California Adult Education Digital Learning Guidance

Developed in 2022, updated in 2025

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About Us

California Department of Education

California provides a world-class education for all students, from early childhood through adulthood. The California Department of Education (CDE) serves the state by innovating and collaborating with educators, schools, parents, and community partners as a team to prepare students to live, work, and thrive in a multicultural, multilingual, and highly connected world.

The CDE Adult Education Office provides educational opportunities and services to equip adults with the knowledge and skills necessary to participate effectively as citizens, workers, parents, and family and community members. Adult students are served by school districts, community colleges, community or faith-based organizations, volunteer literacy organizations, public or private nonprofit agencies, public libraries, correctional facilities, and state agencies.

California Community Colleges Chancellor's Office

The California Community Colleges Chancellor's Office includes nine divisions that manage policy and provide students the resources and support they need to reach their goals. The Educational Services and Support Division oversees community college curricula and instructional support, including adult education programs.

Outreach and Technical Assistance Network

The Outreach and Technical Assistance Network (OTAN) provides electronic collaboration and information, and support for instructional technology and digital learning to literacy and adult education providers in California. OTAN began in 1989 as a federally funded project through the CDE, Adult Education Office, through federal funds from the Workforce Innovation and Opportunity Act, Title II: Adult Education and Family Literacy Act. OTAN is one of three state leadership projects that support adult education in California, alongside CALPRO and CASAS.

International Society for Technology in Education

The International Society for Technology in Education (ISTE) is a nonprofit organization that works with the global education community to accelerate the use of technology to solve tough problems and inspire innovation. ISTE sets a bold vision for education transformation through the ISTE Standards, a framework for students, educators, administrators, coaches, and computer science educators to rethink education and create innovative learning environments. ISTE hosts ISTELive, one of the world's most influential annual edtech events. The organization's professional learning offerings also include online courses, professional networks, year-round academies, peer-reviewed journals, and other publications. ISTE served as the lead developer for the 2022 Digital Learning Guidance, working in partnership with OTAN,

the California Department of Education, and the California Community Colleges Chancellor's Office.

Community Learning Partners

Community Learning Partners works with educators and organizations to design and deliver effective, inclusive learning experiences for adults. Services include curriculum development, professional learning, technology integration, and project management to support flexible instruction that helps adults build skills, pursue goals, and successfully navigate education and work. Partners include adult education programs, workforce development agencies, colleges and universities, nonprofits, and corporate learning teams. CLP served as the lead developer for the 2025 update of the Digital Learning Guidance, working in partnership with OTAN and the advisory group.

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Foreword

We are pleased to present the California Adult Education Digital Learning Guidance, a collaborative effort toward implementing effective and meaningful digital learning experiences within adult education.

This guidance is intended to serve as a practical resource for the many individuals who support adult learners—classroom teachers, classified and support staff, counselors and transition specialists, school administrators, and consortium members in designing and implementing digital learning experiences with adult learners in mind.

Funding for this guidance was provided by the California Department of Education through the Workforce Innovation and Opportunity, Title II: Adult Education and Family Literacy Act, which supports workforce education programs across the nation.

To ensure this guidance includes practical, research-based, and timely content, we gathered input from state and national experts in the field of adult education, along with educators, counselors, support staff, and school leaders from adult education programs throughout California. We are grateful for the work of our advisory group members, partner organizations, and draft reviewers. We are particularly grateful for the contributions of the California educators who shared their experiences with us.

We would like to gratefully acknowledge the coordinating project teams from the Outreach and Technical Assistance Network, Community Learning Partners, and the International Society for Technology in Education for putting the vision of this project into action.

We hope that this guidance serves as a practical resource for leveraging digital materials, resources, and tools to design effective and transformative learning experiences for adult learners in California and beyond.

Sincerely,

Dr. Carolyn Zachry
Education Administrator/State Director, Adult Education Office
California Department of Education

Dr. Mindi Parsons
Division Director, Career and College Transition
California Department of Education

CHAPTER 1

Executive Summary

The purpose of the ***California Adult Education Digital Learning Guidance***—referred to here as the Guidance—is to enable adult educators in the state of California to design and implement effective digital learning experiences. The Guidance is intended to inform the practice of all California educators, support staff, and organizational leadership that work with adult learners.

California has a long history of providing adult education, from the early years of statehood in the 1850s to today. The California Adult Education System is derived from two funding streams. Primarily, the California Adult Education Program (CAEP) distributes over $650 million in annual funding to adult education programs across the state. Additionally, over $115 million in supplemental funding is distributed through the Workforce Innovation and Opportunity Act (WIOA), Title II, Adult Education and Family Literacy Act. CAEP is a uniquely designed program with the CDE and California Community Colleges Chancellor's Office (CCCCO) jointly administering the annual allocation to adult education program providers from both K-12 school districts and community college districts who are organized into 71 adult education regional consortia.

Purpose of the Guidance

The *Guidance* supports adult educators and program administrators in the design and implementation of meaningful digital learning experiences in adult education, including a focus on adult basic education (ABE), adult secondary education (ASE), adults with disabilities (AWD), career and technical education (CTE), English as a second language (ESL), and high school equivalency (HSE) programs.

Intended Audience

The audience for the Guidance is primarily classroom educators and support staff who work directly with adult learners, including classified staff, office staff, instructional aides, tutors, community volunteers, and librarians. The Guidance also applies to program administrators, coordinators, counselors, and other leadership roles that shape adult education programs.

In California, a combination of regional consortia, county offices of education, school districts, and community colleges provide adult education through both federal and state funding. Beyond educators and program providers, the Guidance may be of interest to policymakers and researchers in the broader field of adult education. Other stakeholders such as community-based organizations, employers, and labor unions may also find the Guidance useful in understanding and supporting adult learning.

Methodology for Updating the *Guidance*

The 2025 update of the Digital Learning Guidance builds on the original 2022 version through a structured review and revision process. A group of practitioners, advisors, and adult learners reviewed the 2022 text, marking up content with feedback and suggestions for improvement. Alongside this feedback process, the literature review was updated to include recent research on digital learning and adult education. Draft revisions were then shared with advisors for further input before being finalized.

This edition also introduces new **Program Tips**, **Administrator Tips**, and **Educator Tips**. These short, actionable notes provide quick guidance aligned with the main content, helping readers translate the recommendations into practical steps for their own context.

Artificial Intelligence (AI) Use Statement

Artificial intelligence (AI) tools were used during the revision of the Guidance to support the work of the project team. AI tools including ChatGPT, Gemini, Perplexity, and Claude, assisted with tasks such as organizing advisory group resources, analyzing advisor feedback, conducting literature scans, and helping with content research, drafting, and copyediting. No personally identifying information about students, advisors, or staff was included in AI queries. All AI-assisted material was reviewed and revised by the development team before being finalized.

This statement is included to model transparency in AI use. In education, learners and staff are increasingly encountering AI tools, and programs are making decisions about when and how to use them. By explaining how AI was applied in this project, and clarifying that human expertise guided and verified all results, the Guidance provides a practical example of how organizations can use AI responsibly, safeguard quality, and maintain transparency.

From Distance to Digital Learning

Distance education constitutes only one aspect of digital learning. In this guide, **digital learning** is defined as learning experiences that utilize digital tools for teaching and learning. Digital learning can happen in any learning environment—including in-person settings. Therefore, the Guidance is designed to benefit and support adult educators in all learning environments, whether in-person or online. To better prepare adult learners for living, working, and thriving in an increasingly digital world, it is vital for adult education providers to help learners to develop digital literacy and digital resilience.

Formal Literature Review

A 2022 literature review synthesized existing research on digital and distance learning in adult education. That review applied defined inclusion parameters, focusing on peer-reviewed studies and reputable non-corporate sources published since 2002 that addressed digital and distance learning for adult and nontraditional learners. The findings informed the development of the 2022 California Adult Education Digital Learning Guidance.

Search Methodology

The 2025 review followed the same overall approach but expanded the scope in response to changes in the field. Since 2022, emerging technologies such as artificial intelligence have become central to discussions of digital learning, yet the body of peer-reviewed research specific to adult education remains limited. To provide a more informed and evidence-based overview, the updated review incorporated not only scholarly journal articles but also reports and guidance from government agencies, professional associations, and educational research nonprofits. This broader set of sources allowed the review to capture both the established research base and the rapidly developing policy and practice context.

To be included in the 2025 literature review, sources were required to:

- be peer-reviewed (scholarly journal articles) or published by a reputable non-corporate organization such as an educational research nonprofit, professional association, or government agency;
- be published in 2002 or later;
- focus on digital learning, distance education, digital literacy, or digital skills;
- address adult education or nontraditional learners in higher education, with relevance for workforce and lifelong learning contexts;

- use an adult learning or andragogical lens where applicable, or provide findings transferable to adult education practice; and
- support the aims of the Guidance.

Search Process

The Education Resources Information Center (ERIC), an educational research database sponsored by the Institute of Education Sciences of the U.S. Department of Education, was used to locate sources. To ensure a comprehensive search, the following keywords were entered into ERIC in various combinations:

- **General terms**: adult education/learners, nontraditional education/learners
- **Subject terms**: ABE/ASE/HSE, CTE/IET/VE, correctional education, citizenship education/ELL/ESL
- **Focus terms**: digital learning, distance education, distance learning, online learning, nontraditional, artificial intelligence, XR/VR/AR

Preview of the *Guidance*

The first version of the Digital Learning Guidance was published in 2022. This 2025 update reflects new technologies, evolving practices, and emerging trends in digital learning, including expanded sections on Universal Design for Learning, career navigation tools, artificial intelligence, and immersive technologies such as virtual and augmented reality.

The 2025 update to the Digital Learning Guidance includes eight content chapters.

- **Chapter 2** addresses equity and access to digital learning, including devices, connectivity, digital literacy, digital resilience, accessibility, mobile-friendly design, and intake workflows. It also covers program-level supports such as device lending, connectivity partnerships, digital navigators, and long-term digital infrastructure planning. The chapter outlines federal and state policy expectations related to digital literacy and introduces Universal Design for Learning (UDL) as a framework for inclusive instructional design.
- **Chapter 3** reviews the foundations of adult education and digital learning. It connects key adult learning theories to digital instructional design, outlines research-based practices for planning effective online and blended learning, and describes how educators can use authentic tasks, feedback, and reflection to support learner progress. The chapter also addresses educator-facing standards, the roles of instructional and support staff in digital environments, and the structures that sustain professional learning, including coaching, administrator onboarding, and PLCs.
- **Chapter 4** examines approaches for selecting and using digital tools to support adult learning. It introduces technology-integration frameworks, digital onboarding practices, troubleshooting routines, and strategies for evaluating tools and content. The chapter outlines categories of tools for communication, collaboration, creativity, critical thinking, and career navigation, and describes how learning management systems and open

educational resources can support flexible instruction across in-person, hybrid, and online settings.

- **Chapter 5** describes distance, blended, and HyFlex models used in adult education. It outlines variations within these models, the technology and staffing needed to support teaching across formats, and approaches for onboarding learners and sustaining engagement. The chapter also explains how contact and distance learning hours are reported in NRS and CASAS TE, and summarizes key WIOA considerations that shape program planning and implementation.
- **Chapter 6** reviews how assessment and data support instruction and program planning. It outlines standardized assessments used in adult education, performance-based assessments, and digital skills assessments, along with options for remote testing. The chapter describes how to interpret assessment data, use dashboards and reports for instructional decisions, and understand related reporting requirements in NRS and CASAS TE. It also covers digital credentials and wallets, informal assessments, and emerging uses of AI in assessment and scoring.
- **Chapter 7** focuses on creating healthy, equitable, and inclusive digital communities. It outlines strategies for building connection in online and hybrid learning, supporting learner and educator well-being, and integrating social and emotional learning into instruction and advising. The chapter also examines digital citizenship in adult education, including privacy, digital identity, online safety, and the role of frameworks in shaping responsible digital participation.
- **Chapter 8** (new in 2025) introduces generative AI in adult education and provides an overview of how these tools work, their limitations, and their emerging role in teaching, learning, and program operations. It outlines strategies for writing effective prompts, describes applications for instruction, learner practice, career navigation, and administrative work, and reviews essential considerations for privacy, copyright, bias, and verification. The chapter concludes with guidance for developing local use policies, integrating AI frameworks, and evaluating a range of general-purpose and education-focused AI tools.

VOICES FROM THE FIELD

Alisa Takeuchi

TOSA, *Garden Grove Adult Education*

What specific strategies or practices from the DLG have you applied, and how have they worked in your context?

From Chapter 2, we focused on ensuring that students have the devices they need to succeed. Since the pandemic, we have checked out hundreds of

Voices from the Field (continued)

Chromebooks and laptops to students and provided orientation on how to use them at home. One of our challenges has been providing reliable internet access. While we didn't have enough funding to purchase hotspots for everyone, we trained students to use their mobile phones as hotspots when possible.

For our Career and Technical Education (CTE), High School Diploma, and High School Equivalency students, we make sure every laptop is preloaded with the software and apps they need to study as if they were on the classroom desktops. We have also been fortunate enough to have an on-site IT specialist three days a week, which gives both staff and students access to timely technical support and troubleshooting when issues arise.

What has your program learned from using the DLG that could be useful for others considering it as a planning tool?

At Garden Grove Adult Education, the DLG helped us take a step back and examine how we use technology to support learners. It offered a clear framework to identify what's working well and where we could improve—especially in ensuring equitable access to digital tools. Rather than feeling pressure to implement everything at once, the guide helped us set realistic goals and focus on connecting technology use directly to student learning outcomes.

What stood out most for our team was how the DLG encouraged honest conversations among teachers and staff. It gave us a shared language to talk about digital learning, which made planning feel more collaborative and achievable. For other programs, we recommend using it not just as a checklist, but as a springboard for reflection, new ideas, and small, practical steps that lead to meaningful change for students.

CHAPTER 2

Ensuring Equity and Access

Digital equity means creating the conditions that enable everyone to access and use technology in ways that support full participation in a connected world, including work, education, healthcare, and civic life.[1] In adult education, it involves supporting learners' ability to engage with instruction and services, whether they are preparing for the workforce, navigating reentry, learning English, building foundational literacy, or pursuing personal goals.

Elements of digital equity include:

- **devices**: up-to-date laptops, tablets, or smartphones
- **connectivity**: reliable internet access at home or in community spaces
- **digital literacy**: skills to use technology effectively

Digital equity is shaped by how learning environments are designed, including how they account for differences in English proficiency, physical and cognitive ability,[2] and ways learners interact with digital content. In practice, this involves understanding and planning for the conditions in which learners access instruction and services. Many adult learners are balancing work, family responsibilities, and other commitments while returning to school. They

may review class materials on a phone during a work break, join online lessons using shared devices, or complete assignments without reliable internet or a quiet space to study. These are common conditions that directly influence how learning happens.

To address these realities, programs must look beyond immediate access. Equity is sometimes framed as providing devices, internet, and digital skills training, but these steps alone may not ensure meaningful participation. Programs can also look at the broader conditions that shape whether learners can keep using technology reliably over time. This includes factors such as the cost of monthly internet service, the availability of affordable device repairs, data limits on mobile plans, and the quality of local broadband infrastructure. It can also involve policies or funding models that determine whether learners can retain a loaned device after completing a program. Addressing these kinds of conditions helps ensure that digital access is sustainable, not temporary.

For adult education practitioners, advancing equity means planning with these realities in mind and making informed decisions about technology, curriculum, and support that reduce barriers and promote persistence. This chapter highlights practical strategies for improving access, building digital skills, and creating inclusive learning environments across a range of settings.

Understanding Learner Needs

Supporting digital equity begins with understanding how learners access and use technology. Programs can gather this information at intake and update it during enrollment through surveys, interviews, or informal conversations. These insights can help staff identify barriers, plan supports, and design learning environments that are more inclusive for all learners. A range of tools and strategies can support this process and help organize responses effectively:

- **Assessment embedded in registration processes**: intake tools that capture digital readiness
- **Mobile-friendly surveys** (Google Forms, Microsoft Forms, Jotform): online forms with features like images, dropdowns, or branching logic
- **Translation tools** (Google Translate, Microsoft Translator): to make surveys and intake questions accessible across languages
- **Spreadsheets to organize responses**: used to filter for learners who may need devices, hotspots, or digital skills support, prioritize follow-up, and coordinate support activities

Programs can also integrate digital skills into broader goal-setting discussions during intake or orientation. In practice, this means asking how learners currently use technology in daily life and how it connects to their short- and long-term goals, such as finding a new job, supporting a child's schooling, or managing online tasks. These conversations help staff understand each learner's motivation and identify digital skills that are immediately relevant to their priorities.

When learners see how technology use supports their own goals, participation in digital skills instruction often becomes more purposeful and sustained.[3]

To ensure information remains accurate over time, programs can re-administer surveys at the start of each term or during scheduled check-ins. Because surveys rely on self-reporting and some learners may not feel comfortable sharing personal details (such as their home internet situation or financial constraints), programs can also use informal methods, including:

- **Brief conversations between learners and staff**: short discussions that surface access or support needs
- **Classroom observations by instructors or support staff**: noticing when learners encounter difficulties with devices, logins, or digital tasks

These approaches provide multiple ways to understand access conditions and to plan supports that reflect learners' circumstances.

Participation data can also signal potential barriers related to access or confidence. For example, missed online classes or incomplete assignments may reflect unmet digital needs rather than a lack of interest. Programs can respond by:

- Following up directly with learners who are missing assignments or classes
- Monitoring attendance and login activity to identify patterns in engagement
- Reviewing participation data at specific points in the term (for example, after the first week or month)
- Contacting learners flagged for low engagement to discuss possible supports

The following tools can help assess learner needs at both the individual and program level by offering clear, accessible questions about device access, internet use, digital skills, and support needs:

- OTAN Student Technology Intake Survey: identifies learners' device, internet, and skill needs at intake. Administrators can also request aggregated results to inform technology planning and staff training.
- Northstar Digital Literacy Screener: provides a snapshot of learners' baseline skills in key areas.

Using these tools and approaches together gives programs a more complete picture of digital access and readiness, making it easier to plan supports that enable full participation.

VOICES FROM THE FIELD

Francisco Xavier Pinedo Jr

Director, *Soledad Adult School*

How does your program identify which students have access to devices and reliable internet, and how do you keep that information up to date throughout their enrollment?

At the beginning of each student's journey at our school, students complete the Technology Intake Survey. Afterward, instructors ask whether they have internet access at home (beyond a mobile data plan) and if they have a secondary device such as a tablet, Chromebook, laptop, or desktop computer.

If a student reports no internet access at home, we refer them to Human-I-T. Through Human-I-T, our students have been able to get low-cost internet service, free digital skills training, and in some cases, a free laptop for completing a digital literacy class on topics such as AI. Some students have also received mobile hotspots for as little as $15 per month for unlimited access through the T-Mobile network.

For students who need a device, we refer them to Loaves, Fishes, and Computers, a local nonprofit organization in Monterey County. Students can receive low-cost or free devices by attending a six-week digital skills class offered at the LFC headquarters or at partnering adult schools in our consortium.

Within the Salinas Valley Adult Education Consortium, data show that 65 percent of adults in our region have never used a computer, 75 percent do not have one at home, and 55 percent of children complete homework on a parent's cell phone. LFC also sells refurbished equipment at affordable prices for families.

In classrooms, we post flyers for Human-I-T (internet access) and Loaves, Fishes, and Computers (devices and training). At the end of each semester, we survey students to see whether they accessed these services and what support they received.

What strategies have you found effective for providing devices, connectivity, or technical support in a rural community? What challenges (if any) have you experienced in sustaining those efforts?

Across our programs, including ESL, CTE, ABE, and ASE, we integrate technology into instruction. We've found that when teachers model ethical and practical technology use, students are more likely to apply those habits at home. We encourage students to bring their own devices to class, since those are what

Voices from the Field (continued)

they will use for assignments and projects. Seeing technology used meaningfully in class often motivates them to reach out to Human-I-T or Loaves, Fishes, and Computers to get connected and gain more training.

At Soledad Adult School, we hold classes Monday through Thursday and offer Friday Open Office Hours for technology support. During those sessions, students can get help with Canvas onboarding, email, and Google Apps such as Docs and Slides. Currently, the most common areas where students need help are composing emails and sending attachments.

How have you seen students' digital literacy and comfort with technology shift over time, and how has that informed the way your program supports digital skills instruction?

We have seen students become much more comfortable using iPads, Chromebooks, and their own cell phones in class. Instructors model each tool repeatedly until students feel confident using it. We are also consistent in the platforms and apps we use, which helps students build confidence over time. For example, all ESL classes use Learning Upgrade in the fall and USA Learns in the spring. We do not introduce new websites or apps each week; instead, we give students time to master one before adding another.

This consistency helps students develop habits around technology use. Returning students often help onboard new classmates, which makes instruction smoother and strengthens peer learning

One major shift at Soledad Adult School is that students are now much more technology-ready. We encourage computer-based testing for HiSET and have launched the TE Student Portal so students can track their own progress in CASAS testing.

Planning for Common Access Conditions

Once learner needs are identified, programs can plan support systems for a variety of access situations, including mobile-only use, shared devices, or limited connectivity.

Many adult learners rely on mobile phones as their primary or only device.[4] Phones are portable and often more affordable than a laptop or desktop computer, but they can present design and instructional challenges. Digital materials may not display consistently on small screens, and some tools lack mobile-friendly versions. Others may require file types, login processes, or navigation patterns that are difficult to complete on a phone.

To reduce barriers, programs can prioritize tools that work well on mobile devices and test key activities such as registration, assignments, and communication on smartphones.

> **Instructor Tip**
>
> Use browser-based tools like Chrome's device emulator (or similar features in other major browsers) to preview how course content displays on different screen sizes. This helps ensure materials are accessible for learners who rely on phones or tablets.

Learners with laptops or tablets may need to share those devices with family members. Flexible course design can help by allowing learners to choose when and how they participate, such as accessing materials asynchronously or completing assignments offline. Some programs also use models such as HyFlex to extend that flexibility, giving learners the option to join class sessions in person, online, or through a blended format. (See Chapter 4 for more on designing flexible learning experiences.)

For learners with unreliable internet or no connectivity at home, or for those in correctional programs where internet use is restricted, programs can prepare offline or alternative access options. These approaches also support instructional continuity during service disruptions caused by wildfires, power outages, or infrastructure limitations. Examples include:

- **Printed and non-internet phone supports**: printable packets for offline learning and outreach via calls or text and voice memos
- **Preloaded or offline digital resources**: USB drives, RACHEL devices (offline content servers), or laptops configured with local materials
- **Downloadable and shareable content**: files saved for offline access, shared drives or folders (physical or digital), and printable versions of lessons or worksheets created in tools like Google Docs, Canva, or Microsoft PowerPoint
- **Community-based access points**: coordination with local partners such as libraries, housing centers, or food distribution sites to serve as pickup and drop-off locations for materials
- **Reliable communication channels**: maintaining updated contact information and learner communication preferences (e.g., SMS, email, WhatsApp) for timely outreach

These options help programs plan for digital access limitations and can be integrated into broader contingency and access plans that reflect local needs, staffing capacity, and delivery models.

VOICES FROM THE FIELD

Stephen Hill
Teacher, *Yreka Adult School and Curriculum Coordinator, Adult Education Pathways Consortium*

What device or connectivity challenges have students in your region faced, and how have those barriers affected participation in classes or services?

Poverty remains a significant barrier for the vast majority of our students. Many work for low wages, often with limited hours and few benefits, and job turnover is frequent. Most have smartphones, but maintaining consistent service is difficult. Some have computers, but they often cannot connect to the internet for two main reasons. First, reliable service is only available near town centers, and second, even when available, many simply cannot afford it.

These challenges limit participation in our online programs for GED preparation (using GED Academy from Essential Education) and access to online coursework through Edmentum. They also restrict students' ability to attend virtual classes or meet with instructors through Zoom. Connectivity issues make it difficult for learners to register for GED testing, complete USCIS forms for citizenship preparation, or respond to program surveys. Without stable internet, students also miss out on opportunities to conduct research, access community resources, and search or apply for jobs online.

What steps has your program taken to address those challenges, and what strategies have been most effective in expanding access?

At Yreka Adult School, we loan Chromebooks to students who do not have access to a computer. Students are also welcome to use school computers during open hours when space is available, which has been especially helpful for homeless learners. While on-site, they can access the internet, complete coursework, and connect with teachers. We also refer students to the public library and other community spaces with free Wi-Fi to help them stay connected and continue their learning outside of school hours.

Programs can also create or expand device loaner and donation programs to provide learners with short-term and long-term access to laptops or tablets. These programs may be managed directly or in partnership with local libraries, workforce agencies, or community organizations. Several planning guides outline strategies for managing device lending programs, including inventory tracking, budgeting, and support logistics:

- Lending Connectivity Tools – A Library Planning Guide: includes sample policies, sustainability planning, and inventory systems
- Prey Project Guide to Running a Student Device Lending Program: a step-by-step guide for launching and managing loaner programs

Although originally developed for K–12 or library settings, both resources can be adapted for the scale and staffing models of adult education.

Program Tip

Planning for device sustainability involves budgeting not only for initial purchases but also for ongoing costs such as maintenance, repairs, and replacements. Because these expenses extend across multiple years and budget cycles, many programs combine funding from federal, state, local, and private sources to maintain reliable access. Documenting technology needs in an annual program improvement or technology plan helps track funding sources, coordinate budgets, and plan for timely replacements or upgrades. For more on long-term planning, see the "Building Digital Infrastructure" section later in this chapter.

Connecting Learners to Resources and Support

Alongside program-level strategies for supporting device and internet access, programs can also connect learners to external supports that reduce barriers. These may include federal subsidy programs, state initiatives, local lending options, community internet access points, and digital literacy workshops offered by partner organizations.

Device and Internet Access Support

Learners may be eligible for various local and national programs that provide devices, internet access, or both. Programs can share these opportunities during onboarding, orientation, or outreach:

- California's Closing the Digital Divide Initiative: provides funding and support to expand access to devices and internet service, including laptops, tablets, hotspots, and modems, through schools, libraries, and local partnerships
- The Emergency Connectivity Fund (ECF): supports schools and libraries in providing devices and hotspots
- EveryoneOn: helps learners identify low-cost device and internet options by ZIP code.
- Digitunity: connects individuals to donated or low-cost refurbished devices through local partners and digital inclusion programs

Subsidy programs can reduce costs, but they may not fully address issues such as device ownership, reliability, or long-term affordability. Programs can plan follow-up support, such as maintaining a small inventory of loaner devices, partnering with local libraries for extended access, or helping learners navigate repair and replacement options.

Clear communication about available low-cost or free device and internet options can help address common misconceptions, such as believing that subsidy programs are only for K–12 students, that personal information will be shared publicly, or that applying will affect other benefits. Because eligibility rules and timelines change, staff can coordinate with local partners for up-to-date information.

VOICES FROM THE FIELD

Jaemi Naish

Director, *Tamalpais Adult School*

How has your program's approach to device lending, connectivity, and digital support evolved since the early years of distance learning?

Since 2020, Tamalpais Adult School (TAS) has approached device lending and digital support intentionally and strategically. Each year, students complete OTAN's Intake Survey and a local survey to identify who needs a device other than a smartphone. Staff review the results together to identify trends and plan improvements.

All teachers are now expected to integrate digital learning and literacy into their classrooms. New student orientations include logging into district Chromebooks, using student email, and managing passwords for online platforms. TAS also offers rotating workshops on Chromebook use, accessing online learning through Canvas, and applying G Suite tools such as Google Docs, Quizzes, and Gemini AI. A cart of 30 Chromebooks is reserved each year for student loaners, primarily supporting beginning-level ESL learners.

TAS partners with Canal Alliance in San Rafael, where students can complete an eight-hour digital literacy workshop in Spanish and receive a Chromebook to keep. Data continue to show that digital literacy remains a challenge in lower-level ESL, so teachers at those levels are expected to build digital skills into instruction using tools such as Typing.com, Duolingo, Learning Chocolate, Kahoot, Peardeck, USA Learns, Northstar Digital Literacy, and Vocaroo.

What strategies have proven most effective in identifying students' connectivity needs and helping them gain consistent access to technology? What challenges still exist?

Voices from the Field (continued)

TAS maintains a strong partnership with the Tamalpais Union High School District IT department, which manages the school's web domain, classroom Chromebook carts, and access to online tools including YouTube, Khan Academy, and Gemini AI. Annual student surveys and teacher feedback help the program understand learner needs and adjust supports each year.

Many adult learners—especially in ABE and ASE programs—express strong interest in online learning but still rely mainly on smartphones to participate. This creates ongoing connectivity and usability challenges. Attendance at optional technology workshops has been limited, and a new district network policy now prevents personal devices from connecting to Wi-Fi, requiring learners to use district-issued Chromebooks. While this shift has required adjustment, close collaboration with the district IT team has allowed TAS to respond quickly to learner needs and maintain steady progress toward more equitable digital access.

Technical Setup and Ongoing Support

Providing devices and internet access alone does not ensure equitable participation. Learners may also need support with tasks such as device setup, software installation, and ongoing troubleshooting. Integrating these services into orientation or making them available during key transition points (such as the first week of class) can help ensure learners can participate consistently.

Programs located in K–12 districts or community college settings may be able to coordinate with district IT teams to provide device setup and software installation, account creation for email and learning platforms, and technical troubleshooting for login issues, device errors, and connectivity.

For programs that are not part of larger institutions, establishing a small tech team can provide a clear point of contact for questions, if capacity allows. If dedicated staff are not available, options include setting aside regular time for teacher-led tech Q&A or pairing learners with peers who have stronger technology skills.

Some programs also work with digital navigators, trained staff or volunteers who provide one-on-one support with device setup, internet access, or account creation. Digital navigators help learners troubleshoot issues, locate affordable connectivity options, and build confidence using technology for everyday needs. Several national initiatives, such as the Goodwill Digital Navigator Certificate Specialization developed by Goodwill Industries International and World Education, offer free or low-cost online training for individuals and organizations interested

in implementing these services. These programs introduce digital navigation as a structured intervention, emphasizing customer service, cultural competency, and local partnership strategies that connect learners to sustained digital access and skill development.

Building Digital Infrastructure

A strong digital infrastructure across an adult education program provides the foundation for equitable and reliable technology use. It includes the systems, equipment, and supports that make digital learning possible—such as hardware, network connections, software, data storage, and technical support processes. Evaluating this infrastructure helps programs confirm that devices, internet access, and internal systems are consistent and dependable for both staff and learners.

Building a digital infrastructure requires attention to both immediate needs and long-term sustainability. Purchasing new devices or software is only one step. Programs also need clear plans for how technology will be maintained, supported, and replaced over time to ensure that investments remain reliable.

The total cost of ownership model provides a framework for planning this long-term sustainability. It accounts not only for initial purchases but also for ongoing costs such as maintenance, upgrades, and training. Factors to consider include:

- Annual software license or subscription fees
- Device maintenance, repair, and replacement cycles
- Expected lifespan of equipment and peripheral costs (cases, chargers, cables)
- Inflation and its impact on future budgets
- Ongoing technical support requirements
- Training costs for staff and learners using new tools

For example, a program may determine that purchasing tablets is affordable in the current budget year, but a total cost of ownership approach ensures that costs for maintenance, protective equipment, software updates, and staff training are also included in planning. Considering total cost of ownership highlights how equity depends on sustained investment, not just initial access.

Several tools can help programs estimate and manage long-term technology costs. The CoSN Total Cost of Ownership Tool offers structured guidance for projecting, comparing, and monitoring technology investments over time. Documenting these details helps align purchasing, budgeting, and replacement cycles to support continuity across fiscal years.

Ensuring Staff Access and Capacity

Digital equity extends beyond learner access. Educators and support staff also need reliable devices, secure connectivity, and ongoing opportunities to strengthen their digital skills. Evaluating staff access is an important part of identifying and removing barriers that may limit

instructional quality or consistency. In some programs, staff experience challenges similar to learners—for example, limited home internet, shared devices, or restricted access to on-site resources and technical support.

Once access needs are addressed, programs can focus on strengthening staff capacity to design and deliver digital learning effectively. Educators benefit from structured opportunities to learn, practice, and collaborate on technology integration. Professional development focused on digital tools and online teaching methods helps ensure that new technologies are used purposefully rather than added as isolated features.

Programs can provide this support through ongoing technology-focused workshops, peer mentoring, and collaborative planning time. Allowing educators to test new tools, share experiences, and observe colleagues promotes confidence and sustainable change in instructional practice.

Administrator Tip

Establish peer mentorship opportunities that pair more tech-experienced instructors with colleagues who are developing confidence in digital teaching. Mentors can offer practical support with tools, troubleshoot challenges, and share classroom-tested strategies. This approach builds trust, encourages experimentation, and helps sustain technology use across staff. Additional strategies for ongoing professional learning are outlined in Chapter 3 of this guide.

Digital Literacy Skills

Digital literacy refers to the ability to use technology to find, evaluate, organize, create, and communicate information. In adult education, pursuing digital literacy involves building the practical technology skills needed for daily life, employment, and continued learning.

A digitally literate adult can use computers, smartphones, and the internet to accomplish personal and professional tasks. This includes:

- **Foundational technical skills**: using a keyboard, mouse, or touchscreen, and navigating websites or apps
- **Information-processing skills**: evaluating online information, using software tools to complete tasks, and solving digital problems

Broadly, these two abilities form the foundation of participation in work, education, and community life. Digital literacy is not a single skill, and the set of competencies it includes, from using email and word processors to understanding online privacy, enable adults to engage effectively in digital spaces.

Digital literacy is also connected to related concepts:

- **Digital resilience**: the ability to adapt to new technologies, troubleshoot issues, and continue learning as tools and systems change
- **Digital citizenship**: the safe and responsible use of technology, including awareness of online privacy, basic cybersecurity, and respectful online communication

The goal in adult education is to prepare adults to be digitally fluent and comfortable exploring new devices, platforms, and information in ways that allow them to participate fully in modern society.

The Importance of Digital Skills in Adult Education

Because it is now a central part of how people work, learn, and participate in community life, digital literacy has become a central focus in adult education. Despite this widespread demand, many adults do not yet have the skills needed to use these tools effectively. As of 2025, nearly one in three U.S. workers lack foundational digital skills:[5] about 13% have no digital skills, and 18% have only limited abilities. These gaps affect access to employment, training, and advancement opportunities.

Digital literacy is vital for personal and civic life. Adults use technology to:[6]

- Access healthcare, including telehealth services and online health information
- Manage finances through online banking and digital payments
- Stay involved in their children's education by using school portals, messaging teachers, or supporting homework and projects
- Complete government forms and access public services
- Participate in community and civic activities, such as forums or voting information sites

For some learners, the chance to practically progress with tasks like communicating online or applying for jobs can be a source of motivation to build confidence and support persistence in digital skills education.[7] Studies find that many adults report a desire for additional digital training but face barriers such as cost or scheduling, reinforcing the importance of accessible, flexible opportunities.[8]

As learners continue to develop these skills, they can participate more fully in work, community, and civic life.

Aligning Digital Literacy with Accountability Systems

Digital literacy is now embedded in federal and state policies that guide funding, planning, and accountability in adult education. As such, it is widely recognized as essential for workforce preparation, civic participation, and lifelong learning.

Incorporating digital literacy supports both instruction and reporting: employers increasingly expect digital competencies and accountability systems track workforce outcomes. Programs

may integrate digital skills into instruction or offer standalone courses, using eligible funding sources.

Policy in adult education comes directly from funding frameworks, and digital literacy and equity planning are no exception. Many states have developed digital equity plans or embedded digital skills in their adult education curricula. For program staff, staying informed about policy priorities such as the ones below can shape curriculum planning and partnerships to reflect local workforce needs:

- **WIOA Title II**: identifies digital literacy as part of workforce preparation activities. Programs may document digital skills instruction in measurable skill gains or integrated education and training (IET) initiatives, aligning with both instructional and accountability requirements.
- **CAEP**: recognizes digital literacy as a cross-cutting skill across all five program areas. Programs may reflect digital access and instruction in their CAEP three-year plans and use CAEP funds to support staffing, devices, or professional development for digital inclusion.
- **Perkins V**: links digital literacy to preparing learners for high-skill, high-wage, in-demand careers. Career and Technical Education (CTE) programs can integrate digital competencies into pathways and performance indicators, particularly where digital tools are standard in the industry.

Digital literacy is both an instructional and a policy priority. Adult education providers can use this alignment to secure resources, improve services, and expand opportunities for learners to build and apply digital skills. In practice, this might involve partnering with libraries to co-host community technology workshops, coordinating with workforce centers to align digital skills instruction with local job-training initiatives, or contributing to regional planning efforts that identify shared technology needs and funding opportunities.

Because policies and funding sources continue to evolve, programs benefit from maintaining regular communication with local and state agencies to stay current on priorities, grant opportunities, and reporting requirements.

Digital Skills Standards Frameworks

Several frameworks define the digital skills adults need for learning, work, and daily life.

Programs can draw on these to decide which specific competencies to teach and how to measure progress. Examples include the Maryland Digital Literacy Framework, the ISTE SkillRise Profile of a Lifelong Learner, Northstar Digital Literacy, and the Seattle Digital Equity Initiative. Each organizes digital skills in slightly different ways, but all provide structures that programs can adapt to their own learners, instructional settings, and policy contexts.

Frameworks are intended as guides, not mandates. In California, no single digital skills framework is required. Programs can select, adapt, or combine those that best align with their learners, instructional settings, and accountability systems.

These models can help programs:

- **Prioritize skills**: Focus limited instructional time on the competencies most relevant for each course or learner group
- **Design targeted instruction**: Create course outlines, mini-lessons, and digital activities that reflect work, education, and community needs
- **Track and communicate learner progress**: Use shared language to coordinate across staff, report outcomes, and help learners recognize their growth
- **Coordinate planning and professional development**: Align curriculum, instructional planning, and staff training around a common set of expectations

For example, an instructor teaching a GED writing course might use a framework's "productivity" standard to guide a lesson where learners draft and submit essays through a cloud-based word processor, practicing both writing and document management. A career navigator might use "communication" or "collaboration" standards to design workplace email activities that align with employability skills. Similarly, a civics instructor might use "information evaluation" standards to help learners analyze the credibility of online sources when researching training or housing options.

Strategies for Integrating Digital Literacy Instruction

Adult education programs can use a range of strategies to integrate digital skills into instruction. The goal is to make digital literacy part of everyday learning rather than a separate topic. Opportunities for guided practice, troubleshooting, and peer support help learners build adaptability and persistence in changing digital environments. Embedding digital practice into authentic tasks such as filling out forms, applying for jobs, or communicating with agencies can link skills directly to learners' goals. Analysis of PIAAC data indicates that frequent use of digital skills at work or at home predicts stronger assessed skills over time, suggesting that ongoing practice is critical for sustaining growth.[9]

Because learners often begin with very different levels of digital experience, strategies that allow for differentiation and learner choice can help ensure that instruction is relevant to individual goals.[10]

The following approaches provide examples of how digital literacy can be embedded into instruction and program design.

Embed digital skills into existing lessons

Integrate technology use into core subjects. For example:

- **Reading**: use online news articles to practice navigation and comprehension of digital text
- **Math**: create a household budget in a spreadsheet to build data entry and formula skills
- **Writing**: draft, revise, and format a paragraph or short essay in a word processor to practice both writing skills and digital document creation

- **ESL**: complete online vocabulary activities in a mobile app to build confidence with digital interfaces

Use project-based learning with technology

Assign real-world tasks that require digital tools. For example:

- Create a newsletter or blog using publishing software to practice writing, editing, and design
- Research job openings online, create a resume, and set up a professional email or LinkedIn profile
- Explore career-training programs in groups and present findings in Microsoft PowerPoint or Google Slides

Leverage blended learning with online resources

Combine in-person instruction with digital practice opportunities. For example:

- Use free platforms such as Padlet or Desmos calculators to build comfort navigating online learning tools
- Send class announcements through email, SMS, or WhatsApp to help learners practice everyday digital communication. Be intentional about how these tools are used by setting clear boundaries—such as when instructors will respond and how personal information is protected—so learners feel supported and respected[11]
- Assign short activities in a learning management system or app to build familiarity with logging in, submitting work, and tracking progress in digital environments

Encourage peer learning

Use collaboration to strengthen digital confidence and skill use. For example:

- Pair learners to practice tasks such as typing dictated text or navigating an app
- Assign small group projects that include the use of collaboration software
- Create routines where learners who have demonstrated ability within specific tasks provide informal peer support

Programs can also provide structured opportunities for reflection, such as short discussions or written check-ins about what tools were used and how they supported progress. This helps learners connect digital practice to broader strategies for persistence.

Integrate workplace scenarios

Align digital activities with common workplace and life tasks. For example:

- **General**: complete an online job application, record hours on a digital timesheet, or create a short slide presentation
- **Healthcare**: look up health information online or practice with an electronic health record interface

- **Skilled trades**: find instructional videos on YouTube or use a mobile app to calculate measurements

Offer standalone digital skills workshops

When programs have staffing and space, dedicated sessions can provide structured time for digital learning. For example:

- Run a four-week "Computer Basics" class covering foundational skills such as mouse use, file management, and internet safety
- Host drop-in lab hours for support with specific tech tasks or practice with typing and navigation
- Offer guided workshops on creating email accounts, navigating learning platforms, or using search engines

Programs can also integrate opportunities for skills validation through badges, certificates, and credentials. Tools such as Northstar Digital Literacy and the Certiport IC3 assessment provide ways for learners to demonstrate progress and signal digital competencies to employers or training programs.[12] These options can also support motivation by giving learners visible recognition of their growth.

Additional Digital Literacy Resources

The following resources offer practical tools and resources supporting digital skill development. Some provide program-level frameworks and planning guidance, while others supply curricula, assessments, or instructional resources that can be used directly with learners.

- **Digital Navigator Model (EdTech Center @ World Education with funding from Walmart)**: a framework for addressing digital equity and inclusion. Digital Navigators may be staff, librarians, volunteers, or other trained individuals who assist learners with securing devices, affordable internet, and foundational digital skills. Examples of navigator activities include helping a learner set up an email account, troubleshooting a video conferencing app, or installing software on a phone. The Digital Navigator Playbook provides guidance on defining navigator activities, measuring outcomes, and integrating the model into existing program structures.
- **Promoting Digital Literacy for Adult Learners (Barbara Bush Foundation and Digital Promise)**: a guide that compiles research-based strategies for developing adult learners' digital skills. It includes examples of effective practices, such as embedding digital skills into adult basic education, and offers approaches for addressing challenges learners may face when adopting new technologies.

In addition to frameworks and guides, several instructional and assessment tools are available for classroom use:

- Northstar Digital Literacy: standardized assessments and instructional modules aligned with skills commonly taught in adult education.

- Microsoft Digital Literacy Curriculum: tutorials ranging from basic internet use to productivity software and online safety.
- Google Applied Digital Skills: project-based lessons using Google tools to teach digital skills in real-world contexts.
- SkillBlox (World Education): a platform that allows educators to search, organize, and assign digital content by skill, level, or standard.

Accessibility

Access includes more than just devices, broadband, and digital skills. Learning materials and digital content should also be usable by all learners, including those with disabilities. A learner may have a laptop and Wi-Fi but still encounter barriers if, for example, an online activity isn't screen-reader compatible or a video lacks subtitles. Accessibility is not just a technical requirement. It is a foundational aspect of equity. It means designing or adapting content so that all learners, regardless of physical, sensory, or cognitive differences, can perceive, understand, navigate, and interact with it.

This is where the concept of Universal Design for Learning (UDL) becomes critical (see below). Rather than creating separate accommodations, UDL focuses on designing environments and materials that are usable by a wide range of learners from the start. For example, adding closed captions to instructional videos supports learners who are deaf or hard of hearing but also benefits many others, such as English learners or those studying in noisy environments. These intentional design choices reduce barriers for all learners. Providing content in multiple formats (text, audio, video, images) further supports engagement by allowing learners to interact with material in the ways that work best for them.

There are also legal requirements for programs receiving federal funding to consider. Section 508 of the Rehabilitation Act requires that federal agencies and organizations they fund (including adult education providers) make their electronic and information technology accessible to people with disabilities. In practice, this includes ensuring that websites, online forms, digital curricula, and instructional software comply with accessibility standards (e.g., WCAG which is discussed next in this chapter). Similarly, the Americans with Disabilities Act (ADA) protects the right of people with disabilities to equal opportunities in public accommodations, employment, government services, and education. Public adult schools and any program administered by a state or local government entity are responsible for providing reasonable accommodations and equitable access to their services, including educational content and technology.

Programs seeking additional guidance on selecting or creating accessible digital materials can consult the Accessible Educational Materials Center (AEM) from CAST, which provides practical tools and explanations to support Section 508 and ADA compliance.

WCAG

For web content and digital materials, the Web Content Accessibility Guidelines (WCAG) offer principles that can help programs design materials more usable for everyone. Educators do

not need to be web developers to apply these ideas, but understanding the core principles can make it easier to spot and fix common barriers. The four main WCAG principles provide a clear way to evaluate and improve accessibility:

- **Perceivable**: Information should be presented in ways all learners can notice and interpret. For example, avoid using color alone to signal meaning, and add alt text to images so screen readers can describe them.
- **Operable**: Learners should be able to navigate and complete tasks using different methods. For example, make sure all functions work by keyboard, allow enough time to complete forms, and use consistent navigation menus.
- **Understandable**: Content and instructions should be clear and predictable. For example, use plain, readable text and design buttons or links so they behave as expected, reducing confusion for learners with cognitive differences.
- **Robust**: Materials should work reliably across devices and assistive technologies. For example, create properly tagged PDFs, structured Word documents, or LMS content that screen readers can interpret.

Educators can also apply practical steps and use built-in tools to check and improve accessibility:

- Become familiar with and use built-in accessibility checkers in Microsoft Word, Google Docs, or an LMS
- Add captions to videos with tools like YouTube's auto-captioning. For live sessions, transcription tools such as Otter.ai can provide real-time captions
- Choose reader-friendly fonts and high-contrast colors in slides and handouts
- Ensure links are descriptive (e.g., "View GED study resources" instead of "click here")
- Ask learners if materials are easy to read and navigate; their feedback can highlight barriers quickly

These steps may not address every accessibility need, but they provide a strong starting point and help programs build confidence with inclusive design.

The table below summarizes common categories of learner need (visual, auditory, motor, and cognitive) with examples of tools and strategies that can support inclusive learning environments.

Learner Need	Accessibility Tools	Strategies and Tool Features
Visual	Screen readers	Add alt text to images; avoid using color alone to convey meaning; use platforms compatible with screen reader software
	Screen magnifiers	Use large, scalable fonts; ensure content layout remains clear when zoomed
Auditory	Captions and subtitles	Provide accurate captions for all video and audio content; offer transcripts for recorded materials
	Visual alerts	Use icons or on-screen cues in addition to, or instead of, sound notifications
Motor	Keyboard navigation	Design interfaces that can be fully operated by keyboard; avoid drag-and-drop-only interactions
	Voice control and adaptive hardware	Allow for voice input or alternative devices; simplify navigation and limit time-dependent tasks
Cognative	Text-to-speech tools	Use plain language; structure content with clear headings; provide audio versions of text where helpful
	Visual organizers	Use diagrams, timelines, or mind maps to support comprehension
	Custom pacing/timing	Break tasks into smaller steps; provide options for flexible pacing and completion times

In addition to classroom strategies, programs can adopt broader practices to support accessibility across the organization, including:

- **Review new tools for accessibility**: Request or consult a Voluntary Product Accessibility Template (VPAT) to understand how a vendor addresses accessibility requirements. While not a guarantee of compliance, a VPAT can inform decision-making. Selecting platforms with straightforward navigation and low cognitive load helps learners focus on coursework rather than troubleshooting technology.
- **Use evaluation tools to guide selection**: The ISTE Teacher Ready Evaluation Tool provides criteria for usability, learning design, and inclusivity, supporting evidence-based decisions when selecting digital tools.

- **Share responsibility across teams**: Accessibility is most effective when both instructional and administrative staff address it during procurement, course design, and platform selection.
- **Leverage curated support resources**: OTAN's Accessibility Resources page includes guides, checklists, and video tutorials on making documents, slides, and websites more accessible.
- **Explore additional guidance and tools**: The National Center on Accessible Educational Materials (AEM) provides resources for acquiring or creating accessible materials, including assistive technology and customizable content formats.
- **Integrate accessibility from the start**: Proactively designing with accessibility in mind prevents barriers and reflects strong instructional practice, including clear organization, multiple ways of presenting content, and flexible participation options.

Program Tip

Accessibility often requires support beyond what individual educators can manage, since time, tools, and training for evaluating and remediating resources may be limited. Where possible, programs and consortia may allocate budget or staff time for centralized tasks such as reviewing content for accessibility, adding captions or transcripts, or reformatting documents so they work with screen readers. Regional consortia may also reduce access gaps by maintaining shared inventories or lending libraries of assistive technologies.

Universal Design for Learning

Universal Design for Learning (UDL) is a flexible, learner-centered framework for designing instruction that anticipates the varied ways learners engage with, perceive, and express ideas. While accessibility focuses on ensuring materials and technologies are usable by all learners, UDL goes further by embedding flexibility and inclusivity into every stage of instructional design. Instead of creating separate accommodations as barriers arise, UDL encourages educators to plan lessons so that all learners can access information, stay engaged, and demonstrate understanding through multiple pathways. The three core principles—engagement, representation, and action and expression—can be applied in adaptable, practical ways across instructional settings.

Multiple Means of Engagement (motivation and persistence):

Engagement describes how learners connect with, sustain, and direct their participation in learning. Educators can design for engagement by offering relevance, choice, and collaboration in ways that reflect learners' goals and experiences.

- Connect lessons to practical decisions such as comparing job postings, budgeting a paycheck, or finding community services.
- Offer participation options including small-group discussions, independent study, or self-paced digital lessons in a LMS.
- Use interactive tools such as polls, virtual whiteboards, or workplace simulations to keep learning active and responsive.

This also involves supporting learners' executive functions, which are the mental processes that help individuals set goals, plan strategies, monitor progress, and adjust as needed. Programs can support the development of these skills through explicit instruction and scaffolding, such as goal-setting activities, study schedules, or guided self-reflection.

Multiple Means of Representation (access to content):

Representation addresses how learners perceive, interpret, and make sense of information. Educators can design for representation by presenting concepts in multiple formats and allowing learners to adjust how they access and process content.

- Pair a short demonstration video with a written checklist or set of labeled images showing each step of a task.
- Add captions to videos and provide transcripts for audio content; these support not only learners who are deaf or hard of hearing but also those studying in noisy places, using mobile devices in public settings, or strengthening English or reading skills.
- Share digital text that can be adjusted, read aloud, or translated, and pair new vocabulary or concepts with representative icons or images.

Multiple Means of Action and Expression (showing learning):

Action and expression describe how learners organize, demonstrate, and communicate their understanding. Educators can design for this by offering flexible ways to show progress and by supporting planning, organization, and reflection throughout the learning process.

- Provide options for demonstrating learning, such as recording a short presentation, drafting an email to a supervisor, completing an online form, or creating a brief slide deck.
- Break complex projects, like applying for a job, into smaller steps with checklists and examples for each stage.
- Accept mobile-friendly, low-tech, or in-person options, such as photos of written work, short voice recordings, or paper-based submissions when digital access is limited.

By planning with UDL principles, educators acknowledge and respect the diversity that already exists in every classroom. A learner who uses captions, another who prefers group work, and another who submits a recorded response can all succeed in ways that fit their needs. Digital tools, when chosen thoughtfully, can support these options without adding unnecessary complexity. This approach also aligns with adult learning principles addressed

in Chapter 3 by recognizing learners' varied backgrounds, focusing on relevant skills, and supporting autonomy.

Instructor Tip

Design a "multi-format challenge" week. Take a standard assignment—like writing a reflection or summarizing a lesson—and let learners choose a new medium to express it (audio message, infographic, short video, or visual mind map). Free tools like Canva and Padlet can make this flexible and engaging while reinforcing digital skills.

Endnotes

1 https://www.congress.gov/117/plaws/publ58/PLAW-117publ58.pdf
2 https://eric.ed.gov/?id=EJ1381658
3 https://eric.ed.gov/?id=EJ1344724
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CHAPTER 3

Foundations of Adult Education and Digital Learning

Effective digital learning in adult education begins with a clear understanding of adult learners. This chapter reviews common adult learning theories and the characteristics of adult learners, then connects those theories to digital learning design and practice. It outlines research-based strategies for implementing digital learning and highlights how different staff roles can help create effective programs. The chapter also introduces professional standards relevant to digital contexts and explains how professional development (PD) and professional learning communities (PLCs) contribute to instructional quality and continuous program improvement.

Adult Learning Theories

Adult learning theories explain how adults approach learning in ways that differ from children. Malcolm Knowles described traditional pedagogy as a model in which the instructor holds primary responsibility for directing learning, organizing content, and determining pace and sequence. Adult learning, or andragogy, shifts this balance. It views learning as a shared process in which adults bring prior knowledge, life experience, and personal goals that

influence what and how they learn. Educators support this process by facilitating choice, collaboration, and practical application.[1]

The following theories are commonly used in adult education and illustrate how digital tools can support and extend these practices.

Andragogy

The word "andragogy" is credited to German educator Alexander Kapp (1833),[2] and continues to be used today to describe adult learners as autonomous and self-directed, with the educator serving as a facilitator rather than a lecturer. Key principles of andragogy include that adults:

- need to understand the why, what, and how of learning
- are autonomous and self-directed
- use prior experiences as mental models and resources for learning
- have a readiness to learn and seek life-related learning opportunities
- are contextual and problem-centered rather than theory-centered
- are motivated by internal goals and interests

In practice, this means instruction is most effective when it connects to practical tasks and allows learners to have some control over the process. Digital tools can support andragogical practice by offering choices in content, pacing, and location of learning.

Example: In a blended class, an instructor and learners use a shared Google Doc to identify personal learning goals at the start of a unit. Each learner lists topics or skills they want to improve, such as writing professional emails or conducting online research. The instructor then uses these responses to inform lesson priorities and share targeted resources in the same document, such as short videos, sample templates, or discussion links that learners can explore independently throughout the course.

Experiential Learning Model

Experiential learning is the process of developing understanding through direct experience and reflection. Kolb's Experiential Learning Model[3] describes this as a continuous cycle with four stages: concrete experience, reflective observation, abstract conceptualization, and active experimentation. In adult education, this approach highlights the value of authentic tasks and ongoing reflection, which digital tools can help facilitate.

- **Concrete Experience**: Learners engage directly in a real or simulated task, such as recording responses to a practice interview question or completing an online job application.
- **Reflective Observation**: Learners analyze their recordings to identify strengths and areas for improvement, using tools such as a digital journal, discussion board, or Padlet wall to record insights and share feedback.

- **Abstract Conceptualization**: Learners connect their observations to broader principles of effective communication by identifying what makes an interview response strong, such as aligning answers to job requirements or using professional tone and structure. These principles are then discussed as a class and summarized in a shared digital workspace for ongoing reference.
- **Active Experimentation**: Learners apply what they have learned by recording another interview response that incorporates these strategies and uploading it to the class platform for peer or instructor feedback.

By intentionally moving through these four stages and using digital tools to support engagement, educators can create learning that connects experience with understanding.

Example: In a healthcare class, learners use a medication-dosage simulation (concrete experience), then discuss strategies in a Zoom session (reflective observation). Next, they summarize dosage rules (abstract conceptualization) and apply them in a new quiz activity (active experimentation). This sequence gives multiple opportunities to apply skills and reflect on progress.

Self-Directed Learning

Self-directed learning (SDL) refers to the process in which learners take initiative to identify their learning needs, set goals, locate resources, and evaluate progress. Factors such as prior education, digital readiness, and personal confidence can influence learners' comfort with self-direction. Instructors can support SDL by gradually adjusting the level of guidance provided, ensuring a balance between autonomy and structure.

One model describes SDL as a progression through four stages,[4] each with corresponding educator roles and instructional strategies:

- **Stage 1 (Dependent)**: The educator provides structure and direction. Digital approaches may include step-by-step video lessons, interactive quizzes, or scheduled practice sessions.
- **Stage 2 (Interested)**: The educator acts as a guide and motivator. Learners may use digital checklists to track progress, respond to reflection prompts in a shared document, or explore a curated set of videos or readings.
- **Stage 3 (Involved)**: The educator facilitates learner-led exploration. Learners may collaborate in shared documents, contribute to discussion boards, or engage in project-based tasks using online research tools.
- **Stage 4 (Self-Directed)**: The educator serves as a consultant. Learners design and manage their own learning plans, track progress in a learning management system (LMS), and meet with instructors for feedback or troubleshooting as needed.

Effective SDL balances independence with accessible support. On-demand help (via email, text, or virtual office hours) and structured milestones or checkpoints ensure that learners have support when needed. Digital environments can make SDL practical by offering flexible pacing, choice of resources, and varied ways to demonstrate knowledge.

Example: In an adult basic education science class, a learner preparing for the GED researches topics to be tested and decides to focus on human body systems. Using a self-directed approach, the learner outlines a study plan schedule, selects video lessons from a curated playlist, and uses a quiz app to check understanding after each topic. Progress is tracked in a shared spreadsheet, and the learner requests instructor feedback during weekly virtual office hours. Over time, the learner expands into related topics such as nutrition and health careers.

Practice Engagement Theory (PET)

Practice Engagement Theory (PET) links skill development, particularly in literacy and numeracy, to regular, meaningful use in authentic contexts. Educators can apply this principle by designing learning activities that involve practicing target skills such as writing, math, communication, or problem solving in everyday settings and sharing those experiences in class.

Technology can make this practice more accessible. For example, learners might use a smartphone app to practice English conversation while commuting on a bus, apply numeracy skills by using a budgeting spreadsheet at home, or use a calendar app to schedule study time, which supports both time management and digital navigation.

Programs can also incorporate routines from the Digital Resilience in the American Workforce (DRAW) and its Playbook for Fostering Digital Resilience, which offer ready-to-implement activities aligned with PET. These routines integrate digital literacy into daily instruction, reinforcing the idea that skills develop through repeated, meaningful use.

Example: In a career navigation course, learners write and revise an actual job application letter for a position they are interested in pursuing. They begin by drafting independently, then exchange feedback with peers and revise their letters based on that input. Next, they meet with the instructor to review their work, make additional revisions, and finalize the letter for submission. This process gives learners repeated, purposeful practice with writing, editing, and using online tools in an authentic context, illustrating PET's principle that proficiency develops through meaningful use.

Heutagogy

Heutagogy, or self-determined learning, is a term first described in 2000 by Stewart Hase and Chris Kenyon to move past the separate disciplines of pedagogy and andragogy.[5] Heutagogy instead positions all learners as the primary decision makers in their education, with instructors providing guidance and support. It emphasizes autonomy, flexibility, and reflection, and recognizes that people of all ages bring goals, skills, and prior experiences that shape their learning process. Digital platforms can support heutagogical practice by giving learners the ability to design their own pathways while maintaining access to instructor input when needed.

Principles of heutagogy include:[6]

- **Learner-centered design**: Learning begins with the learner's goals and choices rather than a fixed curriculum. Learners identify what they want to study, how they will learn, and how they will demonstrate progress. For example, a learner preparing for a commercial driver's license might select online tutorials and practice quizzes while the instructor reviews the plan and monitors progress.
- **Capability development**: Learning extends beyond content knowledge to include skills such as collaboration, adaptability, and problem solving. A class project might use Google Docs and Canva to create a community guide, requiring learners to research, draft, revise, and integrate feedback from peers.
- **Self-reflection and metacognition**: Learners actively monitor and evaluate their own learning to build self-awareness and independence. Digital journals or shared documents can help them track progress and reflect on strategies, with instructors providing prompts and feedback to guide deeper reflection.
- **Nonlinear learning**: Learning paths are flexible and responsive to learner needs rather than strictly sequential. Learners may move between topics or revisit concepts based on immediate goals, using tutorials, apps, or peer feedback platforms. Instructors can add structure when needed to maintain focus and momentum.

Example: In an IET program combining English language instruction and healthcare training, learners identify specific communication skills they want to strengthen for workplace interactions, such as giving patient updates or explaining procedures. Each learner selects from online role-play modules, vocabulary tools, or recorded dialogues to practice those skills. They document progress in a shared reflection log they manage, noting which tools they used, what went well, and what they want to improve next. Instructors can create simple templates in Google Sheets, Google Docs, or Padlet to help learners organize entries and track growth over time. During check-ins, the instructor reviews selected entries, offers targeted feedback, and helps learners adjust goals as new workplace needs arise. This ongoing cycle demonstrates heutagogy's focus on autonomy, reflection, and flexible, self-directed learning.

Transformative Learning

Transformative learning is a concept inspired by Jack Mezirow's work with adults returning to higher education and first described in 1978.[7] The term refers to a process of perspective change that occurs when adults reconsider their worldview through reflection and dialogue. This process may include an experience that challenges assumptions, reflection on that experience, discussion with peers, and applying new approaches to thinking or problem-solving.[8]

Digital tools can support this process by providing access to varied perspectives and spaces for dialogue. For example, in a civics class, learners might view short videos presenting different cultural perspectives on a social issue. They could then participate in an online forum, respond to guided reflection prompts in a journal, and apply new insights in class projects or community activities.

Transformative learning, like other theories, involves designing intentional opportunities for self-reflection, experiential activities that prompt critical thinking, and a learning environment

based on mutual respect. Online platforms, collaborative tools, and digital journals can expand these opportunities and make them accessible to a broader range of learners.

Blending Instructional Theories

Adult education can draw on multiple instructional theories that are applied in combination, depending on learner needs and goals. In practice, learning theories function as points along a spectrum rather than as fixed categories. Educators can draw from each, providing structure where needed and increasing learner independence over time. A central goal is to support adult learners in becoming more self-directed, recognizing that autonomy is a skill developed through ongoing practice. Digital platforms can support this flexibility by offering guided learning pathways for those who want them, while also providing open resources and extension activities for those who are ready to explore.

Research-Based Best Practices in Digital Learning

This section summarizes findings from research on digital learning in adult education and connects them to practical applications. Recent studies, including those conducted during the expansion of online learning in 2020, provide insights into effective practices for digital environments.

Effectiveness of Different Delivery Models

Research consistently shows that instructional quality is more important than the mode of delivery. Multiple studies have found no significant difference in learner outcomes between face-to-face and online instruction when both are carefully designed and well supported.[9,10] Some studies report modest improvements for well-planned online or hybrid programs compared to traditional classroom models.[11,12]

The critical factor is not whether instruction is in-person, online, or hybrid, but how it is designed and delivered.[13] Digital learning can be as effective as classroom learning when supported by strong curriculum, well-prepared instructors, and appropriate learner support systems. Conversely, weak design leads to poor outcomes regardless of the format. For example, an online course that lacks clear structure and interactivity is unlikely to produce positive results, just as a poorly organized in-person class will be ineffective. By contrast, an engaging, interactive online course can provide learning experiences and outcomes comparable to those of a high-quality in-person class.

Benefits of Digital Learning for Adult Learners

Digital learning offers several benefits for adult learners, including:[14,15,16,17]

- **Convenience and flexibility**, helping balance work, family, transportation, childcare, and other responsibilities
- **Development of academic and digital literacy skills**, as well as greater confidence through structured practice and use of diverse tools

- **Support for independent learning**, allowing learners to review material at their own pace and take responsibility for progress
- **Continuity of learning**, by maintaining access during disruptions such as schedule changes or life events
- **Expanded access to content and support**, reaching beyond the classroom setting

The effectiveness of any delivery model or digital tool depends on how well it is integrated into instruction, the amount of time learners engage with it, and the support they receive from educators.[18]

Digital tools also provide benefits for educators, including:

- **Opportunities for differentiated instruction and more personalized learning pathways**, such as assigning leveled tasks, adapting content based on assessment data, or providing multiple formats for practice and review
- **Efficient progress monitoring**, with digital dashboards and performance data to track learner outcomes
- **Timely, constructive feedback**, delivered through comments, recordings, and quiz analytics[19,20,21]

Designing Effective Digital Learning Experiences

When integrating technology, educators should remain focused on learner needs and program goals. The purpose of digital tools is not their use alone, but their contribution to meaningful learning.[22] Effective digital learning design should follow the typical backward design approach to lesson and curriculum planning: begin with the skills or knowledge learners need to develop, then select tools and strategies that make that learning accessible, relevant, and engaging.

The following strategies can support the design of digital experiences that are practical, inclusive, and aligned with adult learning principles:

Facilitate Flexible Learning Opportunities: [23,24,25,26,27]

Flexibility helps adult learners balance education with work, family, and other responsibilities. This can include:

- **Multiple formats**: Provide materials in text, video, and audio, and allow learners to choose tasks or topics that match their goals.
- **Flexible pacing**: Offer rolling enrollment or self-paced modules so learners can take more time when needed.
- **Participation options**: Make it possible to attend in-person, online, or hybrid, so learners can choose what best fits their circumstances.
- **Core and extension activities**: Identify required “core” activities for all, with optional “extension” activities for those who want additional challenge or exploration.

- **Mobile-friendly and low-bandwidth access**: Design materials for phone use, provide downloadable files, or create offline resources so learning can continue regardless of internet connectivity.

Use Authentic, Real-World Tasks

Designing tasks that reflect authentic applications of digital skills helps learners see relevance in meaningful contexts.[28,29,30]

This can include the use of authentic forms, applications, or scenarios that learners are likely to encounter outside of class. Examples include:

- Comparing real credit card offers online instead of reading about them in a textbook
- Writing a professional email
- Filling out an online job application
- Creating a slideshow presentation
- Using a map app to plan travel

These activities mirror the types of tasks adults often complete at work or in their communities, making digital learning practical and transferable. Educators seeking structured models can consult the DRAW Playbook, which provides examples of embedding digital literacy into content-area lessons. These resources demonstrate how a single activity can integrate multiple skills, such as reading, technology use, and task navigation, in a contextualized way.

Establish Clear and Accessible Communication Channels

Clear communication is essential in any learning environment, particularly in online or hybrid formats. Learners need to know how to reach instructors for academic or technical support, how to connect with peers, and how to stay informed about program requirements.

Contact options should be straightforward and easy to use. Class messaging apps (such as Remind, WhatsApp, or Signal), email, and scheduled virtual office hours all provide flexible ways for learners to connect. When instructors normalize asking questions and checking in, learners feel comfortable seeking help when needed.

Shared class message threads (e.g., Slack, Discord) can also encourage peer-to-peer support, where learners troubleshoot technical issues, exchange tips, and celebrate successes. These communication practices can contribute to building confidence and a sense of community, while reducing the likelihood of learners feeling isolated in digital environments. They can also create additional opportunities for persistence, skill development, and the application of digital practices in both work and daily life.

Instructor Tip

Meet learners where they are: survey groups to see what messaging platforms they use or are familiar with and set up peer channels within popular applications.

Provide Timely, Meaningful Feedback[31,32]

Regular feedback helps learners stay engaged, track progress, and continue building skills. Digital tools make personalized responses more accessible. Voice notes, short video messages, or in-line comments can clarify next steps and support improvement. Platforms such as Google Docs, Canvas SpeedGrader, or Padlet streamline this process. Structured peer feedback can also reinforce learning by encouraging analysis and collaboration through shared documents or video responses.

Encourage Self-Reflection and Metacognition

Developing the ability to reflect on one's learning process is important for adults, especially in digital environments where self-regulation is essential.[33] Structured opportunities for reflection can also serve as formative assessment, helping educators and learners identify progress and areas for further support.[34] Examples include periodic journal prompts (such as "What challenge did you face this week, and how did you address it?") or short surveys that ask learners to self-assess their understanding of a topic.

Instructor Tip

At the end of each module, ask learners to record a short voice note or video responding to two prompts: What did I learn this week? and Where did I use it outside class? Record a brief summary highlighting which digital activities or tools appeared most effective for learners that week. Post both types of reflections in a private class thread or LMS folder for ongoing review. This practice models reflective thinking, reinforces digital communication skills, and provides timely insight into what supports learner engagement and progress.

To make reflection accessible, educators can provide structures such as templates or guiding questions. Digital portfolios or journals are useful tools for this process. Learners can collect evidence of their work (such as screenshots, written assignments, or quiz results) and write short reflections on their progress. Over time, portfolios can highlight growth and help learners evaluate both strengths and areas for improvement. For example, an ESL learner might record themselves speaking at the start and end of a semester to compare progress in

fluency. Technology makes these practices feasible through tools like blogs, learning management systems, or private online groups.

In implementing these strategies, intentional planning is essential. Technology should serve specific learning goals rather than be used without purpose. For example, if the goal is to strengthen pronunciation, a mobile pronunciation app or a video recording tool such as Padlet can provide structured practice and feedback. By prioritizing learning design and selecting technology to support it, programs can ensure that digital learning remains purposeful and manageable.

Standards for Adult Education Professionals

Professional standards provide guidance for instructors and staff, including in digital learning contexts. While Chapter 2 of this Guide focuses on learner-facing standards, this section addresses educator-facing standards that support instruction in digital and hybrid environments.

No single framework is required or universally preferred. Programs and educators can select the standards that best align with their instructional goals, local context, and professional development needs.

The **BRIDGES Toolkit** from World Education includes "I Can" statements related to digital competencies for both learners and instructors. Like all standards, they can be used to clarify expectations, guide instructional planning, and monitor progress in digital learning environments.

LINCS Adult Education Teacher Competencies

The LINCS Adult Education Teacher Competencies are organized into four domains with 17 specific competencies. They address areas such as instructional planning, learner-centered practice, digital integration, and continuous improvement.The LINCS framework and accompanying self-assessment help educators identify strengths, set professional learning goals, and align practice with evidence-based teaching standards.

ISTE Standards for Educators

The International Society for Technology in Education developed the ISTE Educator Standards to describe effective practice in technology-rich environments. The standards encourage educators to facilitate learning with technology, design authentic learner-driven activities, model digital citizenship, and strengthen their own digital skills. These standards support meaningful and ethical integration of technology into teaching practice.

National Standards for Quality Online Teaching (NSQOT)

The National Standards for Quality Online Teaching, developed by Quality Matters and the Virtual Learning Leadership Alliance, provide quality indicators for fully online courses. The standards address course design, instructional delivery, assessment, and learner support.

Although originally developed for K–12 and higher education, many principles apply to adult education. For instance, NSQOT emphasizes clear course navigation, timely instructor feedback, and the accommodation of learner needs. These practices align with the requirements of adult learners, including those who are developing digital literacy. Programs can use NSQOT as a framework or checklist to evaluate and strengthen the quality of their online classes.

Roles in Adult Education

Adult education programs include instructional staff, support staff, and administrators who each contribute to effective digital learning. This team approach reflects the collaborative structures emphasized in WIOA's Integrated Education and Training model and CAEP's consortium framework, in which instructional and support functions are designed to work together.

Collaboration across program roles depends on the distinct expertise each group brings to digital learning. The following descriptions outline how these roles interact to create an integrated system that supports both educators and learners in digital environments.

- **Classroom Instructors** design lessons, deliver instruction, and adapt to the needs of learners in areas such as ESL, ABE/ASE, and CTE. In digital environments, instructors also act as content curators and facilitators, selecting online materials, leading online classes, and moderating forums.[35]
- **Instructional Support Staff** extend the reach of instructors. Digital navigators help learners access technology, connect to the internet, and use online platforms. Instructional aides and tutors, including volunteers in some programs, provide assistance by answering technical questions, guiding small group activities, or troubleshooting digital tools. These roles help ensure that learners stay engaged in digital settings.
- **Student Services Staff** address needs beyond the classroom. Counselors and transition specialists support learners in setting education and career goals, planning next steps, and connecting to resources such as job boards or virtual college tours. Technical support staff (or in smaller programs, tech-savvy instructors or partners) assist when digital barriers arise. These services reduce obstacles that could limit participation in online learning.
- **Administrative Staff**, including directors, coordinators, and clerical staff, manage program operations. They ensure compliance with WIOA requirements, maintain digital records, schedule classes and virtual sessions, and often assist learners with tasks such as completing online intake forms or setting up email accounts.
- **Other Roles** also contribute to program success. Data and accountability specialists manage reporting systems, testing staff organize online and remote assessments, and volunteers or community partners such as libraries and local job centers often provide additional opportunities for digital skills practice. Workforce agencies and community organizations extend this support by helping learners connect digital skills to

employment pathways. Together, these roles create the broader ecosystem that sustains digital learning.

A learner enrolling in a GED program may interact with multiple staff members throughout their journey. Office staff assist with registration and setting up digital accounts. A counselor helps the learner map out education and career goals. The instructor provides classroom instruction, supported by an aide who offers tutoring. A digital navigator helps secure reliable internet access. A transition specialist guides the learner in applying to community college. Volunteers facilitate study groups that provide additional practice. This example describes a coordinated approach that enables learners to participate fully and make steady progress toward their goals.

Program administrators can strengthen this model by reviewing whether all of these functions are clearly assigned or supported through partnerships, and by planning training or hiring to address any gaps.

Program Tip

Host an annual planning workshop that brings together instructors, digital navigators, student services staff, and administrators to map a typical learner's digital pathway from first contact through transition to work or college. Identify every digital touchpoint (intake form, LMS login, advising email, portfolio submission) and note where confusion or duplication occurs. Use the map to refine onboarding and communication processes so learners experience a clear and connected digital journey.

VOICES FROM THE FIELD

Dr. Matt Rhoads

EdTech Trainer and Integrationist, *Education to Career Network of North San Diego County*

What motivated your consortium to build shared digital systems, and what did you put in place to strengthen instruction and access across programs?

From 2021 to 2025, the Education to Career Network of North San Diego County (ETCN) turned policy into practice by building shared digital infrastructure, embedding digital literacy within instruction, and aligning professional learning to classroom goals. Together, these moves strengthened persistence, measurable

Voices from the Field (continued)

skill gains, and transitions while aligning with WIOA Title II and California's Digital Learning Guidance.

- **A common LMS with simpler logins**. Canvas was adopted consortium wide and paired with single sign on so learners and staff used one login for email, Canvas, and Google Workspace. This improved navigation, created 24/7 access to materials, and smoothed transitions to the community college partner. Shared course shells and consistent workflows also let ETCN's Tech Trainer run analytics on engagement and assignment completion.
- **Digital literacy inside ESL**. ESL teams followed the DLG recommendation to integrate digital skills into subject instruction. Using Northstar aligned routines such as email, web search, and document creation, instructors built these practices directly into Canvas modules. Each week included one task, one practice quiz, and one "apply it" prompt tied to language objectives.
- **Coaching and professional learning as the driver**. A shared EdTech hub, PLC style workshops, and coaching cycles kept tools focused on teaching goals. Coaches co-planned, modeled, and documented quick wins to reinforce successful practices.

How have these systems and instructional changes shaped classroom practice and student engagement?

Canvas became the foundation for blended learning. Instructors posted short, mobile friendly modules, used discussions and quick quizzes for feedback, and created re-entry points for learners returning after absences. Consistent design, checklists, and feedback tools reduced staff time spent on re-onboarding and improved student persistence.

What changes have you seen for learners and staff, and what advice would you share with others starting similar work?

Between 2021 and 2025, ETCN saw higher persistence, measurable skill gains, especially in CTE, and more transitions to postsecondary programs. Staff reported fewer access barriers, faster feedback cycles, and more time for targeted language support. The improvement came not from adding more technology, but from clear routines, simple access, and feedback rich instruction that adults can manage on a phone after work.

Voices from the Field (continued)

Quick Start Tips

- **Standardize first**. Choose one LMS, one SSO, and course shell templates.
- **Embed one digital routine per week**. Keep it short, authentic, and tied to language or CTE objectives.
- **Coach to an outcome**. Anchor coaching cycles to a concrete metric, such as on time submissions or re enrollments after absence.

As far as next steps, ETCN plans to expand digital badging linked to TE outcomes, deepen Northstar integration across ESL levels, and use Canvas analytics to personalize learning paths. For other WIOA funded programs, these strategies demonstrate how aligning infrastructure, instruction, and coaching can strengthen measurable skill gains, persistence, and transition indicators. When systems and instruction are built together, digital learning becomes both compliant with policy and genuinely supportive of adult learners' progress.

Digital Learning and Professional Development

Implementing digital learning models requires that educators and staff are continuously learning as well. Both instructors and support staff can use professional development (PD) to build digital competencies and to keep up with evolving best practices. Effective PD for educators mirrors the approaches used with adult learners: it is ongoing, collaborative, hands-on, and relevant to immediate needs.

As one study noted, adult educators lacked experience in both distance teaching methods and technology integration even before the pandemic accelerated the shift online.[36] The sudden move to remote learning in 2020 further highlighted gaps in preparedness, as many instructors lacked confidence in implementing online instruction and had received minimal training in that area. With more experience and urgency, the field has started to identify what effective professional development looks like for adult educators.

Characteristics of Effective PD

Research identifies several features of professional development (PD) that contribute to lasting improvements in teaching practice:[37]

- **Sustained and Long-Term**: Short, one-time workshops rarely result in lasting change. PD experiences that extend over time, such as multi-session series or year-long cohorts, allow educators to practice strategies, receive feedback, and refine skills. Studies

suggest that meaningful improvement often requires more than 20 hours of focused engagement on a topic.

- **Collaborative**: Educators benefit from learning with and from peers. Professional learning communities (PLCs), team lesson planning, and structured peer observation support reflection and problem-solving. Observation may involve reviewing a colleague's lesson, analyzing a recorded class session, or exchanging feedback. These activities provide opportunities to share strategies and build professional networks grounded in classroom practice.
- **Active and Applied**: Effective PD engages participants in application, not just discussion. Activities may include practicing with a digital tool, analyzing student work, role-playing instructional strategies, or developing lessons. PD is most effective when directly connected to classroom practice.
- **Relevant and Personalized**: PD should address program priorities, subject areas, and individual educator goals. Training tailored to instructional contexts (for example, "Using spreadsheets to track student progress in ASE math") is more useful than general software demonstrations. Personalized approaches can include goal-setting, self-paced modules, or coaching that builds on an educator's existing experience.
- **Models Best Practices**: High-quality PD demonstrates the methods it promotes. For example, a session on engagement might incorporate polling tools, breakout discussions, or collaborative activities so participants experience the strategies directly.
- **Supported by Coaching and Peer Learning**: Ongoing support helps educators apply new learning in realistic settings. In programs with instructional coaches or lead teachers, brief coaching cycles can focus on a specific goal, such as improving feedback in an online class. The coach and instructor meet briefly to plan, observe, and reflect on one lesson, documenting what worked and what to adjust next time. In smaller programs without dedicated coaches, peer partners can use the same approach by observing one another or reviewing short class recordings together.
- **Designed for Engagement and Connection**: Online PD should foster interaction. Features such as synchronous sessions, small group discussions, or video-based feedback can help participants feel connected to facilitators and peers.
- **Grounded in Competency-based Learning**: PD should allow time and support for educators to demonstrate proficiency with new strategies or tools. This may involve revisiting key ideas, applying them in stages, and creating artifacts or portfolios that document growth and can be used as ongoing instructional resources.
- **Enabled by Quality Technology**: Online or blended PD should use platforms that are accessible, reliable, and easy to navigate. Effective platforms minimize technical barriers, provide support, and allow both synchronous and asynchronous participation.

In California, many of these principles are evident in current initiatives. OTAN provides ongoing training and supports communities of practice. The **Digital Leadership Academy (DLAC)** is a multi-month, cohort-based program where teams of educators implement digital change projects at their agencies. DLAC participants collaborate across schools, share strategies,

and receive coaching, reflecting the sustained, collaborative, and applied PD model described above. These initiatives promote the exchange of practical strategies and foster professional communities that support instructional improvement.

Onboarding New Administrators

Professional development is important not only for instructors but also for administrators, particularly those who are new to adult education or to digital learning. Programs can strengthen leadership capacity by creating an orientation module for new administrators that introduces the principles of the Digital Learning Guidance (DLG) and connects them with ongoing professional development and instructional quality initiatives.

For example, an online orientation for a new administrator could present key concepts from this chapter, such as adult learning theory, digital learning design, and the roles of support staff, along with an overview of the program's current digital tools, data systems, and policies based on funding sources. The orientation might also include opportunities to shadow experienced administrators to see how these practices are applied in context.

After completing the orientation, new administrators can continue building expertise through mentorship with an experienced program director and by joining professional networks such as state leadership circles or national communities. Building knowledge in digital learning helps administrators make informed decisions about resource allocation, scheduling, and program policy. Ongoing orientation and mentorship can also ensure that digital learning initiatives are consistently supported over time.

Administrator Tip

Each term, administrators can "shadow the system" by logging in as a learner to experience the program's digital environment from enrollment through course completion. Completing basic tasks such as registering, submitting an assignment, or accessing feedback reveals how digital tools and processes function from the learner's perspective. Noting points of confusion or friction helps identify where instructions, onboarding materials, or platform design can be improved. This practice supports data-informed decisions about technology use, scheduling, and professional development priorities.

Professional Learning Communities (PLCs)

Professional Learning Communities (PLCs), or communities of practice, provide a structure for sustained professional growth. In a PLC, instructors, support staff, and administrators meet regularly to strengthen practice and improve learner outcomes through collaborative inquiry and reflection. For example, a PLC composed of ESL teachers might meet monthly to review persistence data and test new engagement strategies. Over time, PLCs create a structured

process for piloting innovations, evaluating results, and refining approaches in an ongoing cycle.

A typical PLC inquiry cycle may include the following steps:

1. **Identify a challenge**. For example, beginning-level ESL learners not progressing online.
2. **Research or brainstorm strategies** to address the challenge. For example, adding visual supports and native-language resources.
3. **Apply the strategy** in instruction for a set period of time.
4. **Share evidence**, review outcomes, and reflect as a group.
5. **Repeat the cycle**, making adjustments based on what was learned.

PLCs encourage continuous improvement through reflection and data use. Members hold one another accountable, share results, and build collective expertise by analyzing successes and challenges together.

In the context of digital learning, a PLC might explore questions such as, "How can we increase learner-to-learner interaction in online classes?" or "Which resources best support adults with emerging literacy skills?" Through experimentation and reflection, the group develops strategies that can be adopted program-wide.

Programs interested in launching or strengthening PLCs can use the **Community of Practice Toolkit** from ISTE's SkillRise, which provides steps for planning, launching, and managing professional communities that support ongoing collaboration.

VOICES FROM THE FIELD

Dr. Merari Weber

Professor/Coordinator ESL & PD, *Santa Ana College SCE*

What role have communities of practice or collaborative models played in your professional development efforts, and what impact have you seen on teaching and learning?

Professional Learning Communities (PLCs) are central to our vision of Professional Learning. Research consistently demonstrates that sustained collaboration, rather than isolated workshops, is the most effective way to introduce, practice, discuss, reflect upon, and ultimately integrate new learning. Recent Gallup data reinforces this point, underscoring the importance of moving away from "one-and-done" sessions and toward ongoing, community-based growth.

Voices from the Field (continued)

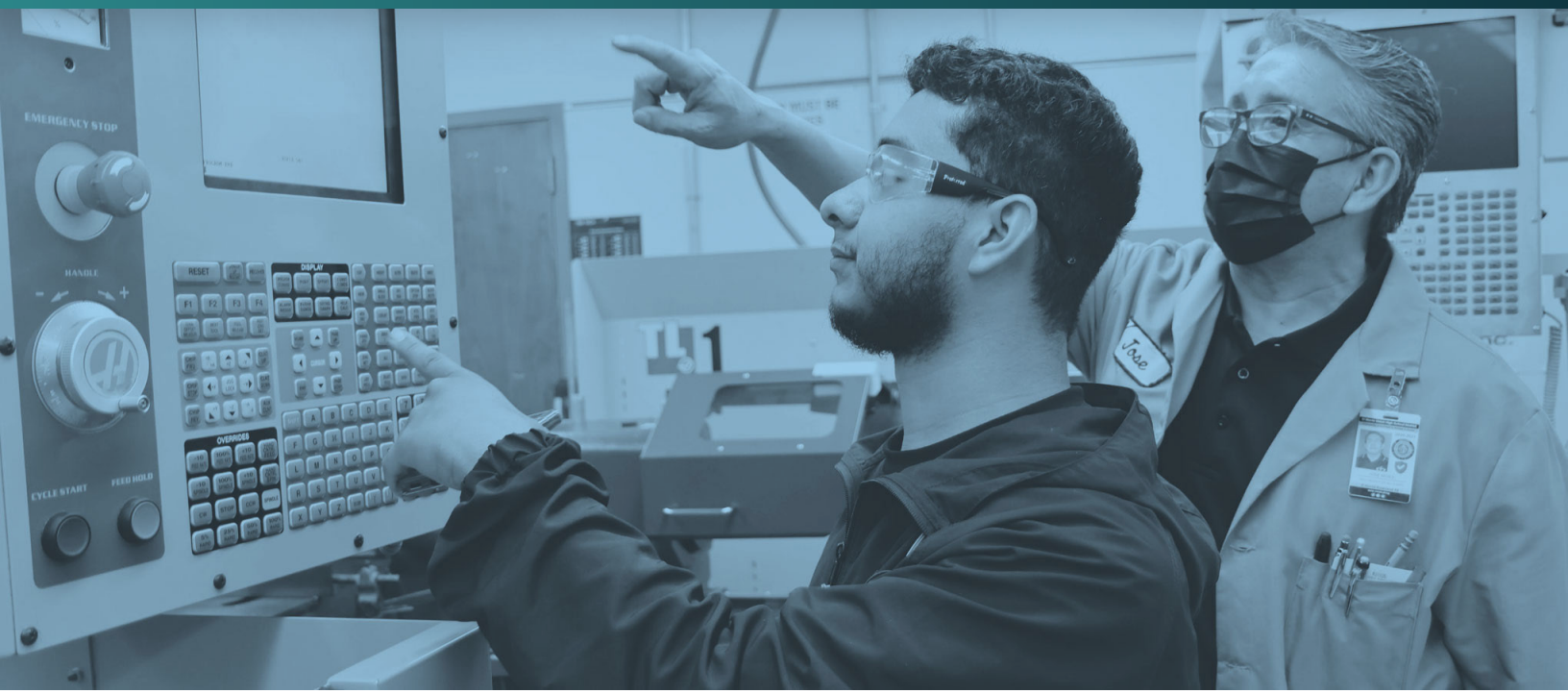
What faculty request most is time; time to engage with colleagues who work with similar student populations and face comparable challenges. PLCs provide this dedicated space, allowing educators to collaborate, conduct action research, and develop strategies that directly support the students we serve. For this reason, I have prioritized PLCs as the primary structure for departmental leadership in faculty learning.

Our progress is evident: we have established PLCs focused on integrating AI into practice, created level-specific PLCs within departments, and launched initiatives such as the Distance Education Refresh series. These intentional communities not only foster professional growth but also cultivate shared responsibility for student success.

State and National Resources for Professional Development

In California, OTAN provides ongoing training and facilitates professional learning communities through webinars, online courses, and workshops listed on the OTAN Professional Development Calendar. The California Adult Literacy Professional Development Project (CALPRO) offers workshops on instructional strategies. Nationally, COABE hosts webinars on a wide range of topics. The IDEAL Consortium, led by World Education, supports states and programs with professional development, technical assistance, and tools for designing distance, blended, and HyFlex options. Additional resources continue to emerge, such as the CREATE Adult Skills Network, which shares research on technology in adult learning, including studies on learning with mobile apps and virtual reality.

Endnotes



CHAPTER 4

Selecting Digital Learning Tools

Digital learning tools can support instruction in in-person, hybrid, and online environments (further discussed in Chapter 5) and can connect classroom learning to practical goals in education, employment, and daily life.

This chapter explores approaches for selecting and applying tools that support communication, collaboration, creativity, and critical thinking, including AI-powered, collaborative, and career navigation platforms. The chapter also examines learning management systems, digital onboarding, and the use of Open Educational Resources (OER) to create connected, adaptable learning environments.

Designing Meaningful Digital Learning Experiences

Effective instruction in digital learning follows the same core principles as instruction in any setting. It begins with clearly defined objectives: what learners should know and be able to do by the end of a lesson or unit. Once goals are established, the next step is identifying how learning will be assessed. Finally, digital tools and activities can be selected to support those

outcomes and reinforce the intended skills or knowledge. Without clear objectives, it becomes difficult to determine which digital approaches or technologies will best support learning.

Lesson objectives also guide decisions about how learning will take place. Digital instruction can combine in-person teaching, live online sessions, and asynchronous activities to meet diverse learner needs. Each modality offers different opportunities to engage learners, present content, monitor progress, and provide feedback. The key is integrating these modalities in ways that align with the goals of the lesson.

The following frameworks offer practical approaches for aligning instructional decisions with technology use and connecting learning across formats.

The **Triple E Framework**, developed by Dr. Liz Kolb, is designed to help educators evaluate how well a technology tool supports learning goals. It focuses on three dimensions:

- **Engagement**: Does the tool focus learner attention and invite active thinking, problem-solving, or collaboration, rather than simple clicking or watching?
- **Enhancement**: Does it deepen understanding by providing support, feedback, or personalization that go beyond what traditional methods can offer?
- **Extension**: Does it connect learning to authentic contexts or create opportunities for continued practice and application outside of class?

The Triple E Framework emphasizes the ways in which technology can support learning rather than whether the tool is new or appealing on its own.

Example: Learners draft a workplace email using Google Docs. The platform supports engagement through real-time collaboration and shared editing (Engagement). Commenting and translation tools enhance learning by allowing instructors and peers to suggest revisions that improve clarity and professional tone (Enhancement). The activity extends learning by connecting classroom writing to authentic workplace tasks, such as emailing a supervisor about a schedule change or following up with a customer or client (Extension).

Similarly, the **SAMR model**, developed by Dr. Ruben Puentedura, describes four levels of technology use, from simple substitution to full redesign of learning tasks. It helps educators reflect on whether technology is simply replacing traditional materials or meaningfully changing how learners engage with content, demonstrate understanding, and connect learning to real-world contexts.

- **Substitution**: Technology replaces a traditional tool with minimal change to the task design. For example, learners read a primary source document in a digital format instead of on paper. This increases access and flexibility for learners using different devices but keeps the learning process itself largely the same.
- **Augmentation**: Technology adds small but useful improvements that support understanding. For example, learners view a digital version of the document with hyperlinks to vocabulary definitions, audio read-aloud options, or instructor comments. These features

help learners build comprehension, review content independently, and reinforce reading skills.

- **Modification**: Technology enables a redesigned learning task. For example, learners annotate the document collaboratively in Google Docs, comparing interpretations and citing evidence in comments. This interaction promotes reasoning, discussion, and peer learning, helping learners deepen their analysis through shared perspectives.
- **Redefinition**: Technology allows new types of learning activities that extend beyond the classroom. For example, learners create a short multimedia presentation that connects the historical document to a current civic issue and share it with peers or a community audience. This extends analysis into authentic communication, integrating digital literacy, critical thinking, and civic engagement.

The **TPACK framework** can be used to plan, assess, and reflect on how well instruction integrates three areas of knowledge:[1]

- **Content knowledge**: understanding the subject matter. In a certified nursing assistant (CNA) course, this includes medical terminology, patient care procedures, and workplace safety standards.
- **Pedagogical knowledge**: applying instructional strategies that help learners master and apply that content. The instructor uses demonstrations, role-play, and feedback to connect medical concepts to real patient interactions.
- **Technological knowledge**: knowing how and when to use digital tools to strengthen both content and pedagogy. Virtual demonstrations or 3D anatomy tools, for example, help learners visualize how procedures relate to body systems before practicing them in person.

When these three areas work together, technology directly supports instructional goals rather than functioning as an add-on, helping learners connect theoretical knowledge to the clinical skills they need on the job.

Connecting Frameworks to Instructional Design

These frameworks can support adult educators in evaluating and improving instructional design. For instance, when planning a blended lesson, an instructor might use the SAMR model to redesign a worksheet into a collaborative digital project (Modification), or apply the Triple E Framework to select a tool that better supports learner engagement and sustained practice.

Research shows that educators benefit from structured approaches to technology integration. Frameworks provide guidance that moves beyond ad hoc tool selection and helps build capacity to design instruction where digital activities are directly tied to learning goals.[2] This is particularly important in adult education programs, where aligning digital activities with career-related skills such as résumé writing, job search strategies, or collaborative problem-solving supports both academic progress and workforce preparation.

The essential principle is intentionality. Technology should be chosen because it helps learners achieve defined goals, not simply because it is engaging or available.

Flexible Digital Onboarding Strategies

Before selecting specific tools, programs can put structures in place that help learners build confidence with digital platforms and handle technical issues as they arise.

Digital onboarding is the process of introducing learners to the platforms and digital skills they will use in their coursework. Adult learners bring varied levels of experience: some use digital tools regularly in life or at work, while others may be using an LMS, email, or a desktop computer for the first time.

Though most adult learners today have familiarity with smartphones, this does not always transfer to confidence with laptop or desktop computers. Tasks such as using a mouse, opening files, switching tabs, or resizing windows often require guided practice. Providing structured time to build these skills supports participation in LMS-based, blended, or online learning.

Onboarding is more effective when spread over time rather than limited to a single session. Approaches that introduce skills gradually and offer repeated opportunities for practice help learners build confidence in context. Examples of onboarding strategies include:

- **Pre-Class Orientation**: Give learners access to key technologies before a course begins. Options include drop-in labs, online walk-throughs, or a short login task to resolve access issues early.
- **Week 1 Onboarding**: Dedicate time in the first week for learners to practice essential tasks such as posting in a discussion board or accessing materials.
- **Just-in-Time Tutorials**: Share short guides or videos for common digital tasks in a central location such as the LMS or a shared folder. Grouping videos by topic (e.g., in a YouTube playlist) allows learners to revisit them when needed.
- **Modular Digital Skills Lessons**: Provide short, topic-specific lessons at relevant points in the course so skills are built in context.
- **Peer Support Models**: Encourage systems where more experienced learners assist others during technology use. This reduces instructor workload and builds community.
- **App-Based Onboarding**: Deliver orientation content through mobile-friendly tools that align with how many learners already use smartphones.
- **Scheduled Tech Help Hours**: Offer regular times, in person or online, for learners to ask technology-related questions outside class.
- **Reusable Centralized Materials**: Create shared onboarding resources (e.g., Google Sites, LMS module, or tutorial folder) that can be reused and updated across classes, especially in programs with continuous enrollment.

- **Embedded Onboarding**: Integrate technology tasks into instruction. For example, submitting an assignment by email or using a discussion board for research practice develops digital skills alongside academic content.
- **Repetition and Practice**: Provide spaced opportunities to use key tools, with increasing complexity over time.

Programs can develop a centralized onboarding hub, such as an LMS template or shared Google Site, that instructors adapt to their courses. This promotes consistency, saves time, and gives learners a single access point for key tools and guidance.

Program Tip: Plain Language in Civic and Workforce Systems

Adult learners often encounter digital forms and applications written in technical or legal language. The U.S. Plain Writing Act of 2010 requires federal agencies to communicate in ways the public can easily understand. Programs can apply the same principle in their own materials to reduce barriers for learners navigating digital systems.

Plain language practices include:

- Using short, clear sentences and everyday words.
- Organizing instructions step by step with headings or bullet points.
- Replacing jargon or acronyms with simple explanations.

Educators experimenting with AI can adapt existing materials into plain language. For example: “Rewrite the following instructions to align with the Plain Writing Act.”

Applying plain language can make civic and workforce systems more accessible and model inclusive digital citizenship by ensuring information is understandable and usable for everyone.

Troubleshooting Strategies

Once learners are introduced to core tools, instructors can reinforce digital skills by modeling resilience when issues arise. Introducing a new platform can create challenges for both instructors and learners. When instructors troubleshoot visibly and calmly, it demonstrates persistence and shows that seeking help and problem-solving are part of the learning process. Narrating a brief think-aloud while resolving an issue allows learners to see the process, not just the outcome.

Common troubleshooting strategies include:

- **Quick triage**: Confirm account access and permissions, refresh the page, try another browser, open an incognito window, clear cache, switch devices, check internet connectivity, or restart if needed.
- **Look up answers**: Use a targeted web search, the vendor's knowledge base or help center, release notes, or the product status page for outages.
- **Learn from peers**: Review short tutorial videos, a program playlist of one- to three-minute clips, or a shared staff chat where common fixes are posted.
- **Use a sandbox**: Try potential fixes in a sample course or demo student account before making changes in the active class site or shared board. This helps confirm the solution works without disrupting learner activities or data.
- **Seek support**: Submit a help ticket with a clear description, screenshots, and steps to reproduce; involve program IT if applicable.
- **Capture learning**: Add the solution to a shared FAQ, create a one-page tip-sheet with screenshots, and link it in the LMS for future classes.
- **Keep instruction moving**: Provide an alternate path for the activity (printable prompt, different tool, or paired work) while the issue is addressed.
- **Set class norms**: Establish and highlight patience during technology issues, shared responsibility for problem-solving, and rotating screen share so different learners practice navigation.

Modeling and celebrating troubleshooting as part of instruction helps learners build digital resilience and apply problem-solving strategies independently when they encounter new tools or unexpected issues.

Evaluating Digital Content, Resources, and Tools

The rapid development of new apps, websites, and instructional tools requires adult educators to make continuous careful decisions about which resources to incorporate. A structured, evaluative approach helps ensure that digital tools are purposeful, accessible, and aligned with instructional goals.

The criteria in this section help educators review specific tools to decide whether they are useful, usable, and accessible for their learners.

Pedagogical usability focuses on how well a tool supports the learning process. Key criteria includes[3]

- **Understandability**: The tool provides clear and concise descriptions of content, such as an intake app that explains each step of a digital registration form in plain language.
- **Added Value**: The tool improves the learning process, for example by enabling real-time feedback on writing through shared documents.

- **Goal Orientation**: The tool supports learners in meeting their established learning goals, such as a GED prep app that aligns practice questions directly with tested competencies.
- **Time Efficiency**: The tool helps learners engage with content efficiently, such as a vocabulary app that adapts review activities to focus only on unfamiliar words.
- **Interactivity**: The tool encourages active participation, such as a polling platform that gathers immediate learner input on a reading passage.
- **Multimedia**: The tool presents content through varied media, such as a workforce orientation module that combines video demonstrations, diagrams, and short quizzes.

Technical accessibility refers to how easily learners and instructors can access and use a tool or resource.[4] Several evaluation frameworks developed in K–12 education can also be applied in adult education:

The **4A Framework** evaluates edtech tools based on the following four elements:[5]

- **Accessibility**: Materials should meet accessibility standards and function across devices and internet connections.
  - » Key questions: Are videos captioned? Can the content be accessed on mobile devices or with limited data? Does it work with screen readers?
- **Active Engagement**: Learners should be prompted to take action or make decisions.
  - » Key questions: Does the tool include interactive prompts? Are learners asked to respond, reflect, or apply knowledge?
- **Advocacy for Inclusion**: Content should represent diverse learners respectfully and accurately.
  - » Key questions: Do visuals, names, and scenarios reflect the diversity of adult learners? Are there inclusive features such as multiple language options, captioning, adjustable text size, or culturally relevant examples that reflect learners' lived experiences?
- **Accountability**: Tools should be transparent about their instructional purpose and data practices.
  - » Key questions: Are sources cited? Is it clear what data is collected and how it will be used?

Interoperability is the controlled, seamless, and secure exchange of data across applications.[6] The goal of interoperability is to help learners focus on the learning experience rather than spending time on digital navigation and technical support issues.

Some questions to consider related to interoperability include:

- When using multiple tools, will they "speak" to each other? For example, if learners have a Google or Microsoft account, can they use that account to log in to a chosen digital curriculum or LMS?

- Can instructors and learners move between platforms without losing work or re-entering information? For example, can a link from Canvas open a Padlet activity or Kahoot quiz without requiring a new account or separate password?
- When learners use third-party tools, is personal information such as names, email addresses, or photos shared only as needed, and are permissions clear before accounts are created?

Evaluation can include structured reflection by educators as well as formal review processes. The EdTech Center @ World Education created the Criteria for Evaluating Workforce EdTech Tools to support programs in assessing how digital resources align with workforce education goals. The criteria address instructional effectiveness, accessibility, learner engagement, ease of use, and data privacy, with the complete list available online.

The Teacher Ready Evaluation Tool, developed by ISTE, provides a research-informed rubric for evaluating edtech products. It focuses on five core areas: 1) user interface and learner agency, 2) learning design, 3) digital pedagogy, 4) inclusivity, and 5) assessment and data. The scoring process is flexible, allowing users to rate only the indicators that are relevant to their context. The results are summarized in a numeric score that reflects overall fit and usability.

Digital learning tools can be integrated with or without the use of formal frameworks, but research shows that digital learning tools are most effective when they are intentionally integrated into core instruction.[7] Programs that scheduled dedicated time for digital learning and provided ongoing instructor support reported higher levels of learner engagement and stronger outcomes than programs where technology was treated as an optional add-on.

After selecting a digital tool, evaluation should continue during its use. Observation and feedback help determine whether the tool supports learning in practice. A structured implementation process may include:

- Piloting new tools in short, optional activities before full program integration
- Gathering learner feedback on accessibility, ease of use, and relevance
- Monitoring evidence of progress, such as participation levels, skill development, or learner persistence
- Preparing paper-based or low-tech backup options for use during technical disruptions
- Limiting the number of tools in use to reduce complexity for both instructors and learners
- Reviewing decisions periodically to remove or replace tools that no longer meet instructional needs
- Sharing evaluation findings with colleagues to build a program-level knowledge base

Evaluation is an ongoing process. The focus is not on trying every new tool but on maintaining a manageable set of resources that consistently support learning goals and work well in the local context.

VOICES FROM THE FIELD

Amy Lloyd

Assistant Principal, *Placer School for Adults*

What approaches or tools have you found most effective for delivering digital learning within a secure or correctional environment?

We use Chromebooks and Nucleos tablets to provide digital content and instruction in the correctional environment. Chromebooks allow us to whitelist approved curriculum from Edmentum (HSD), Aztec (GED), Burlington (ESL), and iCEV (Workforce Prep), giving students access to videos, quizzes, and activities. Because Chromebooks are used in classroom settings with credentialed teachers, student access to digital learning is limited to the hours they are scheduled for class, usually about six hours per week. For learners to make meaningful progress toward literacy, math, GED, or diploma goals, more time with content is needed.

Nucleos tablets help close that gap by removing the classroom time barrier. Students can now attend class, work with teachers, and continue coursework from their housing units. This year, we expanded the number of tablets and housing units with access. Students check out a tablet from the correctional officer on duty, log in, and see only approved curriculum. Each session is recorded, which helps verify who is completing the work and prevents cheating, an issue with paper-based assignments in the past.

How have you adapted instruction, materials, or support systems to align with security requirements while still meeting learners' goals?

To make large goals like earning a diploma or GED more manageable, we introduced Student Tracking Progress Folders aligned with adult learning principles. These folders help break down progress into smaller steps and provide space for reflection. Each folder includes a teacher interview, a signed learning contract, and attendance expectations. The folders stay with the teacher but transfer with What approaches or tools have you found most effective for delivering digital learning within a secure or correctional environment?

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What lessons have you learned about implementing and sustaining digital learning in correctional settings that could help other programs facing similar constraints?

Many! Communication and partnership are essential. Each partner brings different priorities, so patience and steady collaboration are key. Ongoing communication with the Sheriff's Office has been vital to removing barriers to learning. Sharing the larger purpose behind expanding tablet use helped build trust and cooperation. Together, we developed checkout procedures, set priorities for student access, and created a Nucleos Tablet Contract and flyers outlining rules for device use.

We also learned from experience. Early on, students were logging in but leaving the tablets idle, accumulating hours without working. We adjusted settings to time out after inactivity and met with classes to reinforce expectations. Word spread quickly, and engagement improved almost immediately.

Voices from the Field (continued)

Strong budgeting is also critical. Programs should plan for device repairs, licensing fees, and additional technical support. Staff training, communication systems, and logistics all need to be built into the plan. No program design is perfect, but by budgeting carefully, maintaining communication, and staying flexible, our team continues to learn and improve as we move through our second full year of implementation.

Digital Learning Tools

Digital tools provide instructors and learners with options for communication, collaboration, creation, and problem-solving. The choice of tool should be guided by the learning goal and instructional context. For adult learners, tools are most effective when they are accessible on mobile devices (as well as laptop or desktop computers), are low-cost or free, and are appropriate for the program's specific learner population.

This Guidance does not provide tutorials on individual platforms. Instead, it highlights categories of tools with examples of how they can be integrated into instruction. Many tools can be adapted for both simple and more complex activities. A tool that supports short text responses can also be used for multi-step projects that include images, links, or video. Instructors can demonstrate this progression by beginning with straightforward applications and gradually expanding to more complex uses, modeling for learners how digital skills can be built over time through practice.

The sections that follow outline key categories of digital tools and provide examples of classroom applications.

Instructor Tip

Introducing a new digital tool can be challenging for both instructors and learners. Technical issues, login problems, or unfamiliar interfaces are common during early use. Model digital resilience by demonstrating how to troubleshoot in real time—consulting a product's help center, submitting a support ticket, searching a blog, or viewing a short tutorial video. Narrate the thought process while problem-solving so learners see that persistence and curiosity are part of learning with technology. This helps normalize trial and error to build learner confidence with new tools.

Digital Tools for Communication

Communication tools support interaction between learners and are important for building connection in digital learning environments. These tools may be text, audio, or video-based, and can be used asynchronously (not in real-time) or synchronously (in real-time). Providing multiple modes of communication increases access and flexibility for adult learners who balance work, family, and other responsibilities.

Asynchronous Communication

Asynchronous tools allow learners to engage at their own pace. Examples include:

- Discussion forums in platforms such as Canvas or Google Classroom
- Group messaging tools such as WhatsApp or Remind
- Email, text messaging, class blogs, and other communication apps

These tools can support learners who prefer time to process and respond or who cannot join live sessions because of scheduling conflicts. For example, an instructor might post a discussion question on Monday, with responses due later in the week. In a literacy or ESL class, a WhatsApp group might be used for learners to write short messages in English or share voice notes between classes. Because many learners already use text messaging and mobile message apps in daily life, these tools often require less troubleshooting than LMS forums.

Instructors can also design low-bandwidth activities for mobile devices, such as responding to short text or audio reflection prompts in a group chat. These approaches allow learners to participate digitally in ways that reflect their access to devices and connectivity.

Administrator Tip

As artificial intelligence tools evolve, some learning platforms are beginning to integrate AI agents that assist with communication and feedback. For example, Canvas includes an AI-generated Discussion Summary that reviews all posts in a discussion and produces a short overview of common themes and unanswered questions. When considering features like this, programs can examine how the tool handles learner data, whether summaries can be edited or disabled, and how automation will support rather than replace instructor interaction.

Synchronous Communication

Synchronous tools facilitate real-time communication for instructors and learners. Common platforms include Zoom, Google Meet, Microsoft Teams, Slack, and Discord. These tools support live class sessions, virtual office hours, and one-on-one meetings.

In addition to basic video and audio call features, video conferencing platforms allow users to share screens, display presentations, use chat for written responses, and react with emojis. Breakout rooms can support small group work or partner activities. For example, in a workforce preparation class, an instructor might host mock interviews in breakout rooms, with learners rotating as interviewer, interviewee, and observer. In an ESL class, a live session might include a short listening activity followed by discussion in the chat or aloud. Instructors can also record sessions and share them through a learning management system or email for learners who cannot attend.

Some platforms also support both synchronous and asynchronous communication. For instance, Microsoft Teams, Slack, and Discord include chat and file-sharing features that allow learners and instructors to continue conversations or access materials outside of scheduled sessions.

When used thoughtfully, these platforms can support all levels of digital proficiency. Instructors might begin with simple interactions such as using chat or reaction buttons. As learners gain confidence, additional features can be introduced, such as breakout rooms or short presentations where learners walk through a few slides. Recording sessions for later review provides another form of support. The same platform can be used for both introductory activities and more advanced collaborative projects.

Pronunciation Tools for English Language Learners

Several tools can support pronunciation practice outside of class:

- **YouGlish**: A free website where learners can hear how words and phrases are pronounced in context across a wide range of YouTube videos.
- **ELSA Speak**: A mobile app that provides pronunciation feedback using speech recognition. Learners can record themselves, receive feedback on specific sounds, and repeat practice as needed. Both free and paid versions are available.

These tools can be used independently, like when learners use YouGlish to study how phrases are spoken in authentic conversations, or as an extension to classroom speaking activities, like using ELSA to practice vocabulary introduced during instruction.

Digital Tools for Collaboration

Collaboration tools help adult learners share ideas, co-create projects, and develop teamwork skills. All tools can be adapted for in-person, hybrid, or fully online instruction.

Digital Bulletin Boards, Whiteboards, and Multimedia Collaboration

These platforms provide shared visual spaces for brainstorming, discussion, and collaborative content creation. They can be used synchronously or asynchronously to support interactive tasks.

- **Padlet**: A simple digital board for posting text, images, links, and media. It has a low barrier to entry because collaboration does not require a login.

- **Jotboard**: A digital whiteboard from Jotform designed for structured workflows and form-linked tasks. A login is required for all collaborators.
- **Miro**: A digital whiteboard with an infinite canvas and templates for a wide range of collaborative activities. A paid plan is required for collaborators without an account to edit boards.
- **FigJam**: A digital whiteboard with an infinite canvas. An open session allows collaborators to join without a login for up to 24 hours; longer-term access requires an account.

Padlet and similar tools can be scaled for different purposes. Some classes may use them for short text responses, while others may develop multimedia boards with images, links, and videos or structured group projects.

Example uses include:

- Learners in a Science class post examples of how energy is used in daily life, such as heating, lighting, or transportation on digital sticky notes then revisit the collection to categorize examples as renewable or nonrenewable based on what they learn in class.
- During a Math Zoom session, learners work together to solve problems on a shared digital whiteboard.
- Learners in a Health Literacy course create a concept map on healthy lifestyle habits.
- Learners in an ESL class design a basic business plan using a board template.

These collaboration platforms can also be viewed through the SAMR model. For instance, Padlet may substitute for sticky notes, but it can also modify activities by allowing learners to add multimedia, or redefine collaboration by connecting groups across locations in real time.

Jamboard Alternatives

Google Jamboard, a widely used application, was discontinued at the end of 2024. Alternative tools with similar collaborative features include:

- Jotboard
- Padlet Sandbox
- FigJam
- Miro

Document and Workspace Collaboration

These platforms allow learners to co-create, edit, and organize written content, data, and presentations. They support both group work and individual contributions, often with commenting and revision features. Because many of these tools are also widely used in workplaces, they provide learners with opportunities to practice on platforms they may encounter in employment settings.

- **Microsoft Loop**: A shared workspace where learners can co-edit pages, tables, and checklists.

  - » Example: A group uses Loop to plan an event, assign tasks, and track progress.
- **Google Docs** / **Microsoft Word Online**: Real-time document editing with commenting and revision history.
  - » Example: A group of learners co-writes a personal finance tip sheet, each contributing one section.
- **Google Sheets** / **Microsoft Excel Online**: Collaborative spreadsheets.
  - » Example: Pairs of learners build a budget spreadsheet to calculate monthly expenses.
- **Google Slides** / **Microsoft PowerPoint Online**: Collaborative presentation tools.
  - » Example: Learners contribute slides to a group presentation on digital safety, with each learner responsible for one topic.
- **Google Drive** / **Microsoft OneDrive**: Cloud storage for organizing and sharing class files.
  - » Example: An instructor shares a folder where learners upload assignments and download weekly materials.

These platforms can be adapted for a range of tasks, from short contributions to extended projects that involve formatting, editing, and peer feedback. A single tool can introduce learners to basic navigation and later support more complex collaborative writing and project development.

Digital Tools for Critical Thinking

Critical thinking in adult education involves analyzing information, comparing options, and making decisions that mirror real academic, workplace, and daily-life situations. Rather than being tied to a single type of tool, these skills can be developed across many digital platforms. Discussion boards, collaborative documents, forms, and multimedia tools can all prompt learners to interpret information, weigh choices, or justify decisions in ways that extend beyond recall.

Digital tools make it possible to design tasks that reflect authentic decision points. A budgeting scenario in a Google Form can ask learners to choose among weekly shopping lists. A shared Padlet board can present short workplace situations for groups to compare possible responses. Branching simulations created with form logic or slide hyperlinks can walk learners through safety procedures or customer-service interactions, with each choice leading to a different next step. These activities give learners structured opportunities to practice reasoning, apply content knowledge, and reflect on their choices, strengthening critical thinking within the broader digital learning environment.

Digital Tools for Creativity

Creative projects give adult learners additional ways to demonstrate understanding and connect learning to real-world goals. Many digital tools can support visual design, multimedia

storytelling, and personalized communication, but some are optimized for just these types of tasks.

Design Tools

These platforms allow learners to create visual content using templates, drag-and-drop features, and customizable layouts:

- **Canva** and **Adobe Express** (formerly Adobe Spark): Free versions are available.
  - » Example: Learners in an ESL class create an infographic about their hometown, combining short written descriptions with images.
  - » Example: Learners in a career transitions course design a digital résumé or personal vision board highlighting goals and strengths.

Projects in Canva can range from simple template-based flyers to more advanced designs such as résumés, infographics, or slide decks. This adaptability allows instructors to start small and expand as learners gain digital confidence.

Multimedia and Digital Storytelling

These platforms support the creation of short videos, narrated slideshows, and audio-based projects:

- **Animoto** and **Powtoon**: Provide templates and guided tools for creating basic animations or videos.
  - » Example: Learners create a short video titled “Balancing Work and School,” scripting the message, selecting visuals, and recording narration.

Open-Ended Productivity Tools

Common platforms like **Google Slides**, **Microsoft PowerPoint**, and **Microsoft Word** also support creative expression in flexible formats: Examples:

- Example: A learner designs a tri-fold pamphlet on local community health services using Microsoft Word.
- Example: Learners research a career and present findings in a visual slideshow rather than a written report.

These formats allow learners to demonstrate knowledge in ways that are manageable and relevant while also practicing skills in widely used workplace tools.

Extended Reality (XR), Virtual Reality (VR), and Augmented Reality (AR)

Extended Reality (XR), Virtual Reality (VR), and Augmented Reality (AR) are emerging tools that blend digital and physical experiences. They can offer new ways to create simulated practice across contexts, including career pathways such as health care, manufacturing, and skilled trades, as well as language learning, civic education, and other applied instruction.

- **Virtual Reality (VR)**: Creates fully immersive simulations that place learners inside a 3D environment using headsets or 360-degree video. For example, learners can practice patient care tasks in a simulated hospital room before entering clinical rotations.
- **Augmented Reality (AR)**: Adds digital information or images as an overlay to the real world through glasses, a phone, or a tablet camera. For example, learners in a construction skills course can scan printed blueprints with an app to view 3D models of building components and safety equipment.
- **Extended Reality (XR)**: Combines elements of VR and AR so learners can interact with both digital and physical components at the same time. For example, learners in an advanced manufacturing course can use a mixed-reality headset to see step-by-step assembly instructions projected onto real machinery while completing the task.

These tools align closely with the Extension dimension of the Triple E Framework because they immerse learners in realistic scenarios that connect classroom instruction to authentic workplace and community contexts. By simulating real tasks and environments, they help learners apply knowledge in situations that mirror those they will encounter beyond the classroom.

Research on immersive environments highlights that XR is most effective when tied to clear instructional goals and integrated into a lesson sequence.[8] For example:

- **Before XR**: Learners review safety procedures for a clinical or shop environment.
- **During XR**: Learners complete a virtual simulation of those procedures.
- **After XR**: Learners reflect on challenges, compare approaches, and practice the same steps with real equipment or role play.

This structure helps learners transfer skills from virtual settings to authentic contexts, especially in workforce pathways such as health care, advanced manufacturing, or logistics.

As interest in XR tools grows, educators and program leaders should approach adoption thoughtfully. These technologies can be engaging, but their value depends on how well they fit program goals, available resources, and learner needs. Before implementing XR, it helps to reflect on several key factors that influence success in adult education settings:

- **Cost and access**: XR tools vary widely in affordability and technical requirements. Mobile-based or web-based apps often make participation possible for learners who use personal phones or shared devices, while high-end headsets may be unrealistic in some adult education settings. Starting with low-cost or easily accessible tools like can help programs pilot XR without creating new barriers.
- **Program resources**: At the program level, leaders should assess budgets, connectivity, and classroom infrastructure to determine what can be supported sustainably. Reviewing licensing models, maintenance needs, and staff capacity helps ensure that any investment aligns with long-term instructional and equity goals.

- **Workforce relevance**: Choose XR activities that reflect the tasks learners will encounter in their training or future jobs. When practice scenarios mirror real workplace situations, learners can more easily see how classroom skills apply in employment settings.

Career Navigation Tools

Adult education programs often serve learners who are preparing for their first job in a new country, changing careers, or building skills for advancement. Career navigation tools support these goals by helping learners explore career options, develop résumés, search for jobs, and practice interviews. Using these tools during instruction can connect classroom learning to real employment pathways while also strengthening essential digital skills.

The tools listed below are free or low-cost and provide practical applications for adult education settings.

- **LinkedIn**: A professional networking platform that also functions as a digital résumé and job search tool. Learners can create free profiles, highlight skills, and set job alerts by title, location, or experience level. Classroom use can include building profiles, analyzing job descriptions, or practicing professional communication.
- **Online Résumé Builders**: Tools such as Resume.com, Canva templates, and the résumé builder in CalJOBS (California's job search system) guide learners through résumé formatting. AI-supported tools can also help identify keywords from job postings to align résumés with employer expectations and applicant tracking systems (ATS).
- **O*NET Online and My Next Move**: Provide occupational details such as required skills, education levels, and job outlooks. Learners can compare occupations, interpret job profiles, and set career goals. Tools like Career Dreamer generate personalized skill profiles that map prior experience to in-demand occupations.
- **GoPursue and Gladeo**: Career exploration platforms that highlight industries and mentorship opportunities. Where access is limited, programs can replicate this function with local guest speakers, career panels, or recorded industry interviews.
- **Job Search Engines**: Platforms such as CalJOBS, Indeed, and Monster allow learners to search for positions by location, industry, and remote work options. Lessons can focus on analyzing job descriptions, setting alerts, and submitting applications.
- **Interview Practice Tools**: Platforms such as Google Interview Warmup and Big Interview provide structured, digital environments to rehearse responses and receive feedback. These tools extend practice beyond the classroom and help build comfort with both virtual and in-person interviews.
- **Career Training Platforms**: Free or low-cost programs such as Northstar Digital Literacy and Google Career Certificates offer training in areas like IT support, customer service, and project management. These courses can complement classroom learning and provide credentials valued by employers.

Administrator Tip

Encourage staff such as navigators, advisors, and transition specialists to build familiarity with platforms like CalJOBS or CareerOneStop. This knowledge helps them guide learners in clarifying career goals, reviewing local labor market information, and developing training or employment plans tailored to individual needs.

Example Instructional Sequence

To show how digital tools, workforce preparation, and instructional design strategies can come together in practice, the following instructional sequence outlines one way an Integrated Education and Training (IET) class might embed career navigation and digital literacy.

1. **Career Research**: Learners use O*NET or My Next Move to explore two occupations. They document skills, required education or credentials, and salary ranges in a shared worksheet or slide deck. Each learner selects one occupation of interest and compares local training programs (CalJOBS, community college catalogs, or program websites) to find courses or credentials that align with job requirements. Small groups discuss which programs are most accessible and relevant to their goals.
2. **Résumé Development**: Learners choose one job title and use a résumé builder (CalJOBS, Resume.com, or Canva) to create a résumé tailored to that role. Drafts are shared in Google Docs for structured peer review, using comments to provide feedback on formatting, clarity, and alignment with the target job. After revisions, learners finalize their résumés with instructor feedback. AI tools such as Gemini or Anthopic's Claude can be used to identify keywords from job postings to strengthen alignment with employer expectations.
3. **Application Walkthrough**: Learners select a real job posting that matches their target role and practice completing a full application. Activities cover résumé upload, online forms, short answers, and confirmation steps, with learners tracking submissions and follow-ups in a job search log.
4. **Interview Practice**: Learners rehearse responses to common questions using tools such as Google's Interview Warmup or by recording responses on a phone. Role-plays in pairs or small groups simulate phone, video, or in-person interviews, with peer or instructor feedback.
5. **Career Reflection and Planning**: Learners complete a short reflection identifying one current skill, one skill in progress, and one next step, such as applying for a job, enrolling in training, or updating LinkedIn. Reflections may include a simple timeline or checklist.

Together, these activities form a complete, data-informed career navigation process. Learners use labor market data and local program information to identify opportunities, apply digital tools to document and present their skills, and reflect on next steps using evidence gathered throughout the sequence. For educators, this approach demonstrates how career exploration, skill building, and planning can be woven into instruction as a continuous, data-driven cycle rather than a one-time activity.

Learning Management Systems (LMS)

A Learning Management System is a platform that organizes and delivers digital learning content. Common platforms in adult education include Canvas, Moodle, Schoology, and Google Classroom. In California programs, Canvas and Google Classroom are especially prevalent. Canvas often aligns with systems used in K–12 schools, community colleges, and CSU or UC institutions. Google Classroom is frequently adopted for its simple structure and integration with Google tools.

An LMS supports flexible instruction by centralizing materials, communication, and progress tracking. While initially used in online or distance learning settings, LMS platforms are now applied in in-person, blended, synchronous, and asynchronous courses. They provide anytime, anywhere access to materials and enable communication and collaboration beyond class sessions.

Common LMS features include:

- **Centralized Content**: A single location for lesson materials, readings, videos, and audio. Organizing by week, module, or topic helps learners review past lessons, catch up after absences, or preview upcoming content. Clear structure also supports digital navigation skills important for adult learners. Research on online learning standards highlights that effective LMS use depends on clear navigation and manageable cognitive load so learners can focus on instruction rather than system management.[9]
- **Embedding External Resources**: Instructors can link or embed videos, simulations, or open educational resources directly within LMS pages. Keeping materials in one system reduces confusion and minimizes extra logins, which is useful when learners share devices or are building digital confidence.
- **Communication Tools**: Built-in announcements, discussion boards, and messaging allow instructors to share updates, encourage asynchronous participation, and facilitate peer interaction. These options support adult learners with varied schedules.
- **Assignments and Feedback**: Digital submission tools allow instructors to provide feedback through written comments, audio, or rubrics. This supports learners balancing multiple responsibilities by making feedback available outside scheduled class time.
- **Progress Tracking**: Gradebooks and activity logs help learners monitor their progress and allow instructors to follow up after missed work or lapses in activity.

- **Quizzes and Auto-Grading**: Quiz functionality within an LMS can streamline formative or summative assessment activities. Features often include auto-grading, which might reduce instructor workload.

Instructor Tip

Discussion boards can be used for low-stakes writing tasks such as weekly reflections or informal check-ins. This approach allows learners to practice digital communication, build comfort with written expression, and connect with peers between sessions.

An LMS can serve as a digital hub, extending learning beyond scheduled sessions. Effective use often begins with a basic structure such as posting a syllabus, lesson materials, and announcements, with assignments or quizzes added gradually. Lessons and resources can be saved, adjusted, and reused each term, reducing the need to recreate content. Most systems support course duplication or templates, making it easier to build on what works.

Programs may also align LMS use with local colleges or workforce partners. This supports smoother transitions for learners who move between adult education, higher education, and training programs, and allows content sharing across institutions.

When evaluating an LMS, educators can draw on the TPACK framework to reflect on how the platform supports effective teaching and learning. For example, an LMS that allows differentiated instruction demonstrates pedagogical and andragogical alignment by enabling personalized learning paths that match learners' goals and skill levels. Considering how well the system integrates features such as assessments, discussions, and collaborative spaces also helps determine whether it supports both the content being taught and the broader learning outcomes of the course.

VOICES FROM THE FIELD

Josh Eick
Subject Matter Expert, OTAN, *Educator, DACE, LAUSD*

How has your team designed online instruction and communication to promote meaningful interaction between learners and instructors?

While instruction and communication ultimately happen between teachers and students, district and administrative structures play a critical role in making that

Voices from the Field (continued)

How has your team designed online instruction and communication to promote meaningful interaction between learners and instructors?

While instruction and communication ultimately happen between teachers and students, district and administrative structures play a critical role in making that interaction meaningful. Within LAUSD's Division of Adult and Career Education (DACE), two main strategies have supported consistent engagement across programs.

First, when online instruction became essential during the pandemic, district program advisors formed teacher-led teams to design master courses in the learning management system (LMS) for ESL, ABE, and IET programs. These courses were built around project-based learning, collaboration, regular feedback, accessibility, and growth mindset. They were also designed to be adaptable so that individual instructors could tailor units to reflect student-centered learning. Teachers who continue to use these LMS courses, even in hybrid or in-person formats, have reported clear increases in student participation and engagement.

Second, DACE established ongoing opportunities for professional development, professional learning communities (PLCs), and observational rounds focused on effective online instruction and communication. Many schools have since seen improved engagement, and at the Adult Education Virtual Academy (AEVA), enrollment and participation have grown significantly, particularly in classes where teachers apply these shared best practices.

What have you learned about reaching and supporting learners who face barriers to participation in a virtual program?

In my online teaching experience, learners face a range of barriers from work and family responsibilities to low technical skills, background distractions, and inconsistent device or internet access. I have found that the most effective way to address these challenges is by creating multiple, safe opportunities for learners to communicate their needs privately and early.

Before each course begins, I share a brief student survey accessible on any device, asking about internet connectivity, device access, and any physical challenges such as vision or hearing issues. This helps me anticipate support needs before the first class even starts. During the term, I encourage ongoing

Voices from the Field (continued)

communication through text, email, and private Zoom chat messages, and I hold weekly office hours to help students troubleshoot learning or technology issues.

By proactively identifying barriers and addressing them one on one, I have seen major improvements in engagement and retention. Learners who know they can communicate openly about challenges are far more likely to stay connected and complete their courses successfully.

Open Educational Resources (OER)

Open Educational Resource (OER) is a term used to describe teaching and learning materials that are free to use, adapt, and share under open licenses such as Creative Commons. Examples include textbooks, worksheets, lesson plans, and videos. OER can lower costs for programs and provide flexibility to adapt materials for local contexts and learner needs.[10]

Several platforms and strategies are especially useful in adult education:

- **OER Commons**: Searchable library of open materials, with filters for subject, education level, and resource type. Includes adult basic education content.
- **OpenStax**: Free textbooks in math, science, and social studies written at the college or advanced high school level. Sections can be excerpted or adapted for adult learners.
- **MERLOT**: A curated collection of free materials hosted by the California State University system. Resources include lessons, simulations, modules, and assessments across subject areas. While many items are openly licensed, others are free-to-use but not fully open, so instructors should check licensing details before adapting or redistributing materials.
- **Web searches**: Adding terms such as “OER,” “open license,” or “CC-BY” can help locate materials that are free to adapt and share, including ESL and math resources.
- **CK-12 FlexBooks® 2.0**: Free STEM-aligned digital textbooks, interactive lessons, and adaptive practice. Widely used in high school equivalency and math instruction.
  - » *Note*: CK-12 is not fully open. Some materials are free to adapt, but use is limited by the platform’s Terms of Use. Instructors should confirm that permissions fit program needs, especially for adaptation or redistribution.

Evaluating OER for Adult Learners

When selecting OER, programs can consider the following factors:

- **Relevance and Level**: Review materials to ensure they match instructional goals and learner skill levels. Many open resources were originally developed for K–12 classrooms and may reference topics such as school schedules, playground activities, or high school events. These can be revised to use examples that reflect adult settings, such as workplace communication, family responsibilities, or community participation.
- **Bias and Representation**: Ensure materials reflect adult learners' diversity and contexts. Names, scenarios, or visuals may need adjustment to match adult roles such as work, family, and community responsibilities.
- **Engagement**: Static materials can be paired with discussions, writing prompts, or hands-on tasks to increase engagement.

Endnotes

1 https://www.learntechlib.org/p/99246/
2 https://www.proliteracy.org/wp-content/uploads/2024/07/6.2.1_Research-1.pdf
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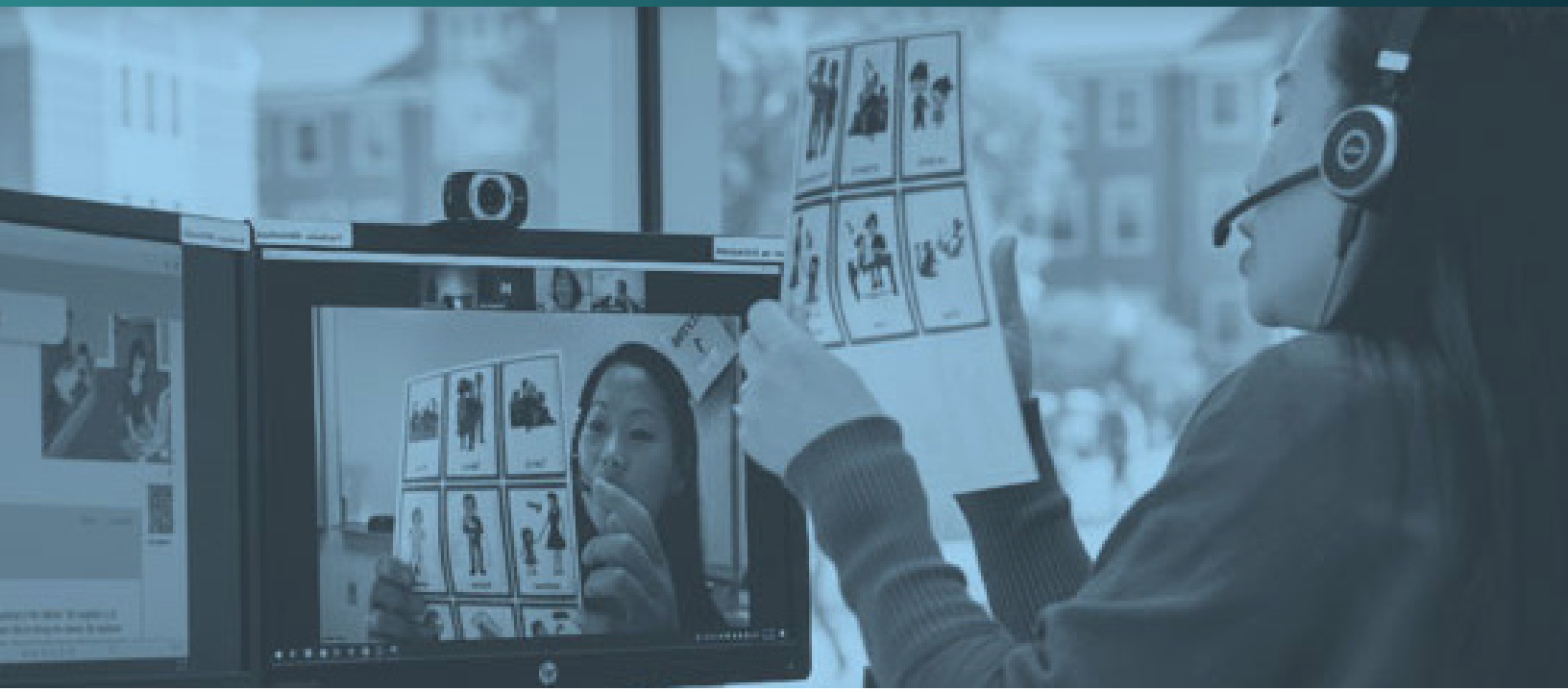

CHAPTER 5

Adopting Models that Work

This chapter outlines four digital learning models commonly used in adult education: distance education, blended or hybrid learning, and the HyFlex model. It describes the different ways they organize instruction across in-person and digital settings and provides an overview of how each can be implemented. The chapter also presents considerations for which strategies programs might use within their own contexts.

Digital Learning Models

Distance Education

Distance learning refers to instruction in which educators and learners are separated by geography, time, or both for most of the course. This category includes correspondence courses, instruction at satellite campuses, and modern online learning. Online learning may be asynchronous (completed on a learner's own schedule) or synchronous (completed in real time using technology). It can take place in fully online courses or as part of another model, such as blended learning, where online components are integrated with classroom instruction. In fully distance education models, most instruction occurs outside of a physical classroom

and usually relies on digital tools for communication and coursework, though in-person sessions may still be used for orientation, assessment, or support.

Blended or Hybrid Learning

Some sources distinguish between blended and hybrid learning,[1] while others use the terms interchangeably.[2] In this guide, the terms are used as synonyms. **Blended** or **Hybrid learning** combines in-person classroom instruction with online learning, with some level of learner control over time, place, path, or pace. In this model, instruction occurs partly in a classroom and partly through online delivery. The online component often allows learners to decide when, where, how, or how they engage with material, which are core principles of adult learning.[3]

Flexibility in time (for example, scheduling learning around work or family responsibilities), place (such as learning from home or another location with internet), path (selecting topics or resources), or pace (moving faster or slower through coursework) supports adult learners in managing their learning process. In this way, blended learning can support competency-based education, where learners progress based on skill proficiency rather than "seat time", the traditional measure of instructional progress based on the number of hours spent in class.

Beyond flexibility, blended learning can create more meaningful learning experiences for both learners and educators. When online and in-person components are intentionally connected, learners have more consistent opportunities to apply skills, engage with peers, and receive feedback. Educators can use classroom time for activities such as discussion and group problem solving, while using online tools to extend learning or offer individualized support between sessions. This integration promotes continuity and engagement across formats so that each part of the course contributes to shared goals rather than operating separately.

Multiple models exist for implementing blended learning in the classroom.

One approach is the **flipped classroom**, where learners are introduced to new content at home through videos, readings, or interactive online materials, and then use class time to apply that knowledge through practice, projects, or discussion. For example, in an Adult Secondary Education math class, an instructor might assign an algebra video for learners to watch before class. During the next session, learners solve problems together on whiteboards, compare different solution methods, and explain their reasoning to peers, while the instructor circulates to answer questions and prompt deeper discussion.

Another variation is the **station rotation model**, in which learners rotate through a sequence of activities on a set schedule. One station might involve online learning, another centers on peer collaboration or project-based work, and a third is led by the instructor in a small-group format. For instance, in an ESL class, learners might move between online vocabulary practice, conversation practice with peers, and direct instruction with the instructor. This structure can make efficient use of devices if access is limited, since not all learners are online at once.

The **lab rotation model** follows a similar structure but places the online component in a separate computer lab or designated space rather than the main classroom. In a GED preparation course, for example, learners might spend one class period each week in a lab using an online platform with support from an aide, while the remainder of the week is dedicated to classroom instruction. This arrangement can be useful where access to devices is limited and allows programs to maximize shared computer labs and centralized support.

A more individualized variation is the **individual rotation model**, where learners move through activities on a personalized schedule determined by the instructor or by adaptive software. Unlike station or lab rotation, learners do not follow the same sequence and may not complete every activity. For example, a learner who demonstrates strong reading skills but needs additional math practice might spend more time in a math software station while skipping a reading activity. Instructors can use data to create tailored weekly plans that identify which in-person workshops and online modules are most relevant.

The **flex model** is designed to offer maximum flexibility by allowing learners to access instruction on a schedule and in a format that fits their circumstances. Learners move through course content at their own pace, while instructors monitor progress, provide feedback, and offer one-on-one or small-group support either in person or online. For instance, a program might provide open-entry enrollment for a self-paced adult basic education course in which learners complete online lessons independently, with instructors tracking activity and offering optional drop-in sessions. This approach is particularly suited to learners managing complex schedules and to programs seeking to provide individualized pathways while maintaining instructional connection.

Blended and hybrid models include intentional instructor presence and interaction. They are distinct from fully independent, self-paced online courses, which provide content but do not necessarily include intentional opportunities for feedback, support, or interaction.

In digital and distance contexts, instructor involvement can take different forms, such as:

- Timely and individualized feedback on assignments
- Scheduled check-ins or office hours (in person or virtual)
- Synchronous sessions or structured asynchronous discussions
- Goal setting and progress monitoring based on activity data

These practices establish the instructional connection between instructors and learners that defines blended and hybrid approaches.

HyFlex Models

Blended and hybrid models typically follow a path in which all learners participate in both in-person and online activities. The HyFlex (Hybrid-Flexible) model differs by allowing learners to decide how they participate in each session, whether in person, live online, or asynchronously. Each class meeting or unit is offered in multiple formats, and learners select the option that fits their circumstances. A HyFlex class is often delivered live to both in-person and

remote learners, with recordings and materials also made available for asynchronous participation. For example, a learner may attend class on campus one week and join remotely the next, depending on their schedule.

HyFlex requires careful course design to ensure that all participation options provide equitable learning experiences. Brian Beatty, who developed the model, identified four key principles:

- **Learner Choice**: Learners select how to participate in each class session. For instance, a learner might attend in person for collaborative group work but use an online recording during a week when work or family responsibilities prevent real-time attendance.
- **Equivalency**: All modes are designed to achieve the same learning outcomes. A live discussion in class, for example, may be paired with an online forum or written response activity for asynchronous learners.
- **Reusability**: Materials are created for use across formats. Lectures can be recorded, and slide decks or handouts posted online so all learners have consistent access to content.
- **Accessibility**: All learners are able to engage fully in their chosen mode. This includes orientation to technology tools, use of accessible materials, and availability of technical support to help learners participate online when needed.

HyFlex models provide different benefits for various stakeholders.

- **Learners** benefit from increased access and flexibility. The format allows participants to decide how to attend each session, which helps those managing work schedules, caregiving, or transportation challenges continue their studies with fewer interruptions. It can also connect learners with a broader network of peers, offering more perspectives and opportunities for collaborative learning.
- **Instructors** benefit from maintaining continuity across in-person and online formats, ensuring that learning can continue even when circumstances change. The model also allows them to reach learners in multiple ways and adapt instruction to different settings. It does require additional planning, technology use, and classroom management across formats, but it also provides opportunities to develop new skills in digital teaching and course design.
- **Programs** benefit from greater flexibility in scheduling and can support enrollment and persistence by accommodating a broader range of learners. The model can also make more efficient use of staffing and facilities. Successful implementation depends on reliable technology infrastructure and ongoing support for both learners and instructors.

As an example, in a HyFlex ESL class focused on workplace communication, some learners attend in person and participate in role-play activities and group discussion. Others join remotely through Zoom, using chat and breakout rooms. The session is recorded, and learners who participate asynchronously watch the video, complete a reflection activity, and post in a discussion forum. Because Zoom breakout rooms are not recorded, asynchronous learners miss small-group conversations, so instructors provide alternate ways to engage with those discussions. All learners engage with the same objectives and activities, with equivalent

expectations across formats. This structure allows participants to move between modes without losing progress or missing key content.

In addition to the software tools discussed in Chapter 4, HyFlex often requires classroom technology that supports both in-person and remote learners at the same time. Classrooms need to be equipped so that all participants, regardless of how they attend, can see, hear, and engage with instruction.

Common setups include:

- **360-degree conference cameras** (such as the Meeting Owl Pro), which capture the full room and automatically track the speaker
- **High-quality microphones and speakers** to ensure that remote learners can hear and be heard clearly
- **Projectors, interactive whiteboards** and/or smart boards that display content for in-person participants while broadcasting it online and saving it for later viewing
- **Lower-tech options**, such as sharing slides on screen or using a document camera, that provide a consistent experience across formats

When planning a HyFlex classroom, factors such as camera placement, audio quality, internet reliability, and ease of use should be considered. Training on equipment setup and trouble-shooting common issues can help ensure consistent operation.

For detailed guidance on planning and implementation, programs may consult World Education's Guide for Design and Implementation of Hybrid–Flexible (HyFlex) Models in Adult Education, which offers examples, equipment recommendations, and strategies specific to adult education settings.

VOICES FROM THE FIELD

Nikki Rae Hart

Adult Education Program Director, *Inyo County Office of Education*

What has the experience of implementing HyFlex been like for instructors and students? What has gone well, and what challenges have you had to address?

Satellite Classrooms have been the best part to come out of our HyFlex instructional model. We've found that students learn better when they are physically in a classroom and can develop a sense of rapport and camaraderie with their classmates. Zoom is an excellent option for students who cannot get to a classroom, but not everyone is comfortable enough with computers and Zoom to use it as a learning tool. Having an in-person class where students can participate and be part of their own community has become an integral part of our HyFlex model.

Voices from the Field (continued)

Many students can only attend one of the scheduled class times, so recording each class and making it easily available in Canvas has been critical to the success of the asynchronous, or "Flex," part of our model. We encourage these students to form study groups and make our location, computers, and internet available to them. These groups allow students to practice their skills with partners and in teams, creating a learning community that continues beyond class time. In this way, our HyFlex English classes almost become syndicated.

Before we began building Satellite Classrooms, every instructor teaching ESL had a full semester to learn the equipment, which proved essential to the model's success. Nothing will turn a student away faster than watching a teacher troubleshoot technology for the first time. As new teachers join, we make sure they have ample training and opportunities to observe before leading their own HyFlex classes so they can deliver a seamless experience for students—whether in person, remote, or asynchronous.

What equipment or tools have been most important for launching HyFlex programming, and what have you learned about setting up and maintaining them?

Our program uses two 85-inch Samsung screens—one interactive smart board and one noninteractive display used specifically for participant videos. They are wired together with a Poly 70X system that integrates with Zoom. The interactive board connects to a laptop that the lead teacher uses to manage the Zoom session, while the Poly controls the second board to display participant videos. A satellite classroom logs on only through the Poly controller, which shows the presentation on the interactive board and participant videos on the noninteractive display.

While the equipment carries much of the load in our Satellite and HyFlex classes, success also depends on having a dynamic lead teacher who can engage students across time and space, and a Satellite Facilitator who supports learners on-site and communicates with the lead teacher. The role of our Technology Integrator is equally critical. Having this position filled by a dedicated staff member within our organization has been key to launching and maintaining the program successfully.

Our HyFlex model also depends heavily on Canvas, an intuitive learning management system that supports both remote and in-person learners. For our ESL classes, we use the Cambridge One curriculum, as each textbook includes its

Voices from the Field (continued)

own Canvas shell course. These shells provide strong practice materials that mirror the textbook and allow asynchronous students to participate in discussions and partner activities. They are also highly adaptable, allowing instructors to add presentations, activities, and links to class recordings.

Comparison of Models

The table below provides an overview of four digital learning models, highlighting delivery format, technology requirements, learner control, and staffing considerations.

Model	Delivery Mode	Technology Requirements	Learner Control	Staffing & Instruction
Distance Education	All instruction online. May be asynchronous, synchronous, or mixed.	**High**: Devices, reliable internet, LMS or equivalent platform; web-conferencing for live sessions.	**Asynchronous**: high control over time, place, pace. Synchronous: control over place; time is fixed; pace is partly fixed. Mixed: varies by component.	Instructor teaches entirely online. Designs activities, runs live sessions as needed, monitors platform data, and provides regular feedback and outreach.
Blended or Hybrid Learning	In-person and online are integrated into one cohesive course with shared goals and assessments.	**Moderate**: Classroom space plus devices and internet; LMS for content, submissions, and tracking.	**Medium**: Some control over time, place, path, or pace in online components; in-person meetings occur on a set schedule.	Instructor coordinates both modalities so each reinforces the other. Uses online work to prepare, extend, and assess in-person learning.

Model	Delivery Mode	Technology Requirements	Learner Control	Staffing & Instruction
Hyflex	Each session is available in person, live online, or asynchronously. Learners choose how to participate.	**Very High**: High-quality audio and video in rooms, stable web-conferencing, and an LMS for materials and recordings.	**Very High**: Control over time and place, with equivalency of outcomes across modes.	Instructor(s) manage in-person and remote learners at once. Plans equivalent activities for each mode and often relies on tech support or a co-host.

It can also be useful to consider the video conferencing platforms that often support distance, blended/hybrid, and HyFlex courses. Each platform offers different features, limitations, and integration options that can affect how programs deliver instruction.

- **Zoom** offers a free version with a 40-minute limit per session and up to 100 participants. Features include breakout rooms, screen sharing, polls, and local recording. It is widely used in education, integrates with many learning management systems, and requires installation on a desktop or mobile device.
- **Google Meet** provides a browser-based option that integrates with Google Classroom and Calendar. The free version allows sessions of up to 60 minutes with 100 participants. It can be accessed through a simple link without installation, though it has fewer engagement features than some other platforms.
- **Cisco Webex** supports up to 100 participants for 50 minutes in its free version, with features such as encryption, screen sharing, breakout sessions, and dial-in access. It offers strong audio and video quality, though the interface may be less familiar and require orientation for some instructors and learners.
- **Microsoft Teams** combines meetings with chat, file sharing, and collaboration tools. The free version supports up to 100 participants for 60 minutes, while breakout rooms and recording typically require an education or paid license. It integrates well with Office 365, though account setup and login requirements can add steps for learners.

When choosing a video conferencing tool, programs may need to weigh factors such as the cost of upgraded plans, ease of use for their learner population, availability of dial-in phone access for those with limited internet, and privacy or data policies. Because platform features change regularly, reviewing current capabilities can help ensure alignment with program goals and learner needs.

Administrator Tip

If a district or agency has not selected a dedicated web-conference platform, consider piloting a few options with a group of learners. Invite the group to compare features, reflect on what supports their participation most effectively, and choose the platform for the course. Software tools change frequently, and different learner groups may benefit from different features. This approach helps programs identify what works best for their context while giving learners a role in selecting the tools they use.

Planning and Implementation

Implementation of digital learning models involves attention to both operational and instructional factors. Programs are responsible for meeting federal and state reporting requirements, preparing staff, and ensuring infrastructure is in place. Different models may align more closely with specific course types or program areas.

For example, a **blended format** may be used in an ESL conversation class where online tools support vocabulary and pronunciation practice, and in-person sessions focus on real-time speaking and feedback. A **fully in-person model** may be most appropriate for a short-term CTE course such as Culinary Arts, which requires hands-on practice with kitchen equipment and safety demonstrations, supplemented by online modules on food safety or customer service. Some programs also combine models within their offerings, providing both fully online distance courses and hybrid in-person/online classes to meet the varied needs of learners and staff.

VOICES FROM THE FIELD

Suzy Kelly

CTE Instructor, *Berkeley Adult School*

What are some of the challenges and opportunities that you see in different digital learning models?

It was extremely challenging to transition culinary to online, but going forward, I want to do a hybrid or HyFlex class. With culinary, there are things that I want them to have hands-on experience with—say, knife skills, or tasting food, if we're talking about seasoning. But there's been so much opportunity with the online teaching that I really want to blend those. I don't want to go away from online,

Voices from the Field (continued)

because it's provided so many opportunities and access for people. Whether people have children at home, or a disability, or whatever prevents them from coming in full-time—I don't want to lose that population.

Addressing Challenges to Implementation

Implementing digital learning models requires attention not only to instructional design but also to the conditions that make participation possible.[4,5,6] Programs must plan for equitable access, digital skill development, and consistent communication across formats. These topics are explored in greater depth in Chapters 2 and 3, which address access, digital readiness, and instructor presence in online environments.

Sustaining new models requires ongoing support for planning and instruction. Teaching in blended, online, or HyFlex formats can involve additional preparation, adaptation, and communication compared with traditional classroom instruction. These formats may also require educators to navigate multiple platforms or instructional modes. Programs can support this work by structuring collaborative planning time, offering curriculum development assistance, and aligning expectations with the instructional design needs of the course. Related strategies for professional learning and instructional readiness are discussed in Chapter 3.

Effective implementation depends on thoughtful planning and ongoing refinement. Programs often need to secure funding for devices, software, and training; establish technical support for staff and learners; and allow time for testing new systems. Early challenges are common, particularly in newer models such as HyFlex. Regular review of results and feedback helps identify what works and where improvements are needed. For instance, early pilots sometimes reveal technical gaps, such as remote learners missing key discussions because microphones do not capture small-group work. Adjustments like repositioning audio equipment or scheduling short check-ins for remote participants can improve continuity across formats. Sustainable approaches rely on clear goals, collaboration among staff, and a willingness to make targeted changes based on experience.

Some learners may still struggle to remain engaged in digital environments. Preparing structured interventions, such as early outreach or targeted support, can help re-engage learners before they fall too far behind.

A useful framework for organizing supports is the **Multi-Tiered System of Supports** (MTSS). It structures interventions into three levels:

- **Tier 1**: Core instruction and engagement strategies provided for all learners.
- **Tier 2**: Targeted supports for learners showing early signs of difficulty.

- **Tier 3**: Intensive, individualized interventions for learners with significant needs.

MTSS is widely used in K–12 education and can be adapted in adult education to provide a structured way of organizing and delivering support.

Tier 1 strategies include offering content in multiple formats for all learners, such as recorded video explanations or live tutoring; providing digital skill supports for learners who might be building confidence with technology; and creating optional study groups for those who want additional practice or collaboration.

One effective Tier 2 strategy is a "pause-and-reset" protocol. When a student stops logging in, misses multiple assignments, or shows consistent signs of disengagement, staff can temporarily pause the learner's progress to initiate personalized outreach. This might include a phone call or one-on-one Zoom meeting to identify challenges, clarify expectations, and co-develop a revised plan. For example, a student struggling with self-paced learning could be invited to attend in-person lab sessions for added structure. Another student dealing with personal challenges might choose to take a short break from coursework or adjust deadlines after discussing options with staff. The goal is to interrupt the pattern of disengagement, address barriers collaboratively, and restart with clear next steps and support in place.

Early identification is important. Many online platforms provide analytics, such as log-in frequency or quiz performance, that can help staff monitor participation. Where analytics are not available, simple systems such as weekly participation reviews can serve a similar purpose.

Peer and staff check-in systems can also help sustain engagement. Assigning a mentor or peer partner gives learners a direct point of contact for support and accountability. Timely outreach, such as contacting a learner within a day of a missed assignment or after several days of inactivity, can help maintain connection and continuity. Tier 2 strategies are most effective when they are timely, personalized, and clearly show that support is available.

Administrator Tip

Programs can streamline outreach by creating reusable email templates for common situations such as checking in with inactive learners. Both Outlook and Gmail include options for saving templates, which staff can then personalize and send without rewriting each message. This approach helps maintain consistency, saves time, and supports timely communication. AI tools such as ChatGPT or Gemini can also be used to generate drafts and translations into multiple languages, making it easier to prepare multilingual versions of templates that reflect the languages spoken in the program.

Onboarding and Orientation for Different Models

Onboarding is an important step in digital learning, giving learners clear guidance on the tools, expectations, and participation options for their course. A structured orientation helps reduce confusion at the start and prepares learners for different instructional formats. The process varies depending on the model.

In any **distance education** model, orientations are designed to familiarize learners with all methods of participation including learning management systems (LMS) and other ways to submit assignments, participate in discussions, or connect with the instructor. A low-stakes practice module can provide clear expectations around time commitment, pacing, and communication norms, along with contact methods such as email or LMS messaging and expected response times. Programs sometimes add a live Zoom session or phone call to preface other orientation activities, building a sense of community and connection from the start.

In **blended** or **hybrid courses**, learners need to understand how class time is divided between in-person and online learning. Orientation may walk through a sample weekly schedule and explain expectations for both formats. Learners can practice accessing online assignments and using tools such as polling apps or shared documents. Attendance policies clarify how both classroom and online participation are tracked.

In **HyFlex courses**, orientation prepares learners to choose and move between in-person, live online, and asynchronous participation, and a technology check ensures access to the LMS and video platforms. Learners are shown how to access each option, what participation looks like, and how to switch between modes when needed. Learners are shown how to access each option, what participation looks like, and how to switch between modes when needed. Key practice tasks during the first week, such as logging into a livestream, posting in a discussion, and accessing recorded materials, can help learners experience each format. Some programs ask learners to identify a primary mode while keeping other options available, and some use formal learner agreements to confirm understanding of participation requirements.

Key elements of orientation across models typically include:

- **Who to contact for help**: instructor, program staff, or technology support.
- **What tools are required**: devices, accounts, and any platform access learners must test before the course begins.
- **When and where learning takes place each week**: schedules for in-person, online, or flexible options.
- **How to stay on track**: communication practices, participation expectations, and time management strategies.

Instructor Tip

Before a HyFlex course begins, dedicate part of the first class to practice transitions between in-person, live online, and asynchronous participation. For example, invite learners to log into a livestream while in the classroom, post in the discussion board, and then join a short group task in person. Practicing these steps early reduces confusion later and helps instructors confirm that technology and instructions work as intended.

Programs can deliver orientation in different ways, including live sessions, written guides, videos, and interactive LMS modules such as a short activity that confirms learners can navigate the platform. Materials may also be adapted to learner needs, for example with multilingual versions or opportunities for hands-on practice.

Program Tip

Programs can create short, sequenced YouTube playlists to guide learners through key orientation topics in a clear order (for example: 1) Welcome and program overview, 2) How to log in and navigate the LMS, 3) Submitting assignments, 4) Communicating with instructors, 5) Accessing digital tools and support services). This approach allows learners to revisit individual videos throughout enrollment and enables instructors to share specific links for just-in-time support. Playlists can also be linked on a program's website, giving prospective learners an easy way to explore how digital learning works even before enrolling. Orientation videos can be developed using simple slide decks in Google Slides or Microsoft PowerPoint and recorded with tools such as Screencastify or Loom, then revised and expanded over time based on feedback and emerging needs.

Readiness Checklists for Digital Learning

In addition to orientation, readiness checklists can help both learners and educators prepare for online, blended, or HyFlex courses.

For **learners**, a short self-assessment may prompt them to reflect on areas such as time management, access to devices and internet, familiarity with online tools, and knowing where to turn for help. Tools like "Are you ready for online learning?" from Penn State University offers a simple checklist to identify areas for preparation, and resources such as the California Virtual Campus Preparing for Online Learning guide provides additional tips and support for getting started with online learning.

For **educators**, a checklist can confirm readiness to teach in digital environments. Items may include comfort with the learning management system, strategies for managing communication across formats, and access to professional development or support for online instruction. A brief self-reflection can also highlight areas where instructors may want additional training before starting a course. Tools such as the Penn State Faculty Online Teaching Readiness Questionnaire offer structured prompts that help educators assess their preparedness for online teaching, including communication habits, feedback practices, and confidence navigating digital tools.

Reporting Considerations

Implementing digital learning models doesn't just change instruction – it also affects how programs track and report learner participation and outcomes. In the United States, federally funded adult education programs must follow the reporting guidelines of the **National Reporting System (NRS)** for Adult Education. California programs use the **CASAS TOPSpro Enterprise (TE)** to report all data for the Federal **Workforce Innovation and Opportunity Act (WIOA)** and State reporting requirements. This section outlines key reporting data: hours of participation (including distance learning), student progress, and student outcomes (including attainment of a diploma, and entry into postsecondary education and training programs). The goal is to clarify how innovative models can work with accountability requirements, ensuring that data collection, reporting, and funding are maintained properly.

NRS Reporting and Definitions

The National Reporting System (NRS) establishes specific definitions and requirements for tracking instructional hours in adult education. Programs must follow these guidelines to accurately report student progress and remain eligible for funding.

Under NRS, a student becomes an official participant after completing at least **12 contact hours** of instruction. Until that threshold is met, learners are not included in federal performance reports. This is especially important for distance or hybrid courses, where the first 12 hours may be earned through a variety of in-person or online interactions, including orientation activities.

Contact Hours

Traditionally, contact hours refer to time spent under the direct supervision of a teacher in a physical classroom. For distance learning, NRS expands this definition to include:

- Synchronous online instruction (e.g., live Zoom sessions)
- Real-time communication via phone or video (e.g., tutoring calls)

These interactions count as contact hours because they involve live instructional support. In blended learning, both in-person class time and scheduled online sessions should be recorded as contact hours. Programs must document attendance for all real-time formats—for example, by using Zoom attendance reports or roll calls during live virtual classes. Contact

hours are essential for establishing official enrollment and meeting eligibility for outcomes such as pre- and post-testing.

Distance Learning Contact Hours

From a reporting perspective, California's adult education data systems classify courses that combine online and in-person instruction under the category of distance learning if the online portion will account for at least 51% of total instruction, consistent with federal definitions. This classification applies across blended, hybrid, and HyFlex models.

A student must earn a minimum of 12 contact hours, required for NRS enrollment, before programs may begin recording distance learning hours for asynchronous, self-paced instruction. These hours, often referred to as proxy hours, represent the estimated time learners spend working independently in approved online curricula. Both contact hours and distance learning hours (proxy hours) are combined for total instructional hours in NRS reporting.

The NRS allows three approved methods for calculating distance learning (proxy) hours:

- **Clock Time Model**: Time is logged automatically by the online platform. If a student spends 90 minutes actively engaged, they earn 1.5 distance learning hours. Idle time should be excluded. This model is used by platforms like USA Learns or Burlington English, which provide detailed time-on-task reports.
- **Teacher Verification Model**: Hours are assigned based on the instructor's estimate of how long a completed assignment typically takes. For example, a completed module may be credited as two distance learning hours. This method relies on teacher judgment and observation, supported by program guidelines, publisher recommendations, or locally developed rubrics that define satisfactory completion and confirm that the learner has met the requirements for the task before hours are awarded.
- **Learner Mastery Model**: Distance learning hours are awarded when a learner demonstrates content mastery, usually by passing an assessment. For example, passing a unit test with 80% might earn three distance learning hours. The focus is on demonstrated understanding of the material rather than the amount of time a learner spends completing it.

States may use one or a combination of these models, depending on the curriculum. In California, OTAN provides a list of approved curricula and the applicable distance learning hour calculation method for each, usually clock time when available or teacher verification otherwise.

Programs must clearly separate and document contact and distance learning hours. In CASAS TE, this is done by designating a class as distance learning and entering both hour types separately. Attendance records may be generated from LMS usage logs or instructor records based on student submissions.

Programs should establish clear local procedures for recording distance learning hours consistently. Supporting documentation is essential for monitoring and audits. For example:

- **Clock Time Model**: LMS logs that document time on task.
- **Teacher Verification Model**: Documentation of completed assignments, the evaluation process, and the associated hour estimates.
- **Learner Mastery Model**: Completed quizzes or assessments and records showing how hours were awarded.

Example: An ESL program using Burlington English reviews weekly usage reports to track learner activity. If a learner spends about three hours actively working in the system and meets performance requirements, the instructor records 3.0 distance learning hours in TE. Another learner who logs only a few minutes of activity may not earn additional hours that week and might be contacted to discuss next steps. Over time, a learner could accumulate 40 contact hours from live sessions and 60 distance learning hours from online work, totaling 100 instructional hours for reporting and assessment purposes.

Learners should be informed that their online activity is tracked for reporting purposes so they understand how participation is recorded. Clear explanations of how hours are counted can encourage consistency. For example: “Time on task in the learning system counts toward your official hours. Log in before starting work so your progress is captured accurately.”

Contact vs. Distance Learning Hours in Reporting

Both contact and distance learning hours contribute to a learner’s total hours and enrollment status, but they serve different purposes:

- **Contact hours** are used for establishing official participant status and are required for administering pre- and post-testing.
- **Distance learning hours** supplement the contact hours for learners engaged in asynchronous learning.

In California, distance learning hours can count toward post-test eligibility in distance education, but programs should follow the most current assessment policy.

Classifying Distance Learners

As noted earlier, courses in which more than 50 percent of instruction occurs online are classified as distance learning in California’s CASAS TE system and for federal reporting. In flexible models such as HyFlex, individual learners may participate differently, with some attending primarily in person and others completing most work online. Programs should classify learners based on their actual participation. If a learner completes a substantial portion of instruction remotely, their proxy hours should be recorded and they should be marked as a distance learner in CASAS TE. Coordination between instructors and data staff helps ensure that all instructional time is captured consistently, even in mixed-model classes.

Meeting or not meeting NRS requirements affects funding, so regular communication between instructional and data staff crucially ensures reporting practices stay consistent and aligned with policy updates. Clear and accurate data also helps programs identify trends, monitor outcomes, and make informed decisions about instruction and support services.

WIOA Performance Considerations

The Workforce Innovation and Opportunity Act (WIOA) is the federal law that authorizes adult education funding under Title II. WIOA emphasizes accountability, workforce preparation, and the use of technology to improve educational outcomes. All distance delivery models must support the same performance standards as traditional instruction.

Key areas of WIOA relevant to digital learning are outlined below.

Measurable Skill Gains (MSG)

In California, most adult education learners demonstrate a Measurable Skill Gain (MSG) by advancing an Educational Functioning Level (EFL) through pre- and post-testing with CASAS, an NRS-approved assessment. Learners may also achieve an MSG by earning a High School Diploma or equivalent.

For online and blended courses, this means planning for how learners will complete pre and post-tests. Options include:

- Scheduled in-person testing sessions
- Remote proctoring that meets state guidelines (e.g., proctors trained and secure procedures in place)

For a diploma or equivalent, data must still be tracked and reported.

While CASAS is the only approved instrument for MSG reporting in California, other standardized assessments such as TABE are sometimes used in specific contexts (e.g., CTE programs or within the California Department of Corrections and Rehabilitation). In these cases, **TABE** results may provide information for instruction, though they are not used for federal MSG reporting.

Digital Literacy in Accountability

Digital learning intersects with state and federal accountability requirements. Under WIOA Title II and CAEP, programs document how technology supports access, instruction, and learner progress, as well as how staff are trained to use digital tools effectively.[7] The use of online and blended or hybrid models aligns with these expectations by expanding access and diversifying instructional approaches.

Many Civic Objectives and Additional Assessment Plans (COAAPs) also include digital literacy outcomes that are reported in CASAS TE. WIOA identifies digital literacy as an essential component of adult education, meaning that even when the instructional focus is academic, programs are encouraged to embed digital skill development within regular coursework. For example, activities such as submitting assignments through an LMS, conducting short online research tasks, creating presentations with productivity software, or collaborating in shared digital documents can help learners build the digital competencies needed for further education and employment.

Programs are often asked to document these efforts in funding applications and reports. For instance, a program might note:

- The number of instructors trained in a learning platform
- The number of learners with COAAPs that demonstrate digital literacy proficiency
- The number of learners with digital literacy credentials (e.g., Northstar certificates)

Information Management Systems

WIOA also requires programs to maintain accurate, timely, and complete data systems. Digital learning generates extensive data, including platform logins, time on task, and assignment completion. Programs should integrate this data into their primary reporting systems (for example, CASAS TE) to ensure full accountability.

For example, if an LMS generates time-on-task reports, there should be a clear process for converting that data into distance learning hours or attendance entries in TE. Even if full automation isn't possible, consistent procedures (e.g., exporting reports weekly, verifying data manually) help maintain data quality.

California requires monthly data entry and quarterly submissions. Frequent data entry reduces errors and helps programs use the information to improve instruction. For example, staff can identify learners with high dropout rates and monitor persistence and outcomes.

Programs may also explore more advanced options like xAPI or learning record stores, but the core requirement remains: use the data to demonstrate learner progress and guide program decisions.

Program-Level Planning and Policy Alignment

Agencies in California submit annual plans describing how they use technology and serve distance learners. For WIOA Title II agencies, this is documented in the **Continuous Improvement Plan (CIP)**, which includes a required Distance Learning Plan. For CAEP-funded agencies, this information is included in the **CAEP Annual Plan**. These documents support both federal compliance and state-level planning.

Shared understanding across staff is critical. Misreporting and/or underreporting can lead to funding risks. Clear definitions, such as what counts as a distance learning hour, or who qualifies as a distance learner, help align data entry, instruction, and administrative oversight.

For example:

- A class where more than 50% of instruction is online must be reported as a distance education class.
- A student completing a significant portion of instruction online should be flagged as a distance learner in TE, even within a mixed or HyFlex course.

Programs can also consider revising intake and data forms to flag online learners early. A simple question like, “Do you plan to complete some or all of your classes online?” can help identify reporting requirements from the start.

Staying current with guidance from California partners such as OTAN, CALPRO, CASAS, CAEP, and CALIE helps agencies align innovation with state policy. Programs may also benefit from engaging in broader professional development networks, including national and cross-sector organizations such as COABE, World Education, or ISTE, which, while not adult-education specific, offer adaptable resources and practices for digital learning models.

Endnotes

1 https://www.sri.com/wp-content/uploads/2021/12/evaluating-digital-learning_1.pdf
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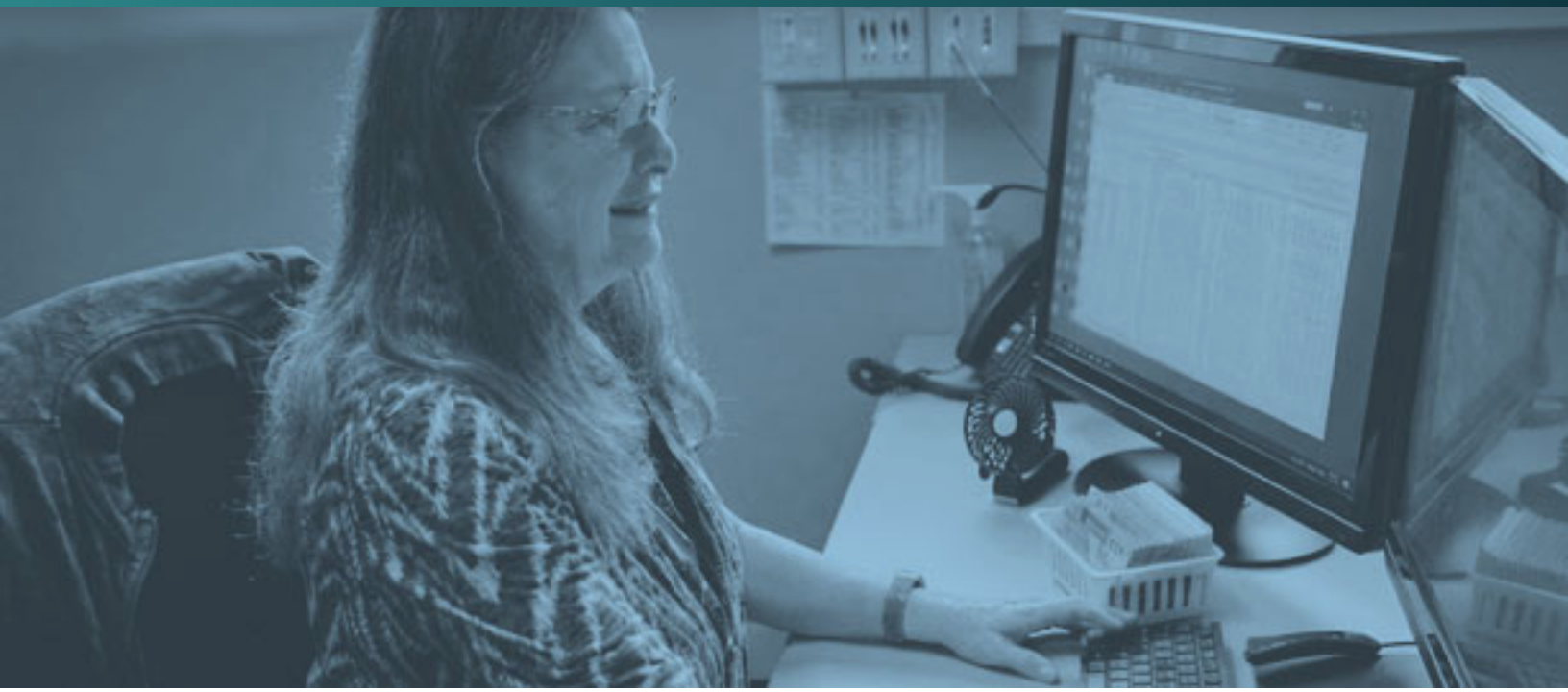

CHAPTER 6

Data-Driven Instruction and Digital Assessments

This chapter provides an overview of how assessments are used in adult education and how digital tools can support different stages of the process. It describes common types of standardized tests, digital skills assessments, and remote testing options. The chapter also suggests how assessment data might be used to guide instruction and track learner progress as well as the potential use of artificial intelligence (AI).

Purposes of Assessment

When used effectively, assessments can inform instructional planning, help programs track learner progress across a course or level, and give learners useful feedback about their growth and next steps. Effective assessment draws on multiple sources, both formal and informal, and considers contextual factors such as timing, attendance, and learning conditions.

Advantages of Digital Assessments

Digital formats can expand how assessments are designed and used, offering practical benefits for both educators and learners. Key advantages include:

- **Accessibility**. Features such as screen reader compatibility, adjustable text size, and alternative text for images remove barriers and ensure that individual needs do not limit opportunities to show progress.
- **Flexibility**. Varied question types, such as drag-and-drop, audio, or video responses, give learners multiple ways to communicate their understanding and educators a better idea of what learners can do.
- **Streamlined administration and scoring**. Automation can reduce the need to manage paper test materials and may provide automatic scoring for many question types. Reports are often available more quickly, saving staff time and simplifying the overall testing process.
- **Immediate feedback**. Learners can often view scores and item-level feedback after completing an assessment.
- **Detailed data for differentiation**. Some tools generate analytics beyond final scores, such as time spent on individual items or answer patterns across groups of learners.

Instructor Tip

Use assessment data to share and analyze common misconceptions with groups of learners. Data systems like TOPSpro Enterprise (TE) include class dashboards and reports that highlight learners' competency gains and gaps. For example, a TE "Class Performance" report can reveal how many learners struggle with specific topics. An instructor might then choose questions from those topics to bring to the whole group, asking what learners think is the most common wrong answer. Likewise, consider using tools like the CASAS Teacher Portal (part of the CASAS eTests system) to view real-time learner results and include learners in predicting and reviewing outcomes. Learners who spend time generating errors and discussing both correct and incorrect responses have better overall retention than those who study correct responses only.[1]

Analyzing Data from Digital Assessments

Once assessment results are collected, the next step is to interpret them in ways that inform instruction and program planning. This means looking beyond scores to identify patterns, determine whether learners are meeting instructional goals, and decide on appropriate next steps.

Effective analysis accounts for the context in which data is generated using multiple reports or indicators before drawing conclusions (for example, comparing class dashboards, individual progress reports, and assessment histories). Considering these factors helps prevent overreliance on a single data point and supports more accurate instructional decisions. Key considerations include:

- **Timing of the assessment**: A test given immediately after instruction may show short-term recall, while one given later may reflect longer-term learning or gaps.
- **Learner attendance**: Inconsistent participation can skew assessment data and make it harder to interpret whether results reflect ineffective curriculum or missed instructional time.
- **External factors**: Work schedules, childcare responsibilities, or limited study time can affect test performance, making it important to distinguish between gaps in learning and external barriers that may have impacted results.

Classified support staff often play a key role in managing assessment data and supporting the testing process. Their responsibilities may include entering demographic and test data into systems like CASAS TOPSpro Enterprise, recording pre- and post-test results, generating reports for teachers and administrators, and proctoring in-person or remote sessions. This work helps maintain data quality and allows teachers to focus on instruction.

Some assessment platforms now incorporate AI-supported scoring tools that can generate rubric-based scores and draft feedback. A recent pilot study found that one such system reduced instructor scoring time by about one-third while maintaining comparable learner outcomes.[2]

Administrator Tip

An option for improving data use is to establish professional learning communities (PLC) to interpret CASAS TE reports, such as Learning Gains or Class Performance dashboards, and link these reports to instructional planning. These communities can meet regularly to review dashboards, identify patterns, and discuss how findings can inform lesson planning or program improvement.

VOICES FROM THE FIELD

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How has your agency/consortium used assessment or enrollment data to coordinate instruction and support across programs?

CAERC: At the consortium level, we utilize enrollment and assessment data to evaluate regional capacity and needs; this is especially important when we go into Three-Year and Annual Planning. The process begins with a data-driven review of aggregate and disaggregate CAEP data, qualitative student feedback data, and regional demographic data. The analysis provides an accurate description of the types and levels of education and workforce services offered throughout our consortium, as well as how effectively we are addressing the needs of adults in the region. Some of our data tools include TOPSpro Enterprise, Data Vista, CAEP Fact Sheets, Google Sheets, and Google Forms.

Dr. Marla Clayton Johnson (Charles A. Jones Career and Education Center): We've used enrollment data to determine program sustainability. We have shifted to student-centered class development rather than teacher-driven class schedules based on CASAS data. Our teachers have access to TOPSpro Teacher Portal and run reports to inform and adjust their instruction.

What structures or practices at the consortium level have helped members work with data effectively, both with staff and in using it to inform decision-making?

CAERC: Our consortium supports a Data and Accountability workgroup, which includes CAERC staff, a subject-matter expert, and consortium members (data managers, support staff, and some administrators, counselors, and teachers). The workgroup meets monthly online, focusing on hands-on data alignment and analysis. Together, we build on our data literacy and knowledge, dig into the data, analyze performance and persistence, and assess support services.

Dr. Marla Clayton Johnson (Charles A. Jones Career and Education Center): The data and accountability meetings have been instrumental in collecting, analyzing, and interpreting data to make decisions at the site level.

Standardized Assessments

Standardized assessments are tests designed to measure specific skills or knowledge areas using the same administration and scoring procedures for all learners. In adult education, standardized assessments may lead to recognized credentials such as a high school equivalency certificate or an industry certification.

Placement assessments determine which course, level, or program best matches a learner's current skills. For example, a program may use an initial CASAS eTest to decide whether a learner begins in an Intermediate Low or Intermediate High ESL course. However, placement decisions are most accurate when they include multiple factors, such as prior education, work experience, learner goals, writing samples, or informal interviews in addition to test scores. Programs can collect this information through digital intake forms, online interest surveys, or writing samples submitted in an LMS. In career-technical education (CTE), programs may also consider job-specific skills or certifications, such as OSHA safety training, ServSafe, or Certified Nursing Assistant (CNA) licensure, to place learners into advanced courses, waive prerequisite requirements, or connect them with appropriate apprenticeship or training opportunities.

Diagnostic assessments identify specific strengths and areas for development within a subject. Like placement assessments, they are often used at the start of a class or unit to help instructors target instruction. For example, a diagnostic reading activity delivered through a platform like Burlington English or Aztec may measure comprehension skills. Results might show that a learner can identify main ideas but has difficulty interpreting charts and graphs.

Formative assessments are ongoing checkpoints during instruction that monitor progress and guide next steps for teaching and learning. The term contrasts with summative assessments, which evaluate what learners have achieved at the end of a course or module. Instructors may use formative assessments at many different stages of instruction, not for a formal grade but to gauge understanding. These assessments may include informal observations during instruction, quizzes or practice tests within instructional software, or short online surveys that provide immediate results. This information helps instructors identify patterns in performance and make timely adjustments to instruction.

Summative assessments occur at the end of a course or level to demonstrate proficiency of competencies and determine readiness for advancement. Examples include a final exam in a course, a CASAS post-test at the end of a term, or an official high school equivalency test such as the GED or HiSET. Some summative assessments lead to formal outcomes that recognize course completion, job-related competencies, or performance on external exams. Standardized assessments administered outside the program, such as high school equivalency exams, may also include testing fees that programs may need to budget for or help learners cover.

Common types of formal, summative assessments include the following categories:

- **Career and technical education (CTE) assessments** often combine hands-on and written components to evaluate job-related skills and knowledge. For example, a learner in a welding course might demonstrate technique in a performance task and also complete a written safety test. These assessments may be required for program completion or for earning a related certificate or credential.
- **Certificates**. Issued by an institution to document completion of a defined sequence of instruction. For example, an adult school may award a certificate for completing a vocational course or series of modules. California community colleges award noncredit certificates of completion and competency in approved pathways.
- **Credentials**. Awarded by external organizations based on successful performance on standardized assessments aligned to industry-recognized competencies.
  - » *Industry-recognized credentials and licensures*. These qualify learners to enter or advance in employment. Examples include Certified Nursing Assistant (CNA) licensure, ServSafe, Microsoft Office Specialist, ASE certifications, and high school equivalency certificates earned through the GED or HiSET.
  - » *Workforce readiness credentials*. These validate preparation for work but may not, on their own, qualify a learner to enter a job directly. Examples include OSHA safety tests and other short-term certificates that demonstrate foundational competencies.Both certificates and credentials provide documented recognition of skills. Some carry external validation beyond the issuing institution and are often linked to employment or further training opportunities.

Both certificates and credentials serve as evidence of skills that can be verified by employers or training partners.

Approved Standardized Assessments in California

In California, the standardized assessments approved for National Reporting System (NRS) accountability are provided by CASAS (Comprehensive Adult Student Assessment Systems). Most are administered through CASAS eTests, which supports both in-person and remote delivery and integrates with TOPSpro Enterprise (TE) for reporting. Paper-based options remain available for some tests, but digital delivery can provide immediate scoring of some items and faster access to reports.

CASAS assessments are organized by program area, with different series designed for ABE/ASE, ESL, and Adults with Disabilities:

Adult Basic and Secondary Education (ABE/ASE)

- CASAS Reading GOALS: Reading series for ABE and ASE levels
- CASAS Math GOALS: Math series for ABE and ASE levels

English as a Second Language (ESL)

- CASAS Reading STEPS: NRS-approved ESL reading series (levels A–E), aligned with English Language Proficiency Standards
- CASAS Life and Work Reading: Reading series for ESL learners
- CASAS Life and Work Listening: Listening comprehension series
- CASAS Reading for Citizenship: Focused on U.S. civics and citizenship content
- CASAS Adult Secondary Reading: For advanced ESL or ASE-level learners

Adults with Disabilities (AWD)

- CASAS POWER (Providing Options for Workplace, Education, and Rehabilitation): Foundational skills (levels 2A–4A)
- CASAS Adult Life Skills: Practical life skills (levels 2A–5A)
- CASAS Braille Reading Assessment: Measures Braille proficiency

Programs generally use a single approved test series per content area to ensure consistency in placement, instruction, and reporting.

High School Diploma/High School Equivalency

Adult learners can complete high school through two main pathways: earning a high school diploma or obtaining a High School Equivalency (HSE) certificate.

High School Equivalency Tests

Two HSE exams are approved in California:

- **GED® (General Educational Development)**: Includes four subject tests: Reasoning Through Language Arts, Mathematical Reasoning, Social Studies, and Science. It is administered by Pearson VUE.
- **HiSET® (High School Equivalency Test)**: Includes five subtests: Language Arts Reading, Language Arts Writing, Mathematics, Science, and Social Studies. It is administered by PSI Services.

Passing either exam results in a High School Equivalency Certificate, which is typically accepted by employers as an alternative to a traditional diploma. Both exams are offered in English and Spanish, with remote-proctored options available for eligible test-takers. Remote testing for both GED and HiSET requires a verified testing environment, reliable internet and device setup, identity verification, and adherence to each provider's security protocols. The GED also requires test-takers to earn a qualifying score on the GED Ready practice test before scheduling the online exam.

Adult High School Diploma

K–12 adult schools may offer accredited diploma programs. Learners earn credits in required subject areas such as English, math, science, social studies, and electives. When credit requirements are met, a high school diploma is awarded by the local board of education.[3]

Instructional formats may include competency-based courses, independent study, or blended models designed to accommodate adult schedules.

National External Diploma Program (NEDP)
The **NEDP** is a competency-based option for earning a high school diploma. Instead of completing full courses or timed exams, learners demonstrate competency through practical tasks collected in an online portfolio. Tasks are completed independently and assessed one-on-one.

To offer an NEDP, an agency must meet provider qualification requirements, including staffing (training at least two personnel to serve as advisor, assessor, and portfolio reviewer), facilities and technology (ensuring computer access and a private space for assessments), and access to required CASAS materials and systems (such as Web Enrollment Units and other NEDP administration tools).

Because the program is portfolio-based, digital skills are embedded in its design. Learners may conduct internet research, create documents, and navigate online systems as part of completing tasks, making the NEDP both an assessment and a way to build applied digital literacy.

Remote Testing

Remote testing refers to computer-based assessments that learners complete outside of a classroom or test center usually with a trained proctor monitoring the session through a secure video connection. This option, introduced widely during the pandemic, remains in use because it increases flexibility and access for learners who cannot test in person.

Successful implementation requires adequate digital access and clear procedures for maintaining test security. Learners need reliable devices, stable internet connections, and basic familiarity with online navigation. Programs must also have trained staff, approved testing platforms, and protocols that align with California Department of Education (CDE) policy.

In California, remote testing is permitted for certain assessments under conditions established by the California Department of Education (CDE). Programs must meet these requirements in order to offer the option.

Current California Policies (2025)
The California Department of Education permits remote testing for certain approved assessments under specified conditions. Each agency's Local Assessment Policy must include written procedures covering the following areas:

- **Test security and integrity**: How content will be protected and unauthorized assistance prevented
- **Privacy protections**: How personally identifiable information will be handled during scheduling, ID verification, and testing

- **Proctor qualifications and roles**: Which staff may serve as proctors and what training is required
- **Identity verification**: Steps for confirming the learner's identity, typically through a government-issued photo ID shown via webcam
- **Learner orientation**: How learners will prepare for the remote testing process, including rules and technology requirements
- **Technology standards and contingency plans**: Approved testing and proctoring platforms and procedures for handling interruptions such as internet or video failure
- **Documentation**: How sessions and irregularities will be recorded in TOPSpro Enterprise (TE) according to local procedures

Remote Testing Implementation Considerations
To support successful implementation, agencies may:

- Offer practice sessions so learners can test their equipment and become comfortable with the platform.
- Provide clear written instructions for both learners and staff.
- Schedule smaller testing groups when needed to support security and troubleshooting.

Remote testing can expand access, but it also requires careful coordination of staff, technology, and learner support. Agencies should weigh these resource demands against the benefits that remote options provide.

Citizenship Tests

Adult education programs can provide citizenship preparation and testing support to help learners build the language, civics knowledge, and interview skills required for the U.S. Citizenship and Immigration Services (USCIS) naturalization exam. These services are distinct from the official exam and often use CASAS Citizenship Tests to measure readiness. The naturalization exam consists of an oral interview with an English language component and a civics component testing U.S. government and history.

CASAS standardized citizenship assessments aim to measure a learner's ability to 1) respond in English to common interview questions and 2) demonstrate knowledge of U.S. civics in formats similar to the official exam. Practice versions of these assessments can be administered in class, with some remote testing options available. In California, learner performance on the official CASAS Citizenship Exams is included in state accountability reports and can generate additional program funding, known as payment points. For WIOA Title II–funded agencies, the CASAS Citizenship Listening Tests 965C and 966C are eligible for 231 EL Civics payment points when administered with a valid pre- and post-CASAS test. Other payment point criteria may vary by program and funding source.

Instructors may combine formal practice tests with informal preparation activities such as role-play interviews. This combination supports learners in developing the civics knowledge

and communication skills required to complete the speaking, reading, and writing components of the USCIS exam.

Performance-Based Assessments

Standardized tests measure knowledge and skills in controlled formats, while **performance-based assessments** aim to test how learners apply skills in realistic situations. These assessments reflect the types of tasks learners may encounter in work or daily life scenarios. Performance-based assessments consider both the process and the product, providing a fuller picture of learner ability than test scores alone.

In California's adult education system, many performance-based assessments are designed within a **competency-based education framework**. Competency-based models organize instruction around clearly defined skills and require learners to demonstrate those skills through practical tasks.[4] In this context, performance-based assessments measure progress toward competency goals, often in ways that mirror real-world applications. For example, an ESL learner may complete an online job application, or an ABE learner may draft a resume or deliver an oral presentation.

A statewide example is the **Civic Objectives and Additional Assessment Plans (COAAPs)** within the EL Civics program, which is usually offered as part of an agency's ESL program rather than as a standalone class. COAAPs are built around competencies related to civic participation, such as navigating health care systems or applying for employment. Each plan defines real-life tasks that require learners to apply language and digital skills in authentic contexts. For example, "Use the internet to find and compare three local job postings and report the findings" integrates reading, research, and communication skills. A standardized rubric is used to evaluate performance. Completion of COAAPs allows learners to demonstrate proficiency in civic contexts while also providing programs with reportable accountability data.

Extended reality (XR) simulations and virtual labs can also be used for performance-based assessment. These tools provide immersive environments where learners practice skills in realistic scenarios. Use of such tools requires consideration of cost, technical requirements, and content development.[5]

Digital Skills Assessments

Digital skills assessments measure how comfortably and effectively learners use computers, software, or online tools. In adult education, they can help inform instruction planning to compare current digital literacy skills with authentic goals such as completing online job applications, using workplace technology, or navigating digital learning platforms. Some assessments align with digital literacy frameworks or industry standards, allowing learners to earn recognized digital credentials that document transferable skills.

There are several commonly used tools and frameworks to assess digital skills.

One widely used tool is the **Northstar Digital Literacy Assessment**, an online platform that measures skills in three areas: essential computer skills (basic operations, internet use, email), essential software skills (Microsoft Office and Google Docs), and using technology in daily life (tasks such as internet searches, social media, information literacy, career exploration, and telehealth). Learners complete interactive tasks like formatting text in a document or identifying parts of a computer window. Results show which items were missed, supporting error analysis and targeted practice. Proctored assessments, either in person or remote, can result in a certificate and digital badge, and the aligned Northstar curriculum allows instructors to provide instruction based on demonstrated competencies.

Other platforms also support digital skill development and assessment. **Google's Applied Digital Skills** includes project-based lessons that can be paired with informal or performance-based assessments. The **ISTE SkillRise Profile and Assessment**, developed with Northstar, extends beyond basic operations to evaluate higher-order uses of technology such as collaboration, problem-solving, creativity, and critical thinking. Learners who meet the requirements can earn a micro-credential that verifies their ability to apply technology effectively in workplace contexts. The **IC3 Digital Literacy Certification**, developed by Certiport, is another option recognized by employers across multiple industries. It measures a broad range of computer, software, and internet competencies and provides a credential that supports workforce preparation. Tool selection depends on local goals, employer needs, and available proctoring capacity.

Digital skills assessment is also integrated into broader adult education programs. The **National External Diploma Program (NEDP)** requires competencies such as conducting online research, organizing data, creating original work, and practicing responsible digital citizenship. Many **EL Civics COAAPs** now include digital components, such as using an online map to find directions to a health clinic.

VOICES FROM THE FIELD

Pete Gonzalez

Transition Counselor, *San Bernardino Valley College*

How do you assess digital literacy skills?

It happens from the beginning—if a student can't use my Calendly link to make an appointment or struggles using Zoom during a counseling session—then I'll refer them to the tutoring center for additional technology support. I won't sign those students up for online courses until they feel comfortable using the tech. But, if a student can schedule a meeting, navigate Zoom, share their screen—those are students that I'll refer to our online courses, because they already have the digital literacy skills to be successful in an online course.

Digital Credentials, Wallets, and Skills-Based Hiring

Micro-credentials are short, competency-based recognitions that document specific skills. Unlike a broad course grade, they provide documentation of what a learner can do and are often awarded after a standardized assessment or demonstration. For example, passing a Northstar Digital Literacy assessment can result in a badge for each skill, for example, "Using Email" or "Spreadsheet Basics." Learners completing a short workplace readiness course may earn an OSHA-10 safety card or a ServSafe food handling certificate. These recognitions can be combined or stacked to demonstrate broad skill sets or contribute toward certificates and industry-recognized credentials.

Research indicates that alternative credentials are now part of mainstream education and workforce systems, with many higher education institutions offering certificates, badges, or micro-credentials.[6,7] Studies in rural communities suggest that micro-credentials can help create clearer career pathways, with potential outcomes such as promotions, wage gains, or transfer into additional training opportunities.[8]

Digital credentials and wallets coexist with micro-credentials by giving learners a portable and verifiable way to share their achievements. A digital credential includes detailed information about what was required to earn it and who issued it. A digital wallet is a secure online space where learners can store and share their verified credentials, such as badges, certificates, and licenses. Some wallets (e.g., Learner Credential Wallet from MIT, SmartResume) can also host a Learning and Employment Record (LER) that organizes verified data from multiple sources—such as schools, employers, and credentialing bodies—into a single, transferable profile.

These tools connect directly to **skills-based hiring**, in which employers place emphasis on demonstrated competencies rather than degrees alone. For example, a learner in a book-keeping course might store a digital badge for course completion, a QuickBooks Certified User certificate, and a community college accounting credit in the same wallet to share with an employer. A learner in an ESL program who earns a customer service badge can demonstrate communication skills to a potential employer. And a series of IT support badges may qualify learners for entry-level technology jobs even before completing a longer degree program.

Digital credentials and wallets are still emerging and not yet widely adopted by employers or training providers. ISTE's SkillRise interactive story provides an accessible, mobile-friendly introduction to these concepts for interested parties.

Administrator Tip

Labor market data can inform curriculum and credential planning by showing which skills are in demand. Programs can scan regional job postings and workforce reports manually or use AI tools such as ChatGPT, Gemini, or Claude to automate this process. Some tools include a feature called Deep Research, which conducts multi-step searches across verified sources and synthesizes the results into a single analysis. This helps programs quickly identify which industries are hiring and which entry-level certifications (for example, CNA, OSHA-10, ServSafe, or CompTIA A+) appear most frequently. Aligning instruction and assessment with these signals helps learners prepare for credentials that are portable and meaningful in skills-based hiring contexts.

Prompt Example Using Deep Research: I teach adult learners in northern California (GED/ESL). Please analyze state and regional labor market data to identify which entry-level industries are currently growing. Then list training programs in northern California that align with those industries. For each program, include the required certification(s), program length, estimated cost, and admission requirements. Where possible, cite official sources (state workforce boards, training providers, credentialing organizations).

VOICES FROM THE FIELD

Denise Douglas

Assistant Director, *Porterville Adult School*

How has your program integrated Northstar digital literacy assessments into CTE courses, and what have you learned from that process?

Porterville Adult School has strategically integrated the Northstar Digital Literacy Assessments across its Career Technical Education (CTE) and non-CTE programs to ensure all students build the digital skills necessary for college, career, and lifelong learning. This initiative has been driven by the work of PAS instructors through their participation in the Digital Leadership Academy (DLAC) through OTAN.

In previous years, CTE students were screened for digital literacy using a local process that required them to create a Word document, attach it to an email, and send it to staff. While this offered a basic measure of familiarity, it was not a comprehensive or reliable assessment. In 2024, recognizing the need for a more

Voices from the Field (continued)

standardized and meaningful approach, the school implemented the Northstar Digital Literacy System.

As part of this integration, incoming CTE students complete the Basic Computer and Email assessments through Northstar. Although Northstar defines 85 percent as a passing score, Porterville Adult School established a 70 percent benchmark for CTE enrollment. Students meeting or exceeding 70 percent may enroll directly in their CTE programs, while those below 70 percent are placed in a Northstar CTE Adult Basic Education class for targeted instruction and guided practice. Upon completion, students are retested, and those achieving the 85 percent standard have this accomplishment noted on their CTE completion certificate. This process has provided a consistent, data-informed way to identify learner needs and document digital skill growth.

Building on this success, the school expanded Northstar use into non-CTE courses, including ESL, to address varying levels of digital literacy across the student population. Many learners now use Northstar as an entry point for developing technology confidence that supports both academic progress and career readiness.

How are you using digital badges to recognize student progress, and how have learners and instructors responded to them?

While Northstar offers digital badges through Badgr, that platform proved cumbersome for many students to access. To make recognition more accessible, Porterville Adult School developed a local badging system using Google Classroom. Instructors can now assign digital badges directly to students who pass their assessments. This simplified process has made it easier for students to view and celebrate their achievements.

Instructors report that students, especially in ESL programs, are highly motivated by the badges and often complete additional Northstar modules beyond the required assessments. Through this system, learners are not only building digital competence but also gaining a stronger sense of accomplishment and confidence as they progress.

Informal Assessments

Informal assessments are often formative (measuring learning) rather than summative (measuring outcomes) because they inform ongoing instruction. The term "informal" emphasizes their adaptable, low-stakes nature. They can be introduced at any point in a lesson to adjust instruction and address learner needs.

Digital platforms can make it easier to gather instant feedback, maintain engagement, and ensure accessibility. Because these tools are often instructor-designed, thoughtful planning supports their effectiveness. Educators can use the following questions as a planning checklist:

- **What should learners be able to do?** Define the specific skill or outcome the assessment will check
- **What is being measured?** Identify what data will be collected from this assessment
- **How will learners demonstrate skills?** Match the assessment format to the target skill
- **How will the data be used?** Decide how to respond to results
- **What are the short- and long-term goals?** Connect the assessment to larger instructional purposes

Examples of Informal Assessments

Once the purpose and format have been identified, informal assessments can take many forms. The examples below illustrate approaches that can be adapted for different subjects, delivery modes, and learner needs:

- **Short quizzes** using an LMS quiz feature, Google Forms, Microsoft Forms, or Wayground for immediate results
- **Quick writing tasks** where learners respond to a prompt in a shared Google Doc, Padlet board, or LMS discussion thread
- **Polls** with tools such as Mentimeter or Poll Everywhere to check comprehension during a live session or webinar
- **Thumbs-up/thumbs-down or emoji reactions** in Zoom, Microsoft Teams, or similar platforms for quick, nonverbal checks
- **Learning games** hosted on tools such as Kahoot! or Blooket to review material in a low-stakes format
- **Exit tickets** collected digitally or on paper, asking learners to reflect on key takeaways or remaining questions
- **Peer reviews** conducted through shared documents, discussion boards, or breakout rooms to provide constructive feedback
- **Verbal Q&A** during lessons, in person or via video conferencing, to confirm understanding

- **Online and in-person discussions** using tools such as VoiceThread, Padlet, or discussion boards in Canvas or Moodle to expand on peers' ideas, demonstrate comprehension, and practice expressive skills

Research shows that frequent participation in meaningful literacy and numeracy activities is linked to long-term growth in proficiency.[9] Informal assessments can provide repeated opportunities for practice, making everyday classroom tasks part of a larger cycle of skill development.

AI in Assessment

Generative AI tools such as ChatGPT, Gemini, and Claude are emerging technologies being tested in various contexts including creating content, adapting materials for different levels, and organizing data for analysis. Some ideas adult educators can try with AI:

- **Create reading comprehension questions** tailored to a specific passage
- **Develop multiple versions of a math word problem** for different skill levels
- **Suggest rubric criteria** for a project or performance task
- **Summarize learner data** to identify skills that need reinforcement

As with all digital tools, its role is to enhance instruction, not replace the expertise of educators. All AI-generated outputs should be reviewed for accuracy, bias, and appropriateness before use. Careful review ensures the resulting data is reliable enough to guide instruction and support learner progress.

Program Tip

Establishing clear local policies on AI use in assessment can support consistent practice. Policies may address handling learner data, maintaining instructional integrity, and clarifying how final instructional decisions are made (see Chapter 8 for additional guidance on developing acceptable use policies).

For additional strategies on using AI in teaching and assessment, see Chapter 8.

Endnotes

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6 https://upcea.edu/wp-content/uploads/2017/05/Demographic-Shifts-in-Educational-Demand-and-the-Rise-of-Alternative-Credentials.pdf
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CHAPTER 7

Fostering Healthy, Equitable, and Inclusive Digital Communities

While Chapter 2 focuses on structural equity, meaning the systems, tools, and supports that make digital learning accessible, this chapter focuses on equity in relationships and participation, or how learners experience digital spaces once they are enrolled. Every learning experience takes place within the broader context of a person's life. Social connections, cultural background, prior educational experiences, and current circumstances all shape how adults participate and engage. When digital environments are designed with these factors in mind, they can build connection, support social and emotional growth, and help learners navigate online spaces with confidence. This chapter presents strategies for creating inclusive, community-centered learning environments in adult education.

Community-Building

A healthy, inclusive community is the foundation of meaningful collaboration in online spaces. Digital course communities do not form automatically; they require intentional design that welcomes all learners and supports connection. This involves building relationships, trust,

and a sense of belonging among adults who may be geographically dispersed and balancing different responsibilities.

Community-building is especially important in distance learning programs, where learners may study from home and experience greater isolation. Research shows that online learners are more likely to persist when they feel connected to peers and instructors in a supportive environment.[1]

The concept known as "communities of practice," theorized by Etienne Wenger, is based on the idea that learning happens not only through independent study but also through informal shared activities, knowledge exchange, and identity-building within a group. For example, in an online ESL class, learners may begin meeting outside of class to share resources, practice vocabulary, and address challenges together. These interactions extend learning beyond a single course and contribute to a sense of belonging.

The Community of Inquiry (CoI) framework adds another perspective, focusing on three elements: social presence, teaching presence, and cognitive presence. These elements illustrate how purposeful design and facilitation help learners feel connected and supported online. For example, instructors can build social presence by starting the term with introductions that invite learners to share their goals and experiences. They can reinforce teaching presence by providing clear navigation in the LMS, timely feedback on assignments, and regular announcements that guide learners through each module. Cognitive presence can be supported through discussion prompts or projects that ask learners to apply new concepts to familiar settings, such as work, family, or community contexts.

Strategies for community-building in digital and distance learning can include:

- **Encourage personal connections**. Create opportunities for learners to connect around shared goals or experiences, such as short introductions, peer "talking partners," or brief breakout discussions. These interactions build familiarity and trust in online spaces.
- **Foster collaboration**. Design structured group work—like peer-to-peer tech help, small projects, or ongoing study teams—that lets learners contribute and learn from one another. Collaboration develops both academic and digital communication skills.
- **Design for asynchronous connection**. Use discussion boards, peer feedback tools, or shared workspaces so learners can engage on their own schedules while still contributing to a shared community.
- **Make inclusion visible**. Invite learners to express their identities through name pronunciations, languages, or short personal profiles. Use multilingual tools and provide captions or transcripts so everyone can participate fully and revisit shared content.
- **Keep course design predictable**. Use consistent schedules, layouts, and communication patterns to reduce cognitive load and make participation straightforward. Predictability helps learners focus on connection rather than navigation.
- **Ensure accessibility**. Choose tools and platforms that support screen readers, captions, alt text, and keyboard navigation so all learners can participate equitably.

- **Highlight learner voice**. Feature contributions through shared whiteboards, collaborative polls, or multimedia submissions. Approaches such as Universal Design for Learning (UDL) reinforce that everyone's input shapes the learning community.
- **Share digital expertise**. Dedicate short segments for learners to demonstrate a tool, shortcut, or strategy they use. Peer-led sharing builds confidence and normalizes collaborative problem-solving.
- **Model digital citizenship**. Demonstrate respectful communication, inclusive discussion norms, and constructive online interaction. These practices help learners see how digital platforms can support learning and professional collaboration.

Community-building also depends on program structures that help learners find support when they need it. Programs can support the community by making digital resources easy to find and use. Creating program-managed spaces such as an orientation portal, help desk, or central communication hub helps learners know where to go for assistance. Clear entry points reduce confusion, lower stigma around seeking help, and make programs feel approachable. When support is visible and accessible, learners are more likely to persist and engage fully in the community.

Program Tip

Pair learners as talking partners in online or hybrid courses. Partners connect weekly through their preferred format (text, email, phone call, or video chat) to check in on goals, share challenges, and encourage progress. A simple routine, such as sharing one accomplishment and one challenge each week, keeps these exchanges consistent and purposeful. Over time, peer partnerships can become a core part of the learning community and support academic engagement. Additional examples can be found in the IDEAL Distance and Digital Education Handbook from World Education.

VOICES FROM THE FIELD

Dr. Merari Weber
Professor/Coordinator ESL & PD, *Santa Ana College SCE*

How have you created opportunities for students to build classroom community, both in person and online?

All of our Distance Education courses are designed using the CVC-OEI Design Rubric, ensuring intentionality and consistency across the board. This framework guarantees substantive interaction (not only between instructors and students, but also among students themselves) creating a strong sense of classroom community.

Such engagement is essential for helping students feel seen, supported, and prepared to thrive in the class and progress along their educational pathways.

In our in-person courses, we reinforce this same commitment to engagement by embedding communicative language practices and Project-Based Learning. These approaches allow students to actively practice both their language skills and the 21st-century competencies that are increasingly vital for success in today's world.

Social and Emotional Learning (SEL)

Social and Emotional Learning (SEL) refers to developing skills that support understanding and managing emotions, building relationships, making constructive decisions, and participating effectively in school, work, and community life. In adult education, these skills can contribute to persistence and support learners in applying what they learn in practical settings.

Research from the Collaborative for Academic, Social, and Emotional Learning (CASEL) identifies five competencies that apply across all ages[2]:

- **Self-awareness**: Recognizing one's emotions, values, and strengths, and understanding how they shape behavior.
- **Self-management**: Regulating emotions, thoughts, and behaviors to manage stress, stay motivated, and achieve goals.
- **Social awareness**: Demonstrating empathy, respect, and perspective-taking across different cultures and backgrounds.
- **Relationship skills**: Building and maintaining healthy connections through communication, cooperation, and conflict resolution.

- **Responsible decision-making**: Making ethical, constructive choices that consider the well-being of oneself and others.

Reentering education can bring both motivation and stress for adults. Competing responsibilities, limited prior exposure to technology, or past school experiences may affect participation. Integrating social and emotional learning (SEL) into digital and blended instruction helps learners manage these challenges, build supportive relationships, and persist through challenges. Practices include:

- Applying adult learning theories to design experiences that respect autonomy and connect to learners' lived contexts.
- Involving learners in goal-setting and self-monitoring through tools such as digital surveys, reflection journals, or progress trackers.
- Providing opportunities for peer connection through group work, discussion forums, study partners, or breakout rooms, including both academic and informal interactions.
- Offering leadership opportunities where learners facilitate short discussions, lead peer tutorials in breakout rooms, or organize study groups in messaging apps. These roles build confidence, communication skills, and a sense of ownership in the learning community.
- Using digital tools to support perspective-taking and cross-cultural empathy, such as comparing two news articles on the same event, discussing differences in framing, or participating in simple virtual exchange activities with peers in other communities.

SEL also appears in advising and administrative practice. For example, career navigators may use short online goal-setting forms and revisit them in advising sessions, and administrators can schedule professional development focused on culturally responsive and trauma-informed teaching in digital environments.

SEL can also support digital resilience by helping learners persist when technology feels challenging. Practices include:

- Keeping short reflective logs after completing digital tasks to note strategies that worked
- Providing practice with authentic systems such as online forms, applications, or portals so learners build confidence through use
- Celebrating frequent "small wins," such as logging in successfully, uploading a file, or completing a survey, to reinforce progress

These routines give learners practical ways to apply SEL skills such as self-awareness and responsible decision-making while building persistence and confidence in digital environments. Additional examples and extensions can be found in the EdTech Integration Strategy Toolkit from World Education.

In addition to individual classroom strategies, programs can draw on broader frameworks and shared resources that provide structure for SEL. Transformative SEL emphasizes identity, agency, and equity, making SEL relevant for adults whose experiences are shaped

by systemic inequities. Programs can apply this perspective by incorporating issues from learners' communities into projects or by creating opportunities for adults to set and pursue personal goals. Practices such as the National Equity Project's Constructivist Listening offer structured routines for building empathy and understanding through guided peer conversations and reflection activities.

These program-level approaches can be reflected in digital classroom practice. One option is to create a rotating activity where each week one learner posts a short audio or video reflection on a personal experience connected to the course theme, such as a challenge at work, a cultural tradition, or a community issue. Classmates respond in writing or audio with questions or affirmations. This practice uses technology to amplify learner voices, promote empathy, and build community across diverse experiences.

Instructor Tip

Many adult learners bring digital practices from their families and communities that can be integrated into instruction. For example, immigrant and multilingual families often use WhatsApp groups to maintain ties across countries and share knowledge. Survey students about what tools they use, and make an effort to integrate them into instruction, building on current skills with digital storytelling, collaborative discussion boards, or peer exchanges that affirm home language use and foster cross-cultural empathy.

Cultivating Educator Well-Being

Supporting learner growth is closely connected to supporting educator well-being. Research on social and emotional learning indicates that when educators are calm, self-aware, and positive, they help create classroom climates that are inclusive and supportive.[3] Educators who manage stress effectively are better able to model problem-solving and healthy communication, which learners can apply in academic and professional settings.

In adult education, well-being is relevant across roles, including instructors, career navigators, administrators, and support staff. Digital formats offer new opportunities but also new challenges. Without supportive structures, managing technology platforms, providing feedback in multiple formats, and addressing learner needs remotely can increase workload and contribute to fatigue.

Educators also benefit from applying SEL practices in their own work. Routines such as journaling about classroom experiences, problem-solving with colleagues, or planning short breaks to manage digital fatigue can support well-being. Making these practices visible to learners models constructive ways to manage stress and maintain balance in digital environments.

Additional self-reflection prompts for educators are available through CASEL's personal SEL reflection resources.

Programs can take concrete steps to promote educator well-being:

- **Gather staff input** through surveys, feedback sessions, or informal check-ins to identify stressors and needs.
- **Encourage peer support** by creating spaces such as online communities of practice or scheduled collaboration time where staff can share strategies and reduce isolation.
- **Balance workload expectations** by recognizing that digital teaching often requires additional preparation and communication. Programs can adjust class sizes, provide technical support, or allocate planning time to support sustainability.
- **Address digital fatigue** by limiting extended screen time. Helpful strategies include short, predictable breaks; camera-optional participation; and keeping synchronous sessions concise. Shorter online segments can be followed with off-screen activities such as written reflections, phone check-ins, or hands-on practice.
- **Strengthen belonging** through varied activities, such as shifting from a short lecture to partner conversation or digital tool practice. Small touchpoints like polls or chat prompts, can restore attention and reinforce community in online courses.
- **Promote self-care and boundaries** with resources and training that guide educators in setting limits between work and home life, especially when teaching remotely.
- **Provide access to mental health supports** such as counseling services or referrals to community-based resources. Clear communication about availability and confidentiality helps normalize their use.
- **Integrate wellness into professional development** by offering workshops on mindfulness, resilience, or stress management.
- **Leverage collaborative professional development models** such as the EdTech Maker Space by World Education, which brings educators together to co-create open digital resources and contribute to shared materials.
- **Offer collective wellness opportunities** such as virtual yoga, guided meditation, or shared journaling to strengthen staff community and reinforce the role of well-being in organizational culture.
- **Maintain open communication** between leadership and staff. Transparent, two-way communication builds trust and allows concerns to be addressed proactively.

Well-being is both an individual and an organizational practice. When leadership builds structures that address workload, provide access to resources, and encourage peer support, staff are better able to sustain their energy and presence.

Administrator Tip

Administrators can adapt the "talking partners" approach to support educators in online or blended settings. Pair instructors or staff as regular partners who meet briefly each week by phone or video to share updates, exchange strategies, and problem-solve. These short, consistent check-ins help reduce isolation, build a professional community, and strengthen staff capacity for digital instruction.

Digital Citizenship

For adult learners, participation in education, employment, and community increasingly depends on the ability to navigate digital environments. Applying for a job often requires uploading documents to an online platform. Accessing financial aid or benefits involves completing digital forms. Staying connected with peers, colleagues, and family commonly happens on social media and messaging tools. Each of these settings offers opportunities for connection and growth, while also presenting risks related to privacy, bias, and misinformation. Digital citizenship refers to the habits, skills, and decisions that enable learners to participate in these spaces safely, ethically, and effectively.

The dimensions below illustrate how digital citizenship appears in the daily experiences of adult learners. They highlight common contexts where learners make online decisions and suggest ways programs can support practice and reflection.

Personal data, privacy, and surveillance

Every click, search, and login generates data collected by devices and platforms. Data is used to both 1) personalize services and 2) inform advertisers or third parties. In the workplace, data collection can also occur in hiring and employment practices, such as background checks, productivity monitoring, or biometric systems. For adult learners, these processes can be invisible or difficult to interpret.

Activities that make these issues more concrete and provide learners with practical tools for protecting privacy include:

- Reviewing app permission screens together to identify what is necessary and what can be declined
- Comparing sign-in options such as single sign-on (SSO), email plus password, passkeys, or password managers, and considering tradeoffs in convenience and privacy
- Reading workplace or platform monitoring policies to highlight what is collected and how employees are informed

- Exploring privacy tools such as private browsing (incognito mode), anonymizing browsers like Tor, or privacy-focused email services such as Proton Mail to show practical safeguards

These strategies help learners build awareness and routines that they can apply in both personal and workplace settings.

Algorithms and platform bias

Search engines, job boards, and social media do more than display information. They rank, filter, and target content using algorithms. As a result, two learners searching for the same resource may receive different results. This filtering can reinforce existing inequities, a pattern sometimes referred to as digital redlining—when technology systems limit access or visibility for certain groups based on factors such as location, language, or demographic data. Affected groups include immigrants, refugees, formerly incarcerated individuals, and others who already face barriers such as limited device access, varied levels of digital literacy, or biased hiring tools. For adult learners, the key is not the technical details but the recognition that online results are partial and can be biased.

Classroom activities that can help learners see how algorithms shape results include:

- Running the same job search with different filters or locations and comparing the results learners receive
- Reviewing labels for ads, sponsored posts, and recommended items in a feed to show how content is prioritized
- Asking reflective questions such as “Why am I seeing this?” and “Who might not be seeing this?”

These practices help learners understand algorithmic influence and use search engines, hiring platforms, and information sources more critically.

Reputation, risk, and digital identity

Social media profiles and posts create a digital identity that employers, schools, and agencies may review in hiring or admission decisions. Adult learners often manage multiple accounts for family, community, and professional purposes. These same tools, when used intentionally, can also support learning, expand professional networks, and strengthen community connections.

The challenge is deciding what to share in each space, how it might be interpreted, and how to balance authenticity with professionalism. Educators can model effective practices by showing how digital tools can be used to engage with peers, participate in professional forums, exchange resources, and share projects or milestones. Highlighting achievements—such as completing a certification, earning a digital badge, or finishing a major project—can help learners build confidence and demonstrate skills to employers. This connects to digital credentials and wallets (see Chapter 6), where learners collect verifiable records of accomplishments that can be displayed on professional profiles or shared with hiring managers.

Programs can guide learners in making thoughtful choices about digital identity through activities such as:

- Reviewing privacy and audience settings on LinkedIn or similar platforms to note what information is public by default
- Drafting and peer-reviewing a professional introduction post suitable for a class forum, online profile, or job board
- Discussing when to separate personal, professional, and anonymous accounts and the risks when boundaries blur
- Practicing how to share achievements such as a ServSafe certificate, workplace safety card, or digital literacy badge in ways that highlight skills while protecting personal information

VOICES FROM THE FIELD

Suzy Kelly
CTE Instructor, *Berkeley Adult School (Ch7)*

How do you use social media in your class?

I created a Facebook page for my class so that students could share what they were learning with their family and friends. It became a really great way for students to share, either photos or videos, and helped them stay connected with family and friends—especially those from different countries. Of course, participation is optional and only for students who feel comfortable sharing.

For my students who like making videos, some of them post their videos on YouTube to share with others. With both Facebook and YouTube, I do have conversations with my students about being aware of what they are posting—staying mindful of what's in the background, or what they're sharing beyond just the content. But it's been great, even some of my friends are learning more about what I teach! We have a better reach now than we ever have because of social media.

Security practices across devices and roles

Adults may share laptops or phones with family members, use public Wi-Fi in libraries or cafés, and move between personal and employer-owned accounts. These situations increase the risk of unauthorized access or accidental data loss. Basic routines such as logging out after each session, limiting saved passwords on shared devices, and keeping work and

personal accounts separate can reduce these risks. Reinforcing these habits regularly helps build learner confidence and creates safer conditions for digital life.

Simple routines that can make device and account use safer:

- **Use a password manager**. A secure password manager helps store and organize passwords safely across devices, so users don't need to reuse or remember them. Most browsers, such as Chrome, Safari, and Firefox, include built-in password managers that offer basic protection. Free, open-source options like Bitwarden provide additional privacy features and work across multiple browsers and devices.
- **Set up two-factor authentication (2FA)**. Adding a second verification step, such as a code sent to a phone or authentication app, greatly reduces the risk of unauthorized access. Keep a simple record of recovery options in case a device is lost or replaced.
- **Use a VPN on shared or public networks**. A Virtual Private Network (VPN) encrypts an internet connection, making it harder for others to see what sites are visited or intercept personal data. VPNs are especially helpful when using public Wi-Fi, such as at libraries or coffee shops.
- **Log out securely**. Always log out after using shared devices, clear downloads or browser histories, and use guest sessions when available.

Phishing and scams

Adult learners may encounter digital scams in the form of phishing emails, fake job postings, or malware. Phishing emails may appear to come from government agencies, schools, or banks and request personal information or urgent action. Fake job postings may advertise high pay for simple work but require applicants to pay fees up front or provide sensitive details such as Social Security numbers. Malware can be hidden in links or attachments that appear legitimate, including resumes, tax forms, or shipping notices.

Programs can help learners recognize and avoid scams through intentional online safety activities:

- Compare real and fake job postings side by side and identify red flags such as requests for payment, vague job descriptions, or unrealistic pay, while verifying listings through official company sites
- Review sample phishing emails to highlight urgent language, suspicious links, and mismatched sender addresses
- Practice verifying the source of attachments or messages before opening them, such as checking official websites or contacting organizations directly

Workplace boundaries and norms

Understanding what counts as part of an employment record, how to engage in video meetings, and when to separate personal and employer-owned platforms is increasingly part of workplace readiness.

Activities that provide learners with space to practice workplace norms include:

- Reviewing a sample acceptable use policy to identify expectations for email, file sharing, and instant messaging
- Practicing video meeting etiquette such as camera use, chat participation, and background settings
- Mapping which platforms are owned by the employer and which are personal and discussing boundaries between them

Digital discrimination and advocacy

Digital environments may exclude learners through inaccessible websites, biased job ads, or automated screening tools. Knowing how to recognize and respond to these barriers can help learners advocate for access.

Activities that support advocacy skills include:

- Practicing how to request accommodations such as captions for a video interview or alternative formats for digital forms
- Comparing accessible and inaccessible web designs to highlight the role of features such as alt text or keyboard navigation
- Learning how to document and report issues by saving screenshots and noting impacts

Credibility in an AI environment

Generative AI tools can now produce resumes, essays, images, and videos that appear convincing. While these tools may support learning, they also increase the challenge of detecting misinformation. Adult learners can benefit from practice evaluating credibility and clear guidelines on responsible AI use.

Programs can introduce routines such as:

- Comparing a human-written and an AI-generated text to identify signs such as generic phrasing, fabricated references, or missing citations
- Using guiding questions to assess credibility, such as “Who created this?”, “What evidence is offered?”, and “What is the purpose?”
- Establishing class guidelines for AI use that clarify when disclosure is expected and what verification steps to follow

Integrating Frameworks for Digital Citizenship

Research-based frameworks can provide programs with a shared language for describing what digital citizenship looks like in practice.

Profile of a Lifelong Learner

ISTE's SkillRise initiative defines digital citizens as "inclusive, equitable, and culturally aware as they live, learn, and work in an interconnected world." For adult learners, this emphasizes that digital participation involves both protecting personal information and contributing to communities in respectful and ethical ways. Programs can use this framing to highlight how everyday digital choices can shape inclusive and equitable environments.

DigCitCommit Competencies

Originally developed for K–12, the Digital Citizen competencies can also apply to adult learners. They focus on positive digital actions organized into five core areas:

- **Inclusive**: engaging respectfully with multiple viewpoints
- **Informed**: evaluating the accuracy and perspective of digital content
- **Engaged**: using technology for civic and community participation
- **Balanced**: making choices about time and attention online and offline
- **Alert**: protecting privacy and creating safe spaces for others

These competencies can provide a structure for integrating digital citizenship into courses, advising, and program support:

- **Instructors** applying the Informed competency can work with learners to evaluate online job postings by examining accuracy, source credibility, and potential bias.
- **Career navigators** drawing on the Inclusive and Engaged competencies can create opportunities for learners to practice professional communication in workplace settings and reflect on how digital interactions support collaboration and respect across diverse teams.
- **Administrators** using the Alert competency can set expectations for secure and respectful use of program platforms, including guidance on privacy, account safety, and appropriate online conduct.

Programs can also apply the competencies more broadly. For example, during orientation, learners might reflect on how they balance study time and personal screen use, illustrating the Balanced competency in relation to daily routines. Competencies might also be incorporated into program-wide agreements about technology use.

Endnotes

1 https://journals.sagepub.com/doi/full/10.1177/07417136231184570

2 https://www.cde.ca.gov/ci/se/tselcompetencies.asp

3 https://doi.org/10.1177/003172171309400815

CHAPTER 8

Generative Artificial Intelligence

Artificial intelligence (AI) is increasingly becoming part of adult education, influencing how programs approach teaching, administration, and learner services. Some AI applications are already part of daily life, such as predictive text on phones, navigation apps, music recommendations, and fraud detection in banking. However, this chapter focuses on **generative AI**, which refers to tools that create new content such as text, images, audio, or video in response to prompts.[1] Focusing on ways generative AI can change how educators plan, deliver, and support learning, this chapter considers both opportunities and risks. The emphasis is on approaches that can adapt as tools continue to evolve, rather than on specific products that may change quickly.

Understanding Generative AI Tools

Before exploring specific applications, it is useful to understand the basics of how generative AI works. This context can help educators evaluate both its potential uses and its limitations.

Generative AI systems create new content in response to prompts. Text-based systems, often called large language models, are trained on extensive collections of data that include books,

websites, articles, and other sources. Rather than "knowing" facts, they generate responses by predicting likely words or sequences based on patterns in their training data.

This process is similar to predictive text features in email or messaging applications, which suggest the next word or phrase based on prior use. Generative AI carries out a comparable function at a larger scale, drawing on extensive datasets and more advanced computing models to produce extended and contextually relevant responses.

Newer tools extend beyond text. Many can accept voice input, analyze images or videos, read PDFs, and generate visuals from text prompts. These systems work by combining language models with image and audio models, allowing the AI to interpret and connect information across formats. For example, a learner might upload a chart and ask the tool to explain its trends, or describe a scene in words and receive a generated image in return.

Because these tools are trained to predict patterns in language, they can produce answers that appear fluent and convincing even when the information is inaccurate. This can lead people to assume a response is correct when it is not. AI may fabricate details (sometimes called a "hallucination") or reflect biases from its training data. Human judgment remains essential, including verifying information and recognizing that responses are shaped by existing content. That content may underrepresent diverse perspectives, overlook minority viewpoints, or reinforce stereotypes.

That's why it's essential for educators to review AI-generated content. Research in higher education supports this point, showing that AI is most effective as a drafting tool when paired with careful human editing and contextualization, rather than as an end-to-end solution.[2]

The next section describes how AI can be used across different roles and provides examples that illustrate its application in adult education settings.

Getting Started with AI Prompts

An essential skill for using generative AI is learning how to write clear prompts. General or incomplete prompts often lead to vague results, while well-structured prompts can generate usable output that requires minimal editing.

Prompt formulas are structured templates that guide the AI with specific elements such as:

- **Persona**: the role or perspective the AI should take (for example, "You are an ESL teacher…")
- **Context**: background information about the learners or setting
- **Task**: the specific request (lesson plan, summary, explanation, etc.)
- **Exemplar**: an example to follow or a model to use
- **Format**: the structure of the output (outline, table, email, etc.)
- **Tone**: the style or voice (formal, friendly, plain language, etc.)

For example:

- **Before** (general): “Can you help make an intermediate level ESL lesson plan?”
- **After** (structured): “You are an ESL teacher at a community-based adult school (persona). The learners are mostly Spanish-speaking adults at CASAS level 2 (context). Create a 60-minute ESL lesson plan that focuses on filling out a job application (task). Use the CASAS employment forms unit as a model (exemplar). Present it as a simple outline with objectives, activities, and materials (format). Write in a clear and professional voice (tone).”

The second prompt includes the level of detail needed for the AI to generate a lesson plan that is specific, potentially usable with editing, and aligned with adult learner needs.

Instructor Tip

When it’s difficult or unclear how to write a prompt, AI can be used to generate one. For example: “Write a prompt that would help create a 30-minute lesson plan on workplace safety for ESL learners.” Reviewing and adapting the output can make the process of prompt design easier and more transparent, particularly for complex tasks.

Additionally, instead of trying to write a perfect prompt on the first attempt, users can start by asking the AI to ask them questions. This can help clarify goals, gather missing details, and create a stronger foundation before drafting any output. For example, an administrator preparing a grant proposal could begin by prompting, “Ask me questions to help define our program goals and data needs for a technology integration plan.” The AI’s follow-up questions can surface missing information and help structure the planning process more efficiently.

When available, attaching or uploading relevant materials (such as a syllabus, lesson plan, or dataset) can also help AI tailor its responses to the adult education setting. For example: “Using the uploaded syllabus, create three short reflection questions for learners.”

Providing this context helps the AI generate outputs that are aligned with local curriculum, learner goals, or reporting formats. Using these strategies, educators can move from generic prompts to specific, context-aware conversations that produce more accurate and useful results.

Program Tip

Programs can create a shared digital folder or document where staff save effective prompts, examples, and use cases tailored to adult education. For example, instructors might contribute prompts for lesson planning or writing feedback, while administrators share ones for reports or data summaries. Over time, this can become a local resource for onboarding new staff, promoting consistency, and saving time when designing materials or administrative documents. Programs can also draw from openly licensed collections such as the CampGPT Open Prompt Book from World Education, which offers structured examples and activities that can be adapted to local needs and added to a shared prompt library.

AI for Instruction

Some AI tools are advertised to support lesson design, classroom activities, and assessment. While they do not replace educator expertise, they might be used to complement instructional planning and provide new ways to create, organize, or adjust learning materials.

Lesson and activity generation: AI can draft lesson plans, warm-ups, or practice questions prompted to align with objectives. For instance, an instructor preparing a unit on financial literacy could request practice scenarios involving budgeting or paycheck deductions.

- **Example prompt**: *"Create a list of five role-play scenarios for an adult education math class on personal finance. Each scenario should involve calculating income, expenses, or savings in a real-world context."*

Considerations for Reviewing AI-Generated Lessons: Some lesson generators reflect built-in pedagogical biases, such as teacher-centered delivery, rigid sequencing, or assumptions drawn from K–12 contexts. These patterns may not align with adult learning theories that emphasize relevance, flexibility, and learner agency. Reviewing and adapting AI-generated lessons helps ensure that pacing, tone, and structure reflect adult learners' goals, local contexts, and program outcomes.[3]

Content adaptation and differentiation: Instructors can ask AI to simplify, summarize, or reformat texts in an effort to make materials more accessible. For example, a workplace safety article could be rewritten in plainer language, paired with a glossary of key terms, or followed by comprehension questions. This allows learners at different proficiency levels to engage with the same core content.

- **Example prompt**: *"You are an assistant helping prepare materials for an ESL class. Rewrite this workplace safety article at a 6th-grade reading level, add a glossary of five key terms, and generate three multiple-choice comprehension questions with answers."*

Writing support and feedback: AI can suggest edits to learner writing or model how revision works. For example, with the right prompt, pasting a paragraph into an AI tool can generate grammar corrections and explanations. Educators can adapt these suggestions into a mini-lesson, a peer review activity, or targeted feedback.

- **Example prompt**: *"Review the following student paragraph. Highlight any grammar or punctuation issues, explain how to fix them in plain language, and suggest one way to make the writing clearer. Text: [paste paragraph]."*

Classroom Activities: AI can generate both strong and weak versions of an assignment to support critical evaluation. For example, in a job readiness unit, an instructor could provide a job description and ask AI to produce two sets of interview responses, one professional and specific and another vague or incomplete. Learners then analyze and compare the responses.[4]

- **Example prompt**: *"Using this job description: [paste text], write two versions of answers to five common interview questions. The first set should be strong, specific, and professional. The second set should be vague or incomplete. Present both sets side by side."*

Formative assessment support: AI can generate practice quizzes, exit tickets, or reflective prompts to help check understanding. It can also produce sample answers or explanations to support analysis of learner work.

- **Example prompt**: *"Generate five short-answer questions that check comprehension of this reading passage. Provide sample correct and incorrect answers written at a 7th-grade reading level. Text: [paste passage]."*

Because evidence-based best practices for AI in instruction are still emerging, its use remains largely experimental. When applied thoughtfully, AI can help draft materials, sample activities, or practice assessments.

VOICES FROM THE FIELD

Bilquis Ahmed

Instructional Lead Teacher, *South Bay Adult School*

In what ways are students using AI tools in their writing, and what kinds of assignments or activities seem to work best?

In our advanced ESL class, teacher Katy Jenssen had students use the following prompt in either ChatGPT or Gemini: "Please show me the errors and suggest improvements in the following composition." Students also upload the rubric for the paragraph or essay. For an expository essay, the rubric examines the

Voices from the Field (continued)

following: main idea and details, organization, voice, word choice, sentence structure, grammar, mechanics, and spelling

Students then type or copy and paste their writing from Google Docs into the GPT text box after the prompt. From there, students hand copy the GPT-corrected version and make revisions.

Which AI tools have students found most useful for writing, and what has made those tools a good fit for your context?

Students usually use ChatGPT for feedback on paragraph or essay writing. They appreciate seeing the feedback with concrete suggestions for improvements in content, grammar, or phrasing. The feedback would take a painstakingly long time for teachers to deliver to students. Along with the feedback, the suggestions for improvement allow students to eventually identify errors in clarity or organization on their own.

AI for Adult Learners

Developing AI literacy is now part of digital literacy for adult learners. Learners benefit not only from using AI tools but also from understanding how they work and how to use them critically and responsibly. Applications include clarifying complex concepts, practicing communication skills, preparing for assessments, and researching or planning career pathways. These activities can take place during class, as additional practice outside lessons, or while applying skills in workplace and community contexts.

Classroom discussions or reflection activities can help learners evaluate AI-generated information, recognize its limits, and consider appropriate uses. The AILit Framework provides a resource for defining and practicing these skills, organized around four domains: Engage, Create, Manage, and Design. Together, these concepts build a foundation for confident and informed use of AI in learning and daily life.

The examples below illustrate how these skills can be applied in classroom and independent learning contexts.

On-demand explanations and tutoring: AI can write about concepts in plain language, provide examples, and answer follow-up questions. For example, a learner preparing for the GED math test might prompt a step-by-step explanation of the triangle area formula from the GED formula sheet, then request practice problems. Learners can also prompt AI to adjust

explanations for different reading levels, connect examples to career goals, or show multiple approaches to the same problem.

- **Example prompt**: *"You are a math tutor helping a student prepare for the GED. Explain the origin of the triangle area formula from the GED formula sheet in plain language. Then, create three practice problems with answers, using examples related to construction or carpentry."*

> **Instructor Tip**
>
> Some tools, like ChatGPT, Gemini, and Claude, include features such as "Study Mode," which automatically ask follow-up questions, offer hints, and prompt learners to explain their reasoning.

Practicing conversation and language skills: Learners can use AI to simulate everyday conversations, receive feedback on grammar and vocabulary, and explore clearer phrasing options. English language learners practicing for a workplace might rehearse interactions such as greeting customers, explaining a product, or responding to a supervisor. Some tools include voice input and output, which could be used to practice pronunciation and listening comprehension.

- **Example prompt**: *"You are a conversation partner for an English learner practicing customer service. Role-play a short dialogue between a customer and a cashier at a grocery store. After the conversation, list any grammar or vocabulary errors and suggest clearer ways to communicate."*

Study aids and skill practice: Learners preparing for academic tests, high school equivalency exams, citizenship interviews, or professional certifications can use AI to generate practice materials. These might include questions with answers, flashcards, plain-language summaries of complex topics, or definitions of unfamiliar vocabulary. Learners must still review and verify the accuracy of the information it provides.

- **Example prompt**: *"You are a study assistant. Create 10 practice questions for the U.S. citizenship test focused on U.S. history, with correct answers. Then, write a short summary of the main points covered, using plain language at a 7th-grade reading level."*

Career and life skills development: AI tools can help users prepare resumés, edit cover letters, and practice interview questions with feedback. They can also assist in drafting professional emails, explaining workplace or legal documents in plain language, and outlining steps for common life tasks. For learners, practicing these activities with AI can provide opportunities to build confidence in a low-stakes environment before applying them in authentic contexts.

- **Example prompt**: *"You are a career coach helping someone tailor their resumé for a specific job. First, review this job description: [paste job description]. Next, review this resumé: [paste resumé]. Suggest specific changes to align the resumé with the posting, focusing on relevant ATS keywords, skills, and measurable accomplishments. Recommend any sections to reorganize for clarity, and flag information that could be shortened or removed. End by drafting a short summary statement for the top of the resumé that highlights the applicant's fit for the role."*

VOICES FROM THE FIELD

Ryan Detwiler

Associate Faculty, *NCESL, MiraCosta College and Palomar College*

Can you briefly describe what the app does and why you decided to build a custom tool rather than rely on ChatGPT or another publicly available general AI option?

Teachers can make AI-powered speaking chatbots and share them with students via links, Canvas, QR, or the Neo English mobile app. We built a custom tool because regular ChatGPT is too advanced for my beginning-level students. With the custom tool, teachers can customize leveled speaking-chatbots, for example, conversation, describe a picture, listen and repeat, and many other types.

Additionally, the custom tool safeguards student privacy. Students don't need to create accounts, and no student data is kept unless the teacher enables automatic transcript reporting. When teachers delete a class code, all corresponding student transcripts and scores are also deleted. Safeguarding student privacy is a top priority.

Please feel free to check out some examples here: https://eslvideo.com/chatty-bots.php

As you began using AI to create speaking activities, what has surprised you most, either something that worked better than expected and/or a challenge you had to troubleshoot? What advice would you give other educators that are getting started using AI in the classroom?

Sharing the Neo English app (where students practice with Chattybots) with my adult, level 1 students was surprisingly challenging. What I do now is break the process into stages:

- Day 1 – install
- Day 2 – log in

Voices from the Field (continued)

- Day 3 – scan a QR code

What has worked surprisingly well? Elevating "activities" into "projects." Instead of students using Chattybots during class, I show them examples of how we'll turn their classwork into Chattybots that they can practice with in the lab or on their phones. I agree with my colleagues that class projects improve effort, persistence, and classroom community. Two projects we've done so far this semester are:

- Student Dialogues – students write, practice, and record their dialogues.
- Create AI Characters – students design characters to interview.

How have your students engaged with the AI activities, and what benefits or challenges have you noticed compared to other speaking activities you've used before?

My students engage with Chattybots in the computer lab and on the Neo English app on their phones. Compared to live, in-person speaking practice, technology continues to be the biggest challenge.

However, the benefits to students include a greater understanding of what AI is and how to use it. Another benefit is that by using Chattybots, students document their progress transcript by transcript. They can clearly see their improvement by comparing transcripts from week 2 with transcripts from week 7.

Role of the Educator

Educators can model how to use AI effectively and responsibly by demonstrating clear prompting, reviewing AI-generated responses with learners, and discussing accuracy and usefulness. For example, a class might pose the same question to AI in several ways, compare the responses, and evaluate which is most accurate or clear.

To facilitate this process, instructors can display prompts and results on a shared screen, invite learners to suggest revisions, and discuss how changes affect the outcome. Small groups can then repeat the exercise with new topics and share what they learned.

Practical classroom activities can reinforce these habits and help learners engage critically with AI-generated content. Examples include:

- Drafting a professional email independently, then generating another version with AI and comparing the two for clarity and tone.

- Working in pairs to refine a prompt until the AI produces a clear explanation of a concept.
- Summarize a short article or video independently, then generate an AI summary of the same material. Compare which details each version includes or omits, and discuss how those choices affect meaning and credibility.

These activities work best when educators guide reflection after each task by asking what was helpful, what needed correction, and how learners might apply similar strategies in their own study or work contexts, emphasizing that AI output is a starting point for review and discussion, not a finished product.[5]

Clear expectations can help learners understand when and how AI can be used appropriately. Like a calculator that supports problem-solving without replacing the need for conceptual understanding—or a translation tool that assists with language comprehension but cannot capture full meaning or tone—AI can help with drafting, brainstorming, or language practice while the learner remains responsible for reasoning and accuracy. Educators can clarify when AI use is encouraged, when original work is required, and how to acknowledge AI assistance. These boundaries help maintain academic integrity while supporting responsible exploration of AI as a learning aid.

By positioning AI as one of several tools and openly discussing its strengths and limitations, educators can help learners build the skills to use AI in ways that are accurate, ethical, and aligned with their goals.

AI for Career Navigation

AI tools can enhance career navigation activities in adult education, supporting both staff and learners. From exploring career options to preparing application materials, these tools can help connect classroom learning with practical workforce opportunities.

Labor market information: AI can generate summaries of local job opportunities by drawing on current labor market data and training program information. It can identify in-demand jobs, list common entry titles, note typical wages, and describe the training or certifications that employers require. Outputs can be formatted as comparison tables, bilingual handouts, or short summaries written at a specified reading level.

- **Example prompt**: *"You are an assistant helping an adult education program prepare career information for learners. Using publicly available labor market data for [region] from sources such as the Bureau of Labor Statistics, ONET, and the state labor market dashboard, create a table of five entry-level jobs projected to grow in the next five years. For each job, include: (1) typical job titles, (2) median hourly wage in [region], (3) common training or certification requirements, and (4) one public training provider in [region] that offers the required training. Then, write a 150-word summary explaining these jobs in plain language at a 7th-grade reading level. Make sure all information is current and include links to sources."*

Resumé and cover letter support: AI can assist in drafting or refining resumés and cover letters by aligning documents to a specific job posting. This can provide learners with a

strong starting point, though best practices still involve human coaching to ensure final documents are accurate and authentic. AI can identify relevant keywords, reorganize sections for clarity, and adjust language to better match employer expectations. Because personal data should not be entered into public AI tools, placeholders or anonymized profiles (for example, "[Student Name]") should be used.

- **Example prompt**: *"You are an assistant helping an adult education program support a student applying for a job. Using the anonymized resumé text and the job posting below, suggest specific improvements to align the resumé with the requirements of the posting. Highlight transferable skills, recommend keywords to include, and adjust section order if needed. Then, draft a three-sentence cover letter that connects the student's experience to the role. Use placeholders for all personal details. Resumé text: [paste text]. Job posting: [paste text]."*

> **Instructor Tip**
>
> Triple quotation marks (""") can separate an AI prompt's directions from the material being analyzed or rewritten. For example, place the job posting inside the triple quotes and write the prompt outside them. This makes it clear that the AI should process only the job posting, not the instructions themselves.

Interview preparation: AI can be used to simulate job interviews by posing questions and offering feedback on responses. Some tools allow interactive role-play where questions are asked one at a time, followed by comments or suggestions for improvement. This can give learners opportunities to practice with common interview formats and receive targeted feedback in a low-stakes setting. While AI cannot replace the nuance and empathy of a human coach, it can supplement existing interview preparation activities.

- **Example prompt**:*"You are an interview coach helping prepare a learner for a retail cashier position. Ask five common interview questions, one at a time. After each answer, provide one constructive suggestion to improve the response and one tip for effective communication. Focus on clarity, relevant examples, and professional tone."*

Tool feature: Career Dreamer

Career Dreamer is a free tool from Grow with Google that uses AI to help learners explore career options based on their skills, experiences, and interests. It prompts learners to describe their background and then generates a short "Career Identity Statement" that summarizes key strengths in plain language. Drawing on U.S. labor market data from sources such as the Bureau of Labor Statistics and Lightcast, the tool suggests possible career paths and identifies typical training needs. It also connects to Google's Gemini AI for resumé and

cover letter drafting. Career Dreamer runs in a web browser, stores information locally on the user's device, and is currently usable without an account (as of 2025).

AI for Administrators and Support Staff

AI can streamline many administrative and support functions in adult education. It can draft communications, organize data, summarize reports, and generate outreach materials, which could help programs save time for tasks that depend on human judgment, relationships, and decision-making.[6,7]

Research from statewide professional development initiatives also shows that AI can assist with reviewing written reflections and lesson artifacts that educators submit to earn micro-credentials. In one pilot,[8] an AI-supported scoring system analyzed these submissions using program rubrics, reducing review time by about one-third while maintaining consistent results. This could make it easier to scale professional learning opportunities and report outcomes without increasing staff workload or reducing quality.

The examples below illustrate other general ideas for AI to support administrative and support roles.

Communication and Outreach: Programs often need clear, timely messages for learners, partners, and stakeholders. Drafting these from scratch takes time, but AI can generate initial text for staff to refine.

- **Example prompt**: *"Draft a short, friendly email reminding learners about the upcoming registration deadline. Include the documents they should bring. Provide versions in English and Spanish."*
- **For a digital navigator**: *"Create step-by-step instructions for a Spanish-speaking learner to install Zoom on a smartphone."*

AI can also suggest alternate formats, such as adapting an announcement into a social media post or creating content for a printed flyer.

Reporting and Data Summaries: Quarterly and annual reports often require turning enrollment, outcome, and program data into a clear summary for funders, consortium partners, or the public. AI can help by reviewing anonymized data and drafting a readable summary that staff can then refine.

- **Example prompt**: *"Review the enrollment and outcome data provided below and draft a short summary of this quarter's results for inclusion in a WIOA report. Highlight key trends such as increases in enrollment or measurable skill gains, and write in a clear, professional tone suitable for program reporting. Data: [paste anonymized table or data]."*

Translation and Accessibility: Many programs serve multilingual communities. While professional translation should be used for formal documents, AI can provide informal translations for everyday communication or quick drafts of materials that need to be shared in multiple languages.

- **Example prompt**: *"Translate the following attendance policy into Arabic and write it in a clear, conversational tone appropriate for adult learners. Keep key terms consistent and avoid literal word-for-word translation. Text: [paste policy]."*

Administrator Tip

Use Plain Language Standards: The Plain Writing Act requires agencies to communicate in clear, accessible language. The same principles can guide adult education programs in adapting AI-generated content for learners. Resources and examples are available at plainlanguage.gov.

- **Example prompt**: *"Revise the following attendance policy to meet Plain Language Act standards. Write it so that it is easy for adult learners and staff to understand. Text: [paste policy]."*

Scheduling and Routine Questions: AI chatbots and scheduling tools can handle common questions and basic appointment or registration scheduling. When connected to a program's trusted information sources, like program documentation, a chatbot can respond to questions such as "When do ESL classes start?" or "How do I register?" without staff needing to reply manually.

- **Example prompt**: *"Using the program information below, create a list of 10 clear questions and answers that adult learners commonly ask about ESL classes. [paste text]."*

Grant Writing and Strategic Reports: AI can help staff organize and draft complex documents such as grant narratives, annual reports, and strategic plans. For example, an administrator preparing a WIOA or CAEP grant can upload planning notes, enrollment data, and key objectives, then ask the AI to generate a structured narrative that meets funder requirements. The AI can outline sections, suggest language for measurable outcomes, and align program goals with federal or state priorities. Staff can then focus on reviewing, editing, and confirming accuracy before submission.

- **Example prompt**: *"Using the notes and requirements from the grant application below, draft a two-page narrative describing how our adult education program will expand digital literacy instruction. Include specific goals, expected outcomes, and connections to WIOA and CAEP priorities. [paste notes and requirements]."*

Administrator Tip

For complex projects such as multi-year grants or strategic plans, AI can be prompted to ask clarifying questions before drafting. For example: *"What questions do you have for me that will help you create a draft project plan?"* This creates an iterative process in which the system generates questions, staff provide answers, and, over several rounds, a more complete and tailored plan emerges.

Data Analysis and Trends: AI can help identify patterns in enrollment, attendance, persistence, and assessment results. For example, it might highlight declining enrollment in a program area, identify links between attendance and test gains, or compare outcomes across cohorts.

- **Example prompt**: *"Using the attached datasets (attendance, CASAS post-test results, and course completion rates for the past three program years), identify the instructional areas with the highest and lowest academic progress as measured by skill gains. Highlight any correlations between instructor, attendance patterns, and test score improvements. Based on these findings, suggest three specific areas where curriculum adjustments or targeted interventions might improve learner outcomes. Include a short summary that program leadership could use to set priorities for professional development, resource allocation, and partnership development."*

Resource and Partnership Mapping: AI can compile and format information about local resources such as childcare, transportation, or training programs. This helps maintain updated referral lists for staff and learners.

- **Example prompt**: "Using the following list of verified local organizations, create a table showing each organization's name, service type, eligibility requirements, and contact information: [paste list or links]."

Administrator Tip

Programs conducting resource mapping or labor market analysis can benefit from "deep research" modes in some AI tools (ChatGPT, Gemini). These modes search across multiple sources—such as state workforce dashboards, local college catalogs, or nonprofit service directories—and organize the findings into a usable format. For example, an administrator might ask the AI to identify child-care providers within a county that serve adult learners or to compare entry-level health care training options across nearby colleges. The tool compiles links, contact details, and short descriptions, which staff can then verify and add to referral lists or partnership directories.

Data Privacy, Ethics, and Use Policies

Responsible implementation of AI for adult education programs involves protecting data privacy, ensuring fairness and accuracy, and setting clear expectations for appropriate use. This section outlines key practices to support safe and ethical adoption of AI across classrooms and operations.

Data Privacy and Consent

Earlier sections introduced privacy as a core consideration when using AI tools. In practice, these concerns center on what information is shared, where it is stored, and who has access. Most free or public AI services store user inputs and may reuse them for future model training unless otherwise specified.

For educators and administrators, two key considerations apply:

- **Avoid inputting sensitive learner information**. Personally identifiable information (PII)—such as names, test results, or contact details—should never be placed in public AI systems. When examples are needed, use placeholders or fictional learner profiles instead.
- **Review the tool's data policy and settings**. Education-specific or enterprise versions often provide stronger protections, including data-use restrictions or storage opt-outs. For example, Microsoft 365 Copilot specifies that prompts and responses are not used to train foundation models, while ChatGPT free accounts indicate that user content may be used for model training.

Programs should balance the convenience of free tools with the need for privacy and compliance, choosing platforms that best protect learner and program data.

When learners use AI tools directly, such as asking for resumé feedback or practicing English conversation, they should understand how their inputs may be used. Programs can support this by vetting tools and preparing simple guidance documents. Key points might include:

- Advice to not share personal contact information or ID numbers in the AI.
- Warning that conversations with the AI may be stored on company servers.
- Steps for deleting or turning off history, managing data permissions, or reviewing privacy options when available.

Copyright Considerations

AI tools raise copyright issues as well as privacy concerns. U.S. copyright law does not recognize AI as an author, so material created entirely by AI is not protected by copyright.[9] For educators and learners, the more relevant issue is how to use copyrighted materials responsibly and how to acknowledge AI contributions transparently.

- **Attribution and transparency**. When AI is used to generate or adapt text, images, or media, noting that use promotes clarity and academic honesty. For example, a learner might include a short statement such as, "Portions of this report were drafted with AI assistance and then edited by me." Instructors can model this practice by sharing when materials were created with AI support.
- **Using copyrighted materials with AI**. Full copyrighted works, such as textbooks, journal articles, or courseware, should not be pasted into public AI tools, since doing so may violate license terms or exceed fair use. Using short excerpts or summaries for instructional purposes is generally allowed, particularly in nonprofit education. When in doubt, review whether the material is openly licensed (such as Creative Commons) or obtain permission for use.
- **Human authorship**. AI-generated material can be freely shared and adapted, but only content that includes substantial and creative human contribution qualifies for copyright protection. This distinction matters most when programs create official materials, publications, or course content. Human editing and authorship should be evident in all shared work to meet these requirements.
- **Platform licensing**. Programs should review the licensing terms of AI platforms, as some providers reserve rights to reuse user inputs and outputs. Checking these terms helps avoid unintentional sharing of instructional materials or sensitive data.

Instructor Tip

Many AI platforms allow users to share their chat threads via a link. This feature can support classroom activities that build critical thinking and transparency around AI use. For example, instructors can:

- Ask learners to submit their AI conversation link along with an assignment to show how they developed their ideas or refined drafts.
- Have students exchange and review one another's AI threads to compare prompts, evaluate reasoning, and discuss differences in how each person guided the tool.
- Use shared threads in group discussions to highlight effective questioning, bias detection, or fact-checking strategies.

These practices help learners treat AI as a collaborative workspace for reflection and analysis rather than a shortcut for completing tasks.

Bias and Misinformation

AI tools are trained on large collections of text and images from the internet and other sources. This data can include inaccuracies, outdated information, and cultural, racial, or gender biases. As a result, AI-generated content can reflect or amplify misinformation and stereotypes.[10,11]

For example, an AI might:

- Draft a job description that favors one demographic group over another
- Summarize labor market information that is no longer current
- Present opinions on a policy issue as fact without acknowledging multiple perspectives
- Generate images that reinforce stereotypes, such as showing only women as flight attendants or only men as CEOs

Because of these risks, AI outputs should be reviewed for both factual accuracy and bias. This includes checking claims against reliable sources, scanning for insensitive or exclusionary language, and considering perspectives that may be missing. These practices align with information literacy skills already targeted in adult education, such as evaluating websites and media for accuracy and balance. For instance, just as learners are encouraged to question whether information on YouTube or Wikipedia is current and reliable, the same critical lens should be applied to AI-generated content.

Some AI tools now provide sources automatically (for example, Perplexity) or can be prompted to cite them, making verification easier. Regardless of the tool, AI should be treated as another information source that requires evaluation.

- **Example prompt**: *"Summarize the following text and provide a list of reliable sources to support each key claim. Include active links to government, nonprofit, or academic sites where available."*

Environmental Considerations

AI has environmental impacts in addition to instructional and ethical considerations. Training and operating AI systems requires electricity and water. Energy use contributes to carbon emissions and can strain power systems, and water is often needed to cool data centers, placing pressure on local supplies in drought-prone areas. Producing and disposing of hardware such as chips and servers also has environmental impacts.

As investments in renewable and carbon-neutral energy sources such as solar, wind, and nuclear expand,[12] the environmental impact of AI may decrease, though this remains an evolving conversation and consideration.

For individual adult education programs, the impact of a few queries may seem small. However, at scale, with millions of users worldwide, the collective effect is more noticeable and has led to broader discussions about AI sustainability.

One way to respond is to treat AI as a purposeful resource rather than a default option. The *When do I AI?* framework (from World Education and TCALL) encourages educators to first identify what is needed (like lesson ideas, resources, media), then check what already exists (like colleagues, standards, curricula, open repositories). AI can then be applied more strategically, by adapting or extending existing resources instead of using it as the first step to generate new content.

Framing environmental impact as part of responsible technology use helps programs make informed decisions that balance efficiency, accuracy, and sustainability.

Use Policies for Programs and Classrooms

Local use policies can help programs set shared guidelines for how AI tools are introduced and managed. These policies support consistency, transparency, and trust across classrooms and operations. They do not need to be lengthy; even a short list of bullet points can clarify boundaries and responsibilities.

Programs developing or updating local policies can draw on existing models such as the ISTE Acceptable Use Policy Guide and the TeachAI Toolkit for Responsible AI Use. Both provide frameworks, templates, and guiding questions that can help tailor an approach suited to adult education settings.

More example policy items below can help programs decide what to include or adapt when developing local AI use policies.

Allowable Use

- **Authorized Tools**: Use only AI tools approved by the program or consortium that meet data privacy and security standards (for example, Microsoft Copilot, Gemini for Education, or other tools managed under institutional licenses).
- **How to Share Data**: Only share information that is already public or fully anonymized. Learner data protected by FERPA or other privacy laws should never be entered into public AI systems.
- **Permitted Application Areas**: AI may be used to draft documents, plan lessons, summarize meeting notes, or analyze de-identified program data. All outputs should be reviewed for accuracy and relevance before use.

Prohibited Use

- **Unapproved Tools**: Do not use personal or free AI accounts (such as public ChatGPT) for materials containing learner or staff data.
- **Sensitive or Confidential Information**: Never upload names, test scores, case notes, or personally identifiable information into AI systems not covered by institutional agreements.
- **Assessment and Grading**: AI should not be used to assign grades, make enrollment decisions, or evaluate learner progress without human review.
- **Inappropriate or Misleading Content**: AI tools must not be used to create false information, impersonate others, or generate discriminatory or harmful material.

Additional Guidance

- **Transparency**: When AI is used to draft, summarize, or translate materials, note its contribution clearly.
- **Verification**: All AI-generated materials should be checked for accuracy, bias, and cultural relevance before sharing.
- **Training and Support**: Programs are encouraged to provide staff orientation on approved tools, data privacy, and responsible use.
- **Questions and Updates**: Policies should be reviewed regularly as AI capabilities and institutional guidance evolve.

In classrooms, some educators establish norms collaboratively with learners. For example, an ESL class might agree, “AI translators can be used to draft stories, but learners must review and revise the translation,” or “AI will not be used during in-class timed essays.” Engaging learners in setting norms can increase understanding of the rationale behind rules.

Policies should be treated as living documents that evolve alongside new technologies and program needs. Rather than relying on AI detection tools, which have shown inconsistent accuracy,[13] programs can focus on clear communication, periodic policy reviews, and ongoing staff training. A proactive, transparent approach helps maintain program integrity and build trust among staff and learners as AI tools continue to develop.

Frameworks for Responsible AI Integration

Some established literacy and integration frameworks also outline key dimensions of AI literacy and offer examples of instructional and ethical considerations.

Research shows that AI literacy for adults is still emerging, with limited consensus on definitions and competencies. A review of 30 studies found broad agreement that AI literacy focuses less on programming and more on understanding, using, and critically reflecting on AI in daily and professional life.[14,15]

Two frameworks especially relevant to educators include:

- **World Education AI Integration Framework**: This framework offers guidance for integrating AI into adult education and workforce programs across six dimensions. Each dimension includes guiding questions, resources, and scenarios to support both technical and human-centered decision-making. The framework also includes an AI Tool Evaluation Rubric that can be used to assess suitability, accessibility, and alignment before adoption.
- **AILit Framework**: This framework organizes AI literacy into four domains—Engage, Create, Manage, and Design—to help educators, leaders, and developers build shared language and practical approaches to AI use.

Programs can use these frameworks to:[16]

- Identify staff training needs in AI concepts, privacy, and ethics
- Inform learner-facing AI literacy activities
- Align adoption with recognized competencies and ethical principles
- Evaluate and refine AI-related practices over time

Evaluation remains a key gap. While some initiatives report positive learner outcomes, few use validated measures of AI literacy. Programs may benefit from adding short feedback surveys or reflection prompts to early pilots to track confidence, application, and impact over time.

The frameworks and principles outlined above can guide thoughtful, phased implementation. As with any new technology, successful adoption involves piloting tools, gathering feedback, and refining use over time. Programs can adapt these approaches to local goals and capacities, drawing on examples in earlier chapters for guidance on equity, access, and instructional design.

AI Tool Overview

When selecting AI tools, programs can start small and evaluate fit before wider adoption. Key questions include:

- Can the free version be tested before committing to a subscription?
- Does the privacy policy meet program data-sharing requirements, especially if learners will use the tool directly?

- Does it integrate with existing workflows, such as Google Workspace or Microsoft 365?
- Does it provide educator-developed templates or examples relevant to adult education?

The most effective tools are those that support program goals, align with existing systems, and can be sustained in daily practice.

The list below provides a broad overview of commonly used and emerging tools relevant to adult education. It can serve as a starting point for exploring options that align with program goals, technology environments, and learner needs.

One useful distinction separates general-purpose tools and ones designed for specialized educational tasks. General-purpose tools offer flexibility across many contexts, while specialized tools are streamlined for particular functions. Choosing between them involves weighing flexibility and customization against efficiency and focus.

- **General-purpose chatbots**. Tools such as ChatGPT, Claude, Gemini, CoPilot, Grok, and Perplexity can answer questions, draft text, summarize information, and provide explanations. They adapt to many contexts but require clear prompts for effective results.
- **Specialized education tools**. Examples include MagicSchool.ai and Diffit. These provide subject-specific generators, structured activities, or preset templates aligned with instructional goals. They can reduce preparation time and offer targeted support but are less flexible outside their intended uses.

In addition to standalone AI apps, many widely used platforms now include AI functions. YouTube is testing AI-generated topic summaries and quiz tools, while Google Workspace and Microsoft Office have added AI assistants for writing, analysis, and formatting. For adult education programs, this means AI may already be part of tools that staff and learners use daily.

Emerging AI Features

Several emerging AI capabilities may soon influence adult education and workforce contexts. These features are not yet commonly used, but awareness of these capabilities can help programs anticipate changes in the digital landscape and consider how they may align with priorities in administration, instruction, and learner support as the tools evolve.

- **Image generators (Gemini Nano Banana, DALL·E)**: Tools that create images from text prompts, which may help staff produce draft visuals for outreach flyers, program websites, or instructional materials. Learners could use them to generate pictures that support vocabulary building or help illustrate ideas in writing or speaking activities.
- **Vibe coding (Replit, Lovable)**: Tools that create apps or websites directly from natural language prompts. Programs might use these to prototype check-in apps or dashboards that visualize attendance trends.
- **Knowledge-based assistants and Custom GPTs (ChatGPT Custom GPTs, Gemini Gems)**: Tools that can be trained with specific materials and answer questions based on that content. Programs can upload items such as handbooks, schedules, or FAQs, then

embed the assistant on a website or learning platform so students can access clear, consistent, multilingual information at any time.

- **Audio generators (ElevenLabs, Google Text-to-Speech)**: Tools that convert text into speech or create audio explanations. These may support listening practice or provide alternative formats for program information.
- **Transcription and subtitle generators (YouTube Auto-Captions, Whisper Web)**: Tools that create transcripts, captions, or multilingual subtitles for recorded videos. This can improve accessibility for learners who benefit from text-supported media.
- **Podcast or audio-summary generators (NotebookLM, Adobe Shasta)**: Tools that turn documents or notes into spoken summaries. These may provide flexible ways for learners to explore program documents or learning materials
- **Video generators (Veo3, Sora)**: Tools that create short videos from text prompts or storyboard descriptions. Programs might explore these for developing orientation videos or visual explanations of processes.
- **AI agents (ChatGPT Agent)**: Tools that can complete multi-step tasks with limited supervision, such as scheduling meetings, sending reminders, or preparing recurring reports.

AI Tools for Adult Education

The following overview highlights commonly used and emerging AI tools relevant to adult education as of 2025. It is not exhaustive, as new tools and features continue to be released. The list is intended as a reference point for educators and staff to explore options that align with program goals, technology environments, and learner needs.

General-purpose AI Assistants

- **ChatGPT (OpenAI)**: Provides strong general drafting and explanation capabilities that support lesson ideas, examples, and administrative writing.
- **Claude (Anthropic)**: Offers the same core functions as ChatGPT, with the added ability to handle longer documents. Many educators also use Claude for structured analysis tasks or code interpretation because of its clear reasoning style.
- **Gemini (Google AI)**: Shares similar drafting, summarization, and translation capabilities. Its distinguishing feature is integration with Google Workspace, which can streamline tasks for programs already working in Google Docs, Sheets, and Classroom.
- **Perplexity**: Provides many of the same generative features and includes real-time search with cited sources. This can help staff check facts, review policy updates, or gather current information from verified sites.
- **Copilot (Microsoft)**: Offers comparable drafting and analysis abilities within Microsoft Word, Excel, Outlook, and Teams. Because it runs inside institution-managed accounts, it can support privacy and data-security requirements.

- **Grok (xAI)**: Shares the same core drafting and explanation capabilities as the tools above. Its distinguishing feature is access to real-time information from public posts on X, which can help staff verify sources, check the currency of information, or review how topics are being discussed in public forums.

Specialized Education Tools

- **MagicSchool.ai**: Creates lesson plans, rubrics, quizzes, and scaffolds lesson topics.
- **Diffit**: Produces leveled reading materials and comprehension questions for multi-level ESL, HSE, or CTE classes.
- **Khanmigo (Khan Academy)**: Provides AI tutoring for learners and instructional support for educators.
- **Career Dreamer**: Helps learners explore career options based on their skills, experiences, and interests, suggests possible career paths, identifies typical training needs, and drafts resumés and cover letters

Language and Communication Tools

- **Duolingo Max**: Offers AI-driven role-play and feedback for language learning.
- **ELSA Speak**: Provides targeted pronunciation practice with real-time feedback.
- **DeepL**: Delivers translation for multilingual communication.
- **Grammarly**: Improves clarity and tone in learner writing or official documents.
- **Paci AI**: Designed for English language learners, offering personalized feedback on writing, grammar, and vocabulary with adaptive practice activities aligned to learner proficiency levels.

Visual, presentation, and video tools

- **Canva**: Creates flyers, slides, certificates, and visuals with templates and AI design support.
- **SlidesAI**: Turns text into slide presentations for instruction or training.
- **Veed**: Automates video editing, captioning, and subtitling for accessible learning content.

Research Tools

- **NotebookLM (Google)**: Summarizes and answers questions from uploaded documents, policies, or lessons. It can also analyze YouTube videos to support discussion of key points and generate audio summaries or simple podcasts based on the materials provided.
- **Scite**: Locates research sources and shows how they have been cited to support evidence-based instruction.
- **Elicit**: Extracts relevant findings from research papers to inform curriculum design or grant writing.

Endnotes

1 https://www.gao.gov/assets/830/826491.pdf
2 https://digitalcommons.uri.edu/cba_facpubs/548/
3 http://osf.io/preprints/osf/zqjw5_v1
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Glossary of Key Terms

4A Framework

A framework for evaluating edtech tools based on the elements of accessibility, active engagement, advocacy for inclusion, and accountability.[1]

Accessibility

The degree to which content, programs, or tools support and accommodate the needs and preferences of diverse learners.

Adult Basic Education (ABE)

Adult education programs equivalent to zero through eighth grade.

Adult Secondary Education (ASE)

Adult education programs equivalent to ninth through twelfth grade. The primary objective is to obtain a high school diploma or certificate.

Adults with Disabilities (AWD)

Individuals with cognitive, medical, physical, or sensory disabilities. Adult education programs can provide modified equipment, instructional strategies, and materials to meet the needs of these learners.

AI Integration Framework (World Education)

A framework that helps adult education programs plan for responsible AI use across instruction, operations, and data practices. It includes guiding questions, scenarios, and a tool evaluation rubric.[2]

AI Literacy / AILit Framework

The skills needed to understand, use, and evaluate AI tools responsibly. The AILit Framework organizes these skills into four domains: Engage, Create, Manage, and Design.[3]

Andragogy

A practical and theoretical approach to adult education, where learners are autonomous and self-directed, and educators act as facilitators.[4]

Asynchronous Learning

Educators and learners interact with the content and with each other at different times. Asynchronous learning can happen within a structured schedule (e.g., weekly deadlines) and include a combination of collaborative and independent activities.

Blended Learning

Learning experiences that utilize digital or online learning tools that are connected to face-to-face instruction.[5]

Career Technical Education (CTE)

Adult education programs that deliver customized curriculum, including academic career preparation and job readiness skills, to train learners for a specific career pathway. Programs may include apprenticeship/internship opportunities or result in industry certifications.

Civic Objectives and Additional Assessment Plans (COAAPs)

California-approved instructional objectives and related performance-based assessments used in EL Civics programs. Learners complete tasks that demonstrate civic participation, digital literacy, or other community and workplace skills.[6]

Clock Time Model / Teacher Verification Model / Learner Mastery Model

Three NRS-approved methods for calculating proxy hours in distance education:[7]

- **Clock Time Model** uses time logged by an online platform.
- **Teacher Verification Model** assigns hours based on an instructor's review of completed work.
- **Learner Mastery Model** awards hours when a learner demonstrates mastery on an assessment.

Communities of Practice (CoP)

Groups of educators or staff who meet regularly to share strategies, reflect on practice, and solve problems in a shared area of work. CoPs support ongoing learning and continuous improvement.

Community of Inquiry (CoI)

A framework for designing online and blended learning that emphasizes meaningful interaction among learners and instructors. It focuses on three elements: social presence, teaching presence, and cognitive presence.

Competency-Based Education (CBE)

A learner-centered approach that includes the following elements: learner choice, meaningful and relevant assessment, differentiated instruction, mastery-based progress, active and personalized learning, culturally responsive instruction, and clear expectations for learning.[8]

Continuous Improvement Plan (CIP)

An annual planning document for WIOA Title II agencies that outlines goals, implementation strategies, and how the program uses data and technology to improve instruction and services.[9]

Digital Citizen

Someone who is "inclusive, equitable, and culturally aware as they live, learn, and work in an interconnected world."[10]

Digital Citizenship Competencies (DigCitCommit)

A set of competencies that describe how individuals participate responsibly and effectively in digital spaces. The framework includes five areas: Inclusive, Informed, Engaged, Balanced, and Alert.[11]

Digital Credential

A verified, digital record of a skill or achievement, such as a badge, certificate, or industry-recognized credential. It typically includes information about who issued it, what was required to earn it, and how it can be shared.

Digital Equity

"The condition in which individuals and communities have the information technology capacity that is needed for full participation in the society and economy of the United States."[12]

Digital Learning

Learning experiences that utilize digital tools for teaching and learning.

Digital Literacy

The ability to find, evaluate, organize, create, and communicate digital information.[13]

Digital Navigation / Digital Navigator

Support provided to help learners access devices, connectivity, and digital tools, including onboarding, troubleshooting, and guidance on how to participate in online or blended learning. A digital navigator is a staff member or trained volunteer who offers this assistance.[14]

Digital Resilience

"The awareness, skills, agility, and confidence to be empowered users of new technologies and adapt to changing digital skill demands."[15]

Digital Wallet

A secure online space where learners can store, manage, and share their digital credentials, certificates, or badges. Some wallets also support Learning and Employment Records.

Distance Education

Learning experiences that are influenced by an educational organization (i.e., not private study) where the educator and learner are physically separated; educators and learners use digital tools and two-way communication; and there are opportunities for social interaction.[16]

Distance Learning Plan (DLP)

A required component of WIOA planning that describes how a program delivers distance learning, including instruction, technology use, staffing, and reporting procedures.[17]

English as a Second Language (ESL)

Competency-based programs designed to enable learners to become proficient in speaking, listening, reading, writing, mathematics, and decision-making/problem-solving in the English language.

Experiential Learning Model

Establishes a learner's experiences as central to the learning process. There are four stages to the experiential learning model: concrete experience, reflective observation, abstract conceptualization, and active experimentation.[18]

General Educational Development (GED)

One of two California-approved high school equivalency tests. Includes four separate exams: mathematical reasoning, reasoning through language arts, social studies, and science.

Generative AI

AI tools that create new content such as text, images, audio, or video in response to prompts. These tools produce outputs by predicting patterns based on large amounts of training data.

Hallucination (AI)

When an AI tool generates information that is inaccurate, misleading, or entirely fabricated. Hallucinations occur because the model predicts plausible language rather than verifying facts.

Heutagogy

Focuses on the individual learner as the center of the learning process.[19] Like andragogy, the educator facilitates the learning process by providing resources and support, but in heutagogy the learner fully owns the learning path and process.

High School Equivalency (HSE) Credential

California has two state-approved high school equivalency tests: GED and HiSET. Learners who pass a high school equivalency test earn a state-issued HSE credential, which is an alternative to a high school diploma.

High School Equivalency Test (HiSET)

One of two California-approved high school equivalency tests. Governed by ETS. Includes five separate sections: language arts—reading; language arts writing; mathematics; science; and social studies.

Hybrid Learning

Learning experiences that utilize digital or online learning tools, but digital learning and face-to-face instruction are not connected.[20]

HyFlex Learning

Learning occurs concurrently in physical and virtual spaces; learners choose whether to attend class face-to-face or online.

Informal Assessment

Any activity that checks understanding during instruction without using a standardized test. Examples include quizzes, exit tickets, discussions, reflections, or practice tasks.

Interoperability

The controlled, seamless, and secure exchange of data between applications.[21]

Large Language Model (LLM)

A type of AI system trained on extensive text data to generate and interpret language. LLMs power tools that answer questions, draft text, or analyze written materials.

Learning and Employment Record (LER)

A digital profile that organizes verified data about a learner's skills, credentials, coursework, and work history. LERs are portable and can be shared with employers or training providers.

Learning Management System (LMS)

A digital platform for storing and sharing digital content, managing assignments and feedback, and communicating with learners.

Measurable Skill Gains

A WIOA indicator for evaluating program effectiveness. Adult education program participants can demonstrate measurable skill gains by completing an educational level through pre- and post-testing, credit completion, or entering a postsecondary education program; or by earning a secondary school diploma.[22]

Micro-credential

A credential (usually digital) that confirms a specific skill or competency, typically earned by completing a defined learning task and submitting evidence such as an assessment, project, or portfolio sample.

National External Diploma Program (NEDP)

A competency-based and performance-based assessment that allows adult learners to earn a regular high school diploma.[23] NEDP participants build an electronic portfolio to demonstrate their academic and digital skills through a series of life and work tasks.

National Reporting System (NRS)

Evaluates the effectiveness of adult education programs through reporting standards for program outcomes and performance indicators.

Online Learning

Includes asynchronous and synchronous learning experiences that occur online, whether in blended or hybrid learning environments. Online learning also includes open-source content that is free and open to any interested learners.

Open Educational Resources (OER)

Freely accessible, openly licensed digital materials for teaching and learning.[24]

Pedagogical Usability

How well a tool facilitates the learning process.[25]

Performance-Based Assessment

An assessment in which learners demonstrate skills by completing practical or task-based activities. These assessments measure how well learners apply knowledge in authentic contexts.

Practice Engagement Theory (PET)

A theory that describes learning as a process strengthened by repeated, purposeful practice. It emphasizes clear goals, frequent feedback, and opportunities to apply skills in varied and meaningful contexts.

Prompt / Prompt Engineering

The text or instructions given to an AI tool to guide its output. Prompt design refers to creating clear, structured prompts that produce useful and accurate responses.

Proxy Hours

Estimated instructional hours earned through approved online coursework completed independently by learners. Proxy hours are combined with contact hours for NRS reporting.[26]

Remote Proctoring

A process in which a trained proctor oversees a computer-based assessment while the learner tests from home or another off-site location. It includes identity verification, monitoring, and security procedures.

Remote Testing

A form of computer-based assessment where learners take the assessment from their homes or somewhere other than an approved testing location.

SAMR Framework

A model for technology integration that includes four stages of substitution, augmentation, modification, and redefinition.[27]

Social–Emotional Learning (SEL)

Includes the ability to: (1), set and achieve positive goals; (2) feel and show empathy for others; (3) establish and maintain positive relationships; (4) make responsible decisions; and (5) understand and manage emotions.[28,29]

Stages of Self-Directed Learning

The stages of self-directed learning include Stage 1: learner dependent on authoritative educator; Stage 2: learner interested in the learning process with the educator acting as a guide; Stage 3: learner involved in the learning process with the educator acting as a facilitator; and Stage 4: learner is self-directed with the educator acting as a consultant.[30]

Synchronous Learning

Educators and learners interact with the content and with each other during live sessions. Synchronous learning can include in-person activities or in digital spaces (e.g., video conferencing sessions).

Technical Usability

The ease of use and interaction between users and the tool.[31]

TPACK Framework

An instructional framework that identifies three core components of content, pedagogy, and technology as the foundation for high-quality teaching with the complex interaction among the three components as critical to understanding how technology integration is implemented within various contexts.[32]

Transformative Learning

"Learning that transforms problematic frames of reference—sets of fixed assumptions and expectations (habits of mind, meaning perspectives, mindsets)—to make them more inclusive, discriminating, open, reflective, and emotionally able to change."[33]

Transformative SEL

An approach to social and emotional learning that links individual skills with equity, identity, and community context. It emphasizes reflection, shared power, and learning environments that honor diverse experiences.[34]

Triple E Framework

A learner-centered instructional framework for helping educators implement effective technology integration through engagement, enhancement, and extension.[35]

Web Content Accessibility Guidelines (WCAG)

Commonly accepted digital accessibility standards that emphasize four content principles: perceivable, operable, understandable, and robust.[36]

Workforce Innovation and Opportunity Act (WIOA)

Federal policy that requires states to align workforce education programs with performance goals focused on accountability, transparency, and improved workforce development.

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