lead to program offerings that do not match the needs or interests of AFE learners. A fundamental principle of adult education is the need for learning to be relevant and applicable to adults' lives.³⁰ Multiple forces can work against learners' persistence in AFE, including having more than one job, raising families, and even having to work around family members who do not support their pursuit of education. If learners do not see the direct relevance of AFE, they stop attending classes and do not make progress on their learning or life goals. Greater equity can be achieved by ensuring that programs have the resources they need to identify relevant offerings and provide services that will effectively engage their learner communities.

Small and rural communities are especially challenged in trying to offer a full range of AFE services, from basic literacy to high school equivalency preparation, family literacy, and multiple levels of English instruction. Limited options mean that learners may be limited in the range of learning opportunities they can access. Distance learning has some potential to help address these gaps, but its usefulness depends on learners' ability to access the internet and use it for learning. The fact remains that rural Americans consistently report lower levels of broadband internet access and technology ownership compared with Americans living in suburban and urban areas.³¹ Although some programs are able to supplement public funding with private investment, the availability of such sources depends on the local community and the capacity of staff to cultivate relationships with businesses or foundations to gain their support for AFE. Programs in cities like Boston face a landscape of resources (i.e., numerous employers and philanthropic organizations) that differs considerably from that faced by programs in rural communities in the Midwest or the South.

The current state of staffing in AFE raises inequities for learners and the instructors themselves. As a field, AFE relies heavily on part-time staff and volunteers. In 2019–2020, at a national level, only 29% of federally funded AFE personnel—including administrators, counselors, and teachers—were full time. Among teachers, only 21% were full time, although this percentage varies from state to state. Staff requirements and qualifications vary substantially, and as was noted above, instructors have varied levels of experience. Data from 2019–2020 show that only one third of full-time instructors and less than one quarter of part-time instructors have an adult education certification, and one quarter of full-time instructors have no certification at

³⁰ Bouchrika (n.d.)

³¹ Vogels (2021)

all.³² The preparation of teachers has implications for the quality of instruction that learners experience.

Because of limited capacity, staff are also often required to serve multiple roles, including instructor, program administrator/coordinator, and counselor without additional compensation. AFE staff often work on “soft” grant funding that reduces job security, and many work multiple jobs, often without benefits. Turnover among instructors in AFE is high: 59% of AFE instructors leave the profession in 2 years or fewer.³³ This churn means that the system has to train more often, and programs and learners lose the experience and understanding that teachers can gain but can’t pass down to new teachers when they leave. Limited resources for AFE educators mean that they may lack adequate preparation to be most effective for learners. In cases in which licensure is required (e.g., for AFE administered through some public-school systems), this barrier can create an equity and diversity challenge in the workforce. It can be more difficult to recruit instructors from traditionally marginalized communities because of low wages or lack of loan forgiveness, a situation that offers no incentives for these individuals to take the risk of pursuing licensure, or even a career in AFE at all.

The application of technology to AFE creates both equity opportunities and concerns. Technology offers opportunities to augment available resources and increase access to learning (e.g., for rural and other learners who have challenges getting to class). When accessible high-speed internet service is in place, “remote learning programs can reach and retain more rural immigrants through the use of multiple communication and educational technologies.”³⁴ At the same time, infrastructure challenges remain, including regional lack of broadband access and program resources, and the dependence of many learners on smartphones in all areas of the United States. As a result, “programs need to rely on diverse support strategies to provide access to devices and the internet or ensure mobile and lo-fi options.”³⁵ Ensuring that the digital tools used are free to learners and easy to access is a key component in pursuing equity in the application of technology to AFE. Programs may arrange device loan programs for learners in need of digital tools or ensure that digital instruction is designed to work well on smartphones, which many learners already possess. Even with access to technology tools and connections, both learners and instructors can require initial orientation and ongoing support for applying these tools.

³² National Reporting System for Adult Education, Program Year 2019–2020 (n.d.)

³³ Zippia (n.d.)

³⁴ Kallenbach et al. (2021)

³⁵ Vanek et al. (2021)

Equity is not possible without adequate access to digital technologies. Additional equity issues relate to the development of technology and the extent to which developers share and understand learners' cultures. Technology development teams should find ways to involve learners and bring in their perspectives to inform the design process. The equitable use of technology in AFE also requires that learners of all levels understand who owns and has access to their personal information and the data generated by their use of a technology application. Finally, because the cost of comprehensive online curricula can be prohibitive over time, programs and instructors need to have access to free and high-quality digital content and instructional resources.

With respect to learners, inequities in earlier educational experiences are often the reason adults find themselves in AFE later in life, and populations who participate in AFE often face inequities in housing, health, nutrition, and other areas of life. Even within AFE, inequities arise in the way learners are viewed by employers, social service providers, funders, and even educators. As the leadership of VALUEUSA, the national adult education alumni association, has pointed out, learners are often viewed in a way that fails to embrace their full humanity and overlooks all that they bring to the learning experience.³⁶ Such a lens may identify deficits in the individual (e.g., the learner lacks something, such as motivation, life experience, academic abilities) rather than the attributes that support the individual's learning trajectory. Learners are seen as the cause of their own foundational skill gaps instead of as individuals whose education has been affected by policies, systems, and other factors outside their control.

Equity challenges for learners can surface in other ways, too. Learners preparing for high school equivalency in AFE do not receive credit for their prior learning outside formal classrooms, as might community college students pursuing credentials or degrees.³⁷ Depending on where they live, whom they know, and what efforts local systems make in outreach and offerings, adult learners may not have equitable access to or knowledge about AFE services. The pandemic exacerbated inequities in participation, particularly among some subgroups of learners, including certain ethnic groups, English learners, and adults with very low skill levels.³⁸

The equity issues in AFE discussed here reinforce the need for policies and resource distribution to provide more equitable access and learning experiences for the AFE population. State

³⁶ Personal communication with Marty Finsterbusch, executive director, VALUEUSA. January 26, 2023

³⁷ American Council on Education (2023)

³⁸ National Reporting System for Adult Education, Program Year 2020–2021 (n.d.). Note: in narrative reports, nine states indicated substantially fewer English learners (from 28 to 50% less than 2019-20). Two states reported proportionately fewer Hispanic learners (8% less) or fewer Asian learners (44% less). Two other states indicated proportionately fewer low-level learners (no specific percentages).

policymakers and legislators need to recognize the importance of proper funding for AFE programs and staff, and invest accordingly. Programs must aim to ensure the most equitable experience they can provide with their available resources. Involving learners in providing input into programmatic and resource decisions can help. To support the equitable use of technology, state policymakers and educators need to work together to ensure that learners, program staff and instructors have access to affordable high-speed internet, devices, digital skills training, and ongoing supports relevant to their instructional context.³⁹

Researchers can integrate an awareness of equity issues in multiple ways. They can examine and document the underlying inequities that frame the context of their research. For instance, they can explore access to and distribution of resources, potential inequities in student access and experience, and inequities that may contribute to and result from teacher preparation. Finally, researchers can consider power dynamics as an equity issue, both within the systems and programs they are studying and in the research process.

Inclusion

The term “inclusion” in AFE pertains to the environment in which learning takes place and the creation of an experience in which *all* individuals feel “welcomed, respected, supported, and valued to fully participate.”⁴⁰ Establishing inclusive environments enables authentic and empowered participation and a true sense of belonging.”⁴¹

As a field, AFE has long sought to take an inclusive orientation vis à vis adult learners. As an example, the late 1990s saw the creation of Equipped for the Future, a standards-based approach to reforming adult education with learners at the center. Equipped for the Future aimed to recognize and embrace the multiple roles that adults fulfill as citizens, workers, and family members and was informed by the voices of more than 1,500 learners who identified the purposes of adult education as helping them gain access to information, enabling them to give voice to their ideas and opinions, supporting them in taking independent action, and helping them learn continuously to be able to adapt to a changing world.⁴²

This holistic, inclusive view of adults as more than simply learners of language, math, and other academic and workforce skills has influenced AFE through the development of curricula and materials that integrate adult life experiences in their communities, families, and workplaces.

³⁹ For example, see Hawaii’s Digital Equity Ecosystem map: <https://broadband.hawaii.gov/deemap/>

⁴⁰ Worcester State University (2023)

⁴¹ Ascend Public Charter Schools (n.d.)

⁴² Stein (1999)

This is evident in efforts such as the [Teaching Skills That Matter](#) initiative, which aims to equip instructors to develop learners' essential skills for the 21st century in the contexts of health, financial, and digital literacy; workforce preparation; and civic engagement.⁴³ In addition, inclusion can manifest in actions that validate and elevate learner voice and experience, including the publication of learners' writing and opportunities for learners to exercise leadership through program councils, peer mentoring, and tutoring.

At the same time, the field recognizes that real inclusion requires much more attention than inclusive frameworks, curricula, and materials. For instance, many adults face practical barriers to full participation, such as childcare or transportation problems, or issues can arise with individual mobility challenges. Learners frequently need wraparound supportive services to enable them to participate in AFE programming. Even access to remote learning does not always resolve these barriers, as the pandemic demonstrated that many adults struggled to participate with their children at home.⁴⁴ While consideration of situational barriers is not a typical way of looking at inclusion, creating inclusive AFE environments in which adult learners feel respected and supported requires that barriers be understood and mitigated.

Inclusion also requires a sensitivity to learners' prior experiences. Adult educators have grown in awareness of the impact of trauma and methods to alleviate its effects. Many adult learners have histories of trauma, including education trauma. As practitioners in the CREATE Equity in Research working group report, education trauma can include ridicule or humiliation by previous instructors, forced dropout/pushout from K–12 education, stereotypes and “othering” by administrators and guidance counselors, sexual harassment by teachers/authority figures, physical danger or punishment, and embarrassment at not being able to afford textbooks/technology. Learners bring these histories into their AFE classrooms. AFE programs that fail to be “trauma responsive” in serving learners can unintentionally magnify or worsen a learner's negative history, leading to poor outcomes for the adult learners who may have struggled to gather their courage to go back into an education program and try again.

Institutional factors can impede the inclusivity of AFE. Choices regarding the way to brand and market AFE, the time of day instruction is available, the pace of instruction that is offered, or the decision on whether to offer tutoring may act as barriers in drawing learners to and supporting them in AFE.⁴⁵ At the policy level, federal requirements for testing can also impede

⁴³ For more information, see: <https://lincs.ed.gov/state-resources/federal-initiatives/teaching-skills-matter-adult-education>

⁴⁴ Belzer et al. (2020)

⁴⁵ Patterson & Song (2018)

inclusion. Frequent testing to demonstrate learning gains can create an inhospitable environment for learners who carry the scars of prior education trauma.⁴⁶ Reporting requirements focused on items such as postsecondary enrollment and employment can de-emphasize learners' other goals and successes in AFE, which should be elevated in an inclusive learning environment.

There are multiple considerations regarding technology and inclusiveness in AFE. For example, factors such as times that online instruction is offered, the opportunity for learners to have one-on-one guidance in using technology, or the availability of a help desk for learners to deal with information technology issues can all make a learner feel welcome and valued (or not). Digital tools need to be available for different reading levels, and those tools used in instruction must be at the appropriate level and explicitly taught. Offering digital instruction on the types of devices that learners already have at their disposal and are familiar with (e.g., phones) further promotes inclusion.

A focus on inclusion has multiple implications for AFE. Within programs, attention to universal design for learning may be useful to foster inclusiveness. This approach is based on the principle that instruction and materials should be engaging, accessible, and flexibly usable by all learners, including those with disabilities. This is possible when materials are available on multiple platforms, information is presented and represented in multiple ways, and learners are given multiple modalities within which to take action and express their learning.⁴⁷ Beyond the learning process, programs should find ways to integrate learner voice and involvement. Even in the face of budget challenges, programs need to be thoughtful about and prioritize establishing mechanisms for meaningful inclusion of adults in ways that go beyond their roles as learners, including recruitment, retention, resource generation, and reform. Learners can serve on governance boards and committees, and offer assistance in areas such as creating newsletters.⁴⁸ State systems can provide professional development to promote and reinforce inclusive instructional practices, such as culturally responsive teaching⁴⁹ and collaborative learning,⁵⁰ that recognize and validate the backgrounds and experiences that learners bring and can use to enhance their own and others' learning.

Attention to inclusion can be incorporated into research in both the subjects under study and the research process. Researchers can examine elements of inclusion in an AFE setting as they

⁴⁶ Perry (2006)

⁴⁷ CAST (2018)

⁴⁸ Personal communication with Marty Finsterbusch, executive director, VALUEUSA. January 26, 2023

⁴⁹ Adams & Glass (2018); Ladson-Billings (1994)

⁵⁰ Johnson et al. (1998)

manifest in the learning environment, instructional materials, and the teaching process. Researchers should be sensitive as they conduct their work to ensure that the research process does not perpetuate issues of trauma. They should consider ways to elevate and validate learner perspectives and can explore ways learners can contribute to the research process, such as by shaping questions, reviewing instruments, and discussing findings.

Accessibility

Although too often left out of discussions of diversity, equity, and inclusion, accessibility is an important concept to consider in AFE. “Accessibility” means that “a person with a disability can acquire the same information, engage in the same interactions, and enjoy the same services as people who do not have disabilities . . . in an equally integrated and equally effective manner, with substantially equivalent ease of use.”⁵¹ Accessibility is shaped by what a person needs to do, interactions with the environment, and personal preferences, and raises such questions as to whom is something accessible, under what conditions, and for what tasks?⁵² Accessibility includes

the provision of accommodations and modifications to ensure equal access to employment and participation in activities for people with disabilities, the reduction or elimination of physical and attitudinal barriers to equitable opportunities, a commitment to ensuring that people with disabilities can independently access every outward-facing and internal activity or electronic space, and the pursuit of best practices such as universal design.⁵³

Accessibility is inextricably linked with equity and inclusion, since inclusive and equitable learning experiences are not possible if the needs of adults with disabilities are not considered and addressed. We discuss accessibility here separately to recognize its importance in AFE.

Accessibility matters particularly in AFE because of the prevalence of disability in the AFE population. A 2022 multistate survey of adult learners found that 23% of adults in basic skills programs and 38% of adults in high school diploma/equivalent programs reported some type of

⁵¹ Joint Letter U.S. Department of Justice and U.S. Department of Education, June 29, 2010. Cited on *What is Accessibility?* National Center on Accessible Educational Materials. <https://aem.cast.org/get-started/defining-accessibility>

⁵² CAST (n.d.)

⁵³ Orange Coast College (2022)

disability.⁵⁴ Nationally an estimated 8% of adults have learning disabilities.⁵⁵ However, data on adult learners screened at enrollment in AFE showed a rate of 26%.⁵⁶ We know that many learners come to AFE with learning disabilities that went undiagnosed in childhood. Learning disabilities are often accompanied by other types of disabilities and health issues.⁵⁷ Inattention to accessibility can mean that learners are unable to fully benefit from the time they spend in class, that assessments may inaccurately represent learners' skill levels and attainment, and that frustrated learners may abandon their pursuit of learning. Unlike K–12 systems, AFE systems do not have legal requirements to address disability issues. The solutions proposed in this brief require an intentional investment of resources to ensure that learners with disabilities are not excluded from AFE.

Achieving accessibility in AFE has multiple requirements and implications. It requires awareness among adult educators of the prevalence of disabilities and a recognition that disabilities can be invisible. In order to raise awareness, effective screening and diagnoses are necessary. Initial screening for hearing or vision challenges can set a learner up for greater success. Identifying disabilities can also empower both learners and adult educators with an understanding of learner assets and needs but this empowerment requires that instructors have training to address learning and other disabilities. Focusing on accessibility also suggests that AFE should develop learners' self-advocacy skills to help these learners understand what they need and help them communicate and navigate systems to effectively obtain accessible learning opportunities. To facilitate student self-advocacy, educators can map out AFE program and community resources so that learners can understand the roles of various staff and organizations, and identify entry points at which learners can get the support they need.

Accessibility is especially important with respect to the educational materials that learners encounter in AFE. To be accessible, materials should be designed or enhanced in a way that makes them usable “across the widest range of learner variability regardless of format (e.g., print, digital, graphic, audio, video).”⁵⁸ Accessible formats help address barriers presented for some learners and include audio, braille, large print, tactile graphics, and digital text.⁵⁹ There are a number of strategies and accommodations that can help adults with learning disabilities, “including reading out loud, audio texts, color-coding for organization, use of graphic organizers

⁵⁴ This forthcoming study was conducted by members of the Evidence-based Adult Education System Taskforce of the [Open Door Collective](#) to explore adult learner goals for participation in AFE.

⁵⁵ Patterson & Paulson (2016)

⁵⁶ Patterson (2019)

⁵⁷ Patterson (2022)

⁵⁸ [CAST \(n.d.\)](#)

⁵⁹ [CAST \(n.d.\)](#)

(charts, diagrams, etc.), having opportunities to re-state information in one’s own words, and one-on-one instruction.”⁶⁰

Technology offers both opportunities and challenges for accessibility. Using assistive technologies in AFE can improve accessibility for learners, including those with visual, hearing, cognitive, and other challenges. Assistive technologies have the potential to address specific barriers that learners with disabilities may face through means that include text to speech, screen readers, and speech recognition.⁶¹ At the same time, research has shown that there are several challenges related to the accessibility of technology in AFE. For example, AFE learners with disabilities face greater barriers than others to accessing and using technology. These barriers include a lack of assistive technology and inadequate training for staff on how to support learners with disabilities.⁶² AFE programs may not have the resources or infrastructure to effectively integrate technology into instruction, and this can create additional barriers for adult learners, particularly those with disabilities, to accessing AFE programs and participating in them.⁶³ Research also suggests that, although technology can be an effective tool for improving accessibility, it is not a panacea. Technology alone is not sufficient to ensure accessibility for learners with disabilities; it must be used in conjunction with other supports and accommodations, such as training for staff, the provision of assistive technology, and training for learners to use it.⁶⁴

To enhance accessibility in AFE, there is much that can be learned from related fields, including those affiliated with the [National Digital Inclusion Alliance](#). The Office of Vocational Rehabilitation can contribute useful insights into tools and technologies that foster accessibility and that could be integrated into AFE. For example, programs could make screen readers widely available to ensure that people with visual impairment have equitable access to learning. Disability rights advocates and activists might teach AFE about tools and technologies that foster accessibility. Many people with disabilities are “early adopters” and creative technology innovators and might have useful perspectives to offer more broadly to the AFE field.

With respect to research, there are numerous questions to explore regarding accessibility in AFE. These include developing a better understanding of barriers to access in AFE for learners with disabilities and the resulting effects on them. Another important area for inquiry is a deeper examination of successful accessibility models in AFE, which can inform program

⁶⁰ Learning Disabilities Association of America (2015)

⁶¹ [CAST \(n.d.\)](#)

⁶² Chapman et al. (2016)

⁶³ Kirsch & Jun (2017)

⁶⁴ Rogghe et al. (2018)

improvement. As researchers go about their work, they should consider the accessibility of their communication with learners, the tools employed in the research process, and the ways that accessibility may impact the learners' experience and outcomes under study.

Conclusion

This brief represents an initial step by the Equity in Research working group of the CREATE Adult Skills Network to draw attention to elements of diversity, equity, inclusion, and accessibility that must be considerations in practice, policy development, and research related to adult skills development, including technology solutions. Future publications will provide more specific guidance for adult education researchers in utilizing a DEIA lens in their work. We hope that this document will provide new insights and spur reflection and action among its readers.

Contributors

Lisa Soricone and Adam Atwell, Jobs for the Future, with:

Judy Alamprese, Abt Associates;

Alisa Belzer, Rutgers University Graduate School of Education;

Amanda Bergson-Shilcock, National Skills Coalition;

Sharon Bonney, COABE;

Jill Castek, University of Arizona;

Renee Collins, OTAN and Adult Education Programs at Sacramento County Office of Education;

Stephanie Cronen, American Institutes for Research;

Michele Diecuch, ProLiteracy;

Marty Finsterbusch, VALUEUSA;

Paul Giguere, American Institutes for Research;

Deborah Kennedy, National Coalition for Literacy;

Meredith Larson, Institute of Education Sciences;

Victoria Neff, EdTech Center @ World Education;

Maria Oliveri, University of Nebraska, Lincoln;

Margaret Patterson, Research Allies for Lifelong Learning, LLC;

Irina Petranek, Lewiston Adult Education (Lewiston, Maine);

Rachel Riggs, EdTech Center @ World Education;
Theresa Sladek, Literacy Minnesota;
Hallie Smith, University of Memphis;
Tabitha Stickel, Adult Literacy Research Center, Georgia State University;
Amani Talwar, American Institutes for Research;
Brian Tinsley, Digital Promise;
Jen Vanek, EdTech Center @ World Education;
Heide Wrigley, Literacywork International.

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