



CALIFORNIA ADULT EDUCATION DIGITAL LEARNING GUIDANCE





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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 serves nearly one million adult learners annually.

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 distance learning to literacy and adult education providers in California. OTAN began in 1989 as a 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.

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 ISTE Live, 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.



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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 meant 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 came from the California Department of Education through 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 at adult education programs within the state of 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 and the International Society for Technology in Education for putting the vision of this project into action.

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

Sincerely,

Dr. Carolyn Zachry

Education Administrator/State Director, Adult Education Office
California Department of Education

Pete Callas

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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 school 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 \$500 million in annual funding to adult education programs across the state. Additionally, over \$100 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.

The **Outreach and Technical Assistance Network (OTAN)**, funded by the Adult Education Office in the Career & College Transition Division of the California Department of Education through Workforce Innovation and Opportunity Act (WIOA) Title II federal funds, provides “electronic collaboration and information, and support for instructional technology and distance learning to literacy and adult education providers in California.”¹ The *Guidance* was produced by OTAN.

Contents of the *Guidance*

In recent years, the focus in adult education has shifted from distance education to **digital learning**, or learning experiences that utilize digital tools for teaching and learning. Digital learning can happen in any learning environment—whether online, in-person, or blended—but requires adult learners to develop digital literacy and exhibit digital resilience. **Digital literacy** includes the ability to find, evaluate, organize, create, and communicate digital information.² **Digital resilience** signifies having the

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- 1 [OTAN Vision](#)
 - 2 [Digital Literacy](#)

awareness, skills, agility, and confidence to be empowered users of new technologies and adapt to changing digital skill demands.³

The *Guidance* covers best practices across a variety of topics that are foundational to effective digital learning, beginning with access and equity.

Ensuring Equity and Access

Digital equity is defined as “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.”⁴ Access is an essential consideration to ensure that educational opportunities equitably impact the learners who need them, and it includes access to digital devices, internet connectivity, and digital literacy skills.

In addition to digital equity and access, digital learning must be accessible to all learners. **Accessibility** measures the degree to which content, programs, or tools support the needs of diverse learners. The **Universal Design for Learning** framework helps educators design learning experiences that are accessible to all learners through multiple means of engagement, representation, and action/expression.⁵

Foundations of Adult Education and Digital Learning

The recommendations presented in the *Guidance* are grounded in adult learning theories that provide a research-based foundation for understanding the unique needs of adult learners, including:

- **Andragogy:** Adult learners need to know the purpose of learning, are autonomous and self-directed, connect learning to prior experiences, are contextual and problem-centered, and have an intrinsic motivation to learn.⁶
- **Experiential learning model:** Learners cycle through stages of concrete experience, reflective observation, abstract conceptualization, and active experimentation.⁷ Learners’ experiences are central to the learning process.

3 [Digital US](#)

4 [Public Law 117-58](#)

5 [Universal Design for Learning](#)

6 [The Adult Learner](#)

7 [Experiential Learning](#)

- **Heutagogy:** Adult learners are autonomous and self-directed, have varying degrees of capability, and change their actions and beliefs based on learning.⁸
- **Self-directed learning:** Learners vary in their preferences toward self-directed learning depending on a variety of personal factors, including past experiences.⁹

In addition to these theories, a foundation of research about effective digital learning practices informs the recommendations in this guide. Although distance education presents a set of challenges not faced in the traditional classroom, studies that evaluated the effectiveness of distance education found no significant differences among instructional delivery methods on learner outcomes.^{10,11} The **benefits of digital learning** for students include added convenience and flexibility, increased self-confidence, and development of academic and digital literacy skills.^{12,13,14,15} For educators, the benefits of digital learning include the ability to differentiate instruction, facilitate personalized learning, monitor learner progress, and provide feedback.^{16,17}

The *Guidance* focuses on best practices for implementing the best possible learning experiences. Some **recommendations for digital learning** include:^{18,19,20,21,22}

- establishing clear expectations and goals;
- designing flexible learning opportunities and personalized learning pathways; and
- providing opportunities for learner self-reflection.

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- 8 [Heutagogy and Lifelong Learning](#)
 - 9 [Teaching Learners To Be Self-Directed](#)
 - 10 [Second Language Studies](#)
 - 11 [GED Preparation](#)
 - 12 [Covid-19 Rapid Response Report](#)
 - 13 [Building a Digitally Resilient Workforce](#)
 - 14 [Adult Education’s Response to Emergency Remote Teaching and Learning](#)
 - 15 [Facing the Future](#)
 - 16 [Use of Newsela PRO in Precollege Program](#)
 - 17 [Blended Learning Guide](#)
 - 18 [Covid-19 Rapid Response Report](#)
 - 19 [Building a Digitally Resilient Workforce](#)
 - 20 [Adult Education’s Response to Emergency Remote Teaching and Learning](#)
 - 21 [State Director’s Perspective](#)
 - 22 [Blended Learning Guide](#)

Professional development is essential for helping educators implement best digital learning practices in the classroom. **Effective professional development** is sustained, reflective, collaborative, interactive, personalized, includes coaching and peer learning, and models effective technology integration.²³

Designing Flexible Learning Experiences

Several research-based technology integration frameworks informed recommendations for flexible digital learning models discussed in the *Guidance*. Each framework highlights different aspects of digitally powered teaching and learning. A sample of these frameworks includes

- **SAMR:** Four tiers of online learning including substitution, augmentation, modification, and redefinition;²⁴
- **TPACK:** Three core components of content, pedagogy, and technology are the foundation for quality instruction;²⁵ and
- **Triple E Framework:** Three components of engagement, enhancement, and extension help educators implement effective technology integration.²⁶

When used in alignment to instructional frameworks, **digital learning tools** can help educators and learners communicate, collaborate, and be more productive. Choosing the right digital tool depends on learning goals and purpose. Evaluating pedagogical and technical usability can help educators determine whether to implement a digital tool within their classroom. **Pedagogical usability** focuses on how well a tool facilitates the learning process, while **technical usability** focuses on the ease of use and interaction between users and the tool.²⁷

Adopting Models that Work

Finding the right digital learning models that work for any educational situation may be difficult, and there are numerous learning models that incorporate digital resources and methods. Some of the most common digital learning models are:

- **Distance education:** Learning occurs outside of a physical classroom.

23 [Best Practices in Professional Development](#)

24 [How to Apply the SAMP Model](#)

25 [Technological Pedagogical Content Knowledge](#)

26 [Triple E Framework](#)

27 [A Conceptual Framework Web-Based Learning](#)

- **Blended learning:** Learning occurs in both physical and virtual spaces.
- **HyFlex models:** Learning occurs concurrently in physical and virtual spaces; learners choose whether to attend class face-to-face or online.

Adult education program providers must be deliberate and thoughtful in all aspects of the planning and implementation process. Program providers must consider which models will work within different program areas and include appropriate levels of funding, time, professional development, and technical support. The *Guidance* offers strategic advice on how to make crucial decisions about model adoption.

Programs must also follow federal and **state reporting requirements**, including those cited in the National Reporting System, which includes definitions that determine program participation through contact hours (which can be a combination of in-person, online, and remote communication). Additionally, the Workforce Innovation and Opportunity Act requires states to align workforce education programs with accountability and performance goals.

Data-Driven Instruction and Digital Assessments

The primary purpose of assessment is to inform instruction and improve learning outcomes. Assessments also empower learners to better understand their own strengths and areas of potential growth. **Digital assessments** provide increased accessibility, differentiation, and flexibility; streamline the testing process; and provide immediate feedback and results. Many different types of digital assessment tools exist including discussion boards, gamified learning, polls, quizzes, and digital portfolios. The *Guidance* can help teachers, education leaders, and support staff choose and implement the right assessment tools effectively.

Fostering Healthy, Equitable, and Inclusive Digital Communities

Healthy, equitable, and inclusive communities are precursors to deep learning and developing meaningful relationships in online spaces. Cultivating a positive, safe, and supportive classroom community may be challenging and requires effort—it doesn't just 'happen.' Educators must be intentional about creating conditions that actively support learners, especially in a digital learning environment.

The Collaborative for Academic, Social, and Emotional Learning framework defines five core **social-emotional learning competencies**:²⁸ self-awareness,

28 [CA Transformative SEL Competencies](#)

self-management, social awareness, relationship skills, and responsible decision-making. Educators' development of these competencies is important to build relationships with learners, establish a positive classroom community, and to model skills for learners. The *Guidance* offers advice on how to achieve better classroom culture with digital tools.



CHAPTER

1

Introduction

This chapter introduces the purpose and audience for the *Guidance*, including a brief history of adult education and digital learning in the state of California. This chapter also addresses the transition from distance to digital learning, introduces standards in practice that will be used throughout the *Guidance*, and provides a brief overview of the content focus in each chapter.

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 and office staff at schools, community volunteers, librarians, and the many others who support adult learners.

The *Guidance* also provides support for the administration and leadership of 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 in adult education such as community-based organizations, employers, and unions may also be interested in the *Guidance*.

History of Adult Education in California

For more on the history of adult education in California, read *Meeting the Challenge: A History of Adult Education in California, From the Beginnings to the Twenty-First Century* by archivist and librarian Linda West (2005).

Adult education in the state of California began in the early years of statehood in the 1850s. Starting in the 1920s, classes were conducted in learner communities at various times throughout the day to accommodate as many learners as possible, thus establishing a precedent of “education on demand—any time, any place, and any pace.”²⁹

In the 1960s, federal funding was established for ABE programs. By that time, the California adult education system was one of the largest in the nation. CTE programs offered carousel-style “open-entry, open-exit” classes. Though classes were mostly in-person, the emphasis was on allowing learners flexibility in their attendance and participation in programs.

The 1970s brought a rise in competency-based education, with California at the forefront of the movement. The movement influenced all aspects of adult education programming including designing a learner-centered curriculum, incorporating adult learning principles into classroom instruction, alignment between instruction and assessment, and expansion of learner support beyond the classroom walls.

In 1998, the Adult Education and Family Literacy Act, part of the Workforce Investment Act, established accountability requirements for adult education programs receiving federal funding. To better assess the effectiveness of these programs, the

29 [CA Adult Ed History](#)

US Department of Education’s Division of Adult Education and Literacy established the National Reporting System (NRS). The NRS established reporting standards for program outcomes and performance indicators.

In 2018, the California Legislature mandated the creation of the California Adult Education Program, which combined the efforts of the California Community College Chancellor’s Office and the California Department of Education (CDE) into a consolidated program. The California Adult Education Program distributes over \$500 million in annual funding to adult education program providers across the state including K–12 school districts, community colleges, and community-based partners. Additionally, adult education program providers from both K–12 school districts and community college districts participate in 71 adult education regional consortia across the state.

History of Digital Learning in California

By the 1980s, the California workforce was “significantly affected by the demands of the technology explosion” and included “increasing percentages of disadvantaged minority and limited-English-proficient workers.”³⁰ In response to the changing demands, the 1989 California Strategic Plan for Adult Education recommended adjustments to funding mechanisms and policies to allow for “any-time, any-place, on-demand” instruction through technology-based instruction, nontraditional instructional methods (e.g., internships, tutoring), and collaborative programs.³¹ This strategic planning process included an alternative model for funding that allowed programs to allocate 5 percent of their funding to innovative instructional programs for adult learners, such as distance education courses. A groundbreaking model at the time, the 5 percent projects were one of the major elements that facilitated the rise of distance education and digital learning in California adult education programs.

The Outreach and Technical Assistance Network (OTAN) began operating in 1989 within the Hacienda La Puente School District as a federally funded project through the California Department of Education, Adult Education Office. OTAN was established to “provide technical assistance, staff training, and information for adult education providers.”³² The network provided professional development on topics such as assessment, literacy instruction, and technology integration; created a statewide email forum; and established a library of educational technology training materials. In 1994, OTAN moved to the Sacramento County Office of Education and

30 [CA Adult Ed History](#)

31 [Strategic Plan for Adult Ed](#)

32 [CA Adult Ed History](#)

established its current mission to “provide electronic collaboration, access to information, and technical assistance for literacy and adult education providers.”³³

The 1990s brought the California Distance Learning Project, created to implement a statewide distance learning infrastructure for adult education. Other program goals included expanding technology access, building a distance learning knowledge base, distributing instructional materials and resources, and providing professional development and technical support.³⁴ During the same time period, OTAN created a website with electronic information dissemination and member networking capabilities.³⁵ OTAN also conducted a statewide technology infrastructure survey that revealed internet usage in adult education programs tended to be most popular for administrative and teacher planning purposes, with classroom internet use less popular. The primary barrier cited by survey respondents was a lack of technology-related professional development. In response, OTAN conducted technology training at agencies and professional conferences, and developed online learning modules.

Today, OTAN provides “electronic collaboration and information, and support for instructional technology and distance learning to literacy and adult education providers in California.”³⁶ OTAN activities are funded by the Adult Education Office in the Career & College Transition Division of the California Department of Education through federal funds. OTAN puts its vision into action through a multitude of activities, including:

- **Electronic Collaboration and Information**
 - Maintaining the OTAN website, a collection of information and a starting point to explore the world of adult education and literacy resources;
 - Supporting email lists, webcasts, videoconferencing, online meeting, and other forms of electronic collaboration;
 - Developing online grant application and reporting for the California Department of Education Adult Education Office;
 - Providing support to users through telephone support and regional training; and
 - Continuing to develop and improve electronic services to best meet the needs of California adult educators.

33 [OTAN Vision](#)

34 [CA Distance Learning Project](#)

35 [CA Adult Ed History](#)

36 [OTAN Vision](#)

- **Instructional Technology**
 - Providing information and training for planning and implementing new technologies in adult education classrooms;
 - Providing face-to-face and online workshops to increase skill levels of adult educators;
 - Hosting the Digital Leadership Academy (DLAC) to train on-site technology mentors; and
 - Producing a collection of online videos on innovative uses of technology in the classroom.
- **Distance Learning**
 - Providing statewide licensing of curriculum materials appropriate for distance instruction;
 - Hosting a Technology and Distance Learning Symposium;
 - Supporting the Innovation Programs online application and reporting system; and
 - Assisting CDE with distance learning policy development.

In spring 2020, the COVID-19 pandemic necessitated a sudden shift to distance learning. OTAN rose to the challenge with a multitude of programming options to meet the varying needs of California adult educators. OTAN also used the new environment as an opportunity to rethink existing programming, using virtual formats to invite a broader audience and wider participation. Some programming highlights from 2020–21 include:³⁷

- providing tool-specific trainings to establish foundational digital literacy skills;
- providing trainings on effective digital learning and instructional strategies;
- hosting regular office hours to provide personalized educator support;
- holding the annual Technology and Distance Learning Symposium online for the first time. A record 800 attendees registered for the online conference, including several out-of-state attendees and presenters;
- leveraging the expertise of national partners through virtual OTAN Advisory Committee sessions;
- working with the content provider partner CK–12 to develop a database of open educational resources; and

37 [OTAN Annual Report 20–21](#)

- promoting open educational resources through development of the EL Civics Exchange, a repository of instructional materials available to educators to revise, reuse, and redistribute.

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.

Digital literacy includes the ability to find, evaluate, organize, create, and communicate digital information.³⁸ Digital information might be used in an educational setting to learn, to access social services, or in workforce education and advancement. Think about how often you interact with digital information in your daily life—applying for a job, banking, utilizing social services, and even reading this guide. In addition to developing digital literacy skills, adult learners must develop digital resilience to be better prepared for a constantly evolving digital landscape.

Digital resilience signifies having the awareness, skills, agility, and confidence to be empowered users of new technologies and adapt to changing digital skill demands. Digital resilience improves capacity to problem-solve and upskill, navigate digital transformations, and be active participants in society and the economy.³⁹

38 [Digital Literacy](#)

39 [Building a Digitally Resilient Workforce](#)



VOICES FROM THE FIELD

Lynne Ruvalcaba | Administrator of Educational Technology |
California Department of Corrections and Rehabilitation

What are some of the challenges and opportunities that you see in using technology with your students?

We're asking our learners to do things in preparation for their release that aren't setting them up for success, because we know they're going to need to use computers and technology daily. So, while they do have access in the classrooms, it's not every student, every day. That is changing. Slowly, we are rolling our classrooms over to having at least one classroom set of laptops that can be used in the classroom space. That said, we see our learners in the ABE courses two hours a day. We see our CTE learners more frequently, they come every day, but they're doing hands-on applications and the book work must be sort of shoehorned in. And then our postsecondary students, we see them once a week. So that limits what they're able to do because in our environment they can't gather to do study groups, they go to teacher office hours. Our initiatives now are to put devices in their hands that allow our teachers to say, "Here's some materials that you can take with you on your laptop. Continue studying, continue working toward that GED or reading proficiency, or whatever it is that you're focused on." They want to get those high school diplomas, gain some career proficiencies, pursue degrees. Providing them access to laptops allows them to use a device to reach their goals.

What we're seeing is our students are responding in such positive ways to increased access to technology. They're recognizing this as a tool for their future. We're talking about adult learners who were disenfranchised for the most part coming through the K-12 system, whether they were in areas where there wasn't quality education, or they had unidentified disabilities, or whatever factors in their lives prevented them from becoming proficient and becoming literate, they end up in our system. We can't in good conscience put them back on the streets with no skills. Teaching adult learners the fundamentals of reading, literacy, and numeracy comes by engaging them in ways that they were never engaged as kids. These devices can be configured to do that. We can give them grade-level reading material that's still attractive to adults. We can give them experiences in the broader world. We want these tools to inspire our students and help them to understand that the world is so much more than this adversarial relationship between them and a system.

Just one example I'll give—I was working with a 62-year-old student who'd been with us for more than three decades. He was facing a parole board and likely release soon and he had no computer skills to speak of. When he got his laptop and there was a trackpad on it, he just looked at it. He was looking for a mouse. I explained to him that the trackpad had replaced the mouse, did some training to show him how to use it, and within an hour he was proficient in navigating his device. If that's all it takes to set a person up for success to get a job when they leave, we've done our job.

Standards in Practice

Today, digital learning encompasses a variety of learning environments and experiences. Standards can help educators and program providers establish clear expectations for learners, improve curriculum and instruction, measure learner outcomes, and develop effective programs—regardless of where they are in the digital transition. The following standards will be considered throughout the *Guidance* where appropriate.

The **Comprehensive Adult Student Assessment Systems (CASAS)** provides resources for adult education programs, mainly through research-based assessment systems that measure individual learner and program-level outcomes important to function effectively in the community, family, and workplace. CASAS assessments are both competency-based and standards-based, meet NRS reporting requirements, and are approved by the US Department of Education and US Department of Labor.⁴⁰ Adult learners can complete assessments in-person (computer or paper) or through remote testing. CASAS assessments are designed to measure basic academic skills in adult learners such as reading, listening, math, and writing. In addition to learner-centered assessments, CASAS offers curriculum development (competency- and standards-based), instructional support (targeting assessment results), and data reporting.

The **College and Career Readiness Standards for Adult Education (CCRS)** include standards for adult education intended to prepare adult learners for success in college, career and workforce preparation, and citizenship. Subject areas include literacy and mathematics, and standards align with the Common Core State Standards. The CCRS provides a framework for adult education program providers, establishes consistent expectations between K–12 and adult education,

40 [CASAS About](#)

creates consistency among program providers and professional development offerings, and improves learner preparedness for high school diplomacy or equivalent assessments.⁴¹

The **California Standards for the Teaching Profession (CSTP)** include standards for professional educators to “define and develop their practice”⁴² at all experience levels and for varying contexts and roles. The CSTP include six standards of learner engagement and support, creating and maintaining effective learning environments, understanding and organizing subject matter for learning, designing learning experiences for all learners, learner assessment, and developing as a professional educator. In order to reflect the increasingly diverse learner population that California educators serve, the standards are designed to be intentionally holistic.

The **ISTE Standards** provide the competencies for learning, teaching, and leading in the digital age and serve as a comprehensive roadmap for effective digital learning.⁴³ Grounded in practitioner experience and research-based practices, the ISTE Standards include guidance for students, educators, education leaders, and coaches. The ISTE Standards aim to ensure that digital learning results in high-impact, sustainable, scalable, and equitable learning experiences for all learners.

The **National Standards for Quality Online Learning** include three components: online teaching, online programs, and online courses. These components provide a framework and flexible guidance for (adult) education programs to improve online teaching and learning. The standards utilize a competency-based focus and include benchmark indicators to determine effectiveness and quality of the three components, while also allowing for flexibility across various programs and settings.⁴⁴

ISTE’s SkillRise initiative helps empower various stakeholders within adult education using educational technology. The SkillRise **Profile of a Lifelong Learner** helps to define, measure, and advance the digital and lifelong learning skills required for adult learners to succeed in today’s workforce (and beyond).⁴⁵ The Profile of a Lifelong Learner was developed with support from experts in adult basic education, workforce development, community colleges, employer partnerships, K–12 schools, career and technical education, and educational technology. The profile can be used to help develop curriculum and services to support working learners. The Profile of a Lifelong

⁴¹ [College and Career Readiness](#)

⁴² [CSTP 2009](#)

⁴³ [ISTE Standards: Educators](#)

⁴⁴ [Quality Online Learning](#)

⁴⁵ [Profile of a Lifelong Learner](#)

Learner includes the following qualities: lifelong learner, empowered worker, solution seeker, mindful colleague, and digital citizen.

Formal Literature Review

A formal literature review was conducted to curate and synthesize existing scholarly research on distance education and digital learning in adult education. The literature review informed the writing of the *Guidance* and information from the literature review is integrated throughout the guide where appropriate.

Search Methodology

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

- be peer-reviewed (e.g., scholarly journal article) or from a reputable noncorporate source (e.g., government agency, educational research nonprofit);
- be published within the last 20 years (2002 or later);
- focus on digital learning or distance education;
- focus on adult education (or nontraditional learners in higher education);
- use an andragogical lens; 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

The final list of sources reviewed for the literature review included 25 academic journal articles and 11 research reports.

Preview of the *Guidance*

The *Guidance* includes six main content chapters.

Chapter 2 explores the various considerations for **ensuring equity and access for all** educators and learners. The chapter addresses equity and access related to digital devices, connectivity, digital infrastructure, and digital literacy skills. Chapter 2 also addresses **accessibility** considerations and identifies **Universal Design for Learning** as a framework for meeting the needs of diverse learners.

Chapter 3 focuses on **foundations of adult education** and **digital learning**. The chapter includes research-based benefits, challenges, and recommendations related to digital learning in adult education. Chapter 3 also explains **relevant standards** in adult education, introduces various **roles that support adult learners**, and shares examples of **high-quality technology professional development**.

Chapter 4 focuses on **designing flexible learning experiences**. The chapter identifies **instructional models** and **technology integration frameworks** for learning design. Chapter 4 also introduces different types of **digital tools**, including **open educational resources**, and how to use them to meet the needs of diverse learners.

Chapter 5 provides best practices and strategies for **adopting digital learning models** that work. The chapter includes information about various digital learning models including **distance education**, **blended learning**, and **HyFlex**. Chapter 5 also includes implementation strategies and reporting considerations.

Chapter 6 focuses on **data-driven instruction**. The chapter explores various assessment types including **standardized assessments**, **digital skills assessments**, and **informal assessments**. Chapter 6 also considers **remote testing** and identifies **digital tools for assessment**.

Chapter 7 focuses on fostering **healthy, equitable, and inclusive online communities**. The chapter examines the role of “learner” as one of many competing roles in adult learners’ lives. It also shares strategies for **cultivating educator and learner well-being**, **developing educator agency** in creating inclusive learning environments, and **fostering digital citizenship**. The chapter concludes by addressing **the role of the community** as a central facet of the digital learning experience.

The *Guidance* also includes an executive summary, foreword, glossary, references, and a list of supplemental resources by topic (see appendix A).

NOTE: Digital resources and tools included in the *Guidance* are mainly derived from interviews with California educators and field experts. Programs exercise local control when selecting digital resources and tools. Inclusion in the *Guidance* should not be considered an endorsement by the CDE.

In addition to the chapter content outlined above, the *Guidance* incorporates vignettes featuring California adult educators. These vignettes provide practical, real-world examples of educators using digital tools and online learning environments to facilitate meaningful learning experiences for adult learners. Vignette participants include individuals from across the state of California in a wide range of adult education programs and settings.



CHAPTER

2

Ensuring Equity and Access

Digital equity is defined as “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.”⁴⁶ A prerequisite to engaging in digital learning is ensuring digital equity, including access to digital devices, connectivity to high-speed internet, and developing digital literacy skills, all covered in this chapter. Furthermore, this chapter considers strategies for meeting the needs of diverse learners, including accessibility requirements and Universal Design for Learning principles.

Digital Devices

Not all learners have access to adequate equipment for digital learning outside of the classroom. Many learners only have access to a mobile phone, making it difficult

⁴⁶ [Public Law 117-58](#)

to fully participate in certain digital learning activities. Often, digital materials do not look the same on mobile devices, and some digital tools do not have a version that is compatible with mobile devices. Those learners who do have access to a laptop or tablet computer may have to share the device with other family members who have competing demands and responsibilities. In the OTAN Student Technology Intake Survey conducted in August 2021, 25 percent of the 23,026 adult learners who completed the survey indicated a need for a device to help them access digital learning experiences.

Accounting for varying levels of access to digital devices may be challenging for educators. Designing flexible learning experiences and personalized learning pathways provides options for adult learners to access and engage with learning in whatever ways they can. For more information on this topic, see chapter 4 of this guide.

To address this concern from a state level, California's **Closing the Digital Divide** Initiative includes funding and support to help learners obtain digital devices needed to access learning including laptops and tablets, modems and routers, and Wi-Fi hotspots.⁴⁷

Connectivity

In addition to digital devices, to fully engage in digital learning, learners need broadband internet access. Without internet connectivity, learners cannot access digital content or participate in online learning experiences.

In August 2021, OTAN conducted a Student Technology Intake Survey reflecting 23,026 learner responses from 350 agencies (about 5 percent of adult learners in federally funded programs). The most popular method learners reported for connecting to the internet was an in-home internet connection (86.9 percent), but almost one-quarter of learners (22.6 percent) reported using their phones to connect to the internet. Learners also reported using a personal hotspot (5.8 percent) and community-based internet connections (3.1 percent) to access the internet. Some learners reported at-home data limits as a barrier (20.8 percent) to accessing learning opportunities, while other learners were unsure if data limits would be a barrier (22 percent). Some learners also reported needing help to get on the internet (12.4 percent).

⁴⁷ [Closing the Digital Divide](#)

Helping Learners Get Connected

There are several federal funding initiatives specific to issues of device and internet access. Adult educators and classified support staff can play a critical role in connecting learners with these resources. First, conduct a survey to determine which learners are experiencing barriers to accessing digital devices and high-speed internet. Then, share information about relevant programs that will help qualified learners access digital devices and high-speed internet.

The bipartisan Infrastructure Investment and Jobs Act includes almost \$1 trillion in total funding, with \$65 billion in funding for increasing broadband access across the country and \$2.75 billion for the **Digital Equity Act**, which addresses issues of digital equity and inclusion. The act includes funding for digital-skills training for low-income populations, improving accessibility of online social service programs, and empowers rural communities to measure broadband access and adoption.⁴⁸

Funded through the Federal Communications Commission, the **Affordable Connectivity Program** provides discounted monthly internet access (and one-time device discounts) for qualified individuals or households.⁴⁹ Eligibility includes households at or below 200 percent of the Federal Poverty Guidelines, participation in certain assistance programs (e.g., Medicaid), participation in tribal-specific programs, participation in the National School Breakfast/Lunch programs, and Federal Pell Grant recipients.

Also funded through the Federal Communications Commission, the **Emergency Connectivity Fund** provides eligible schools and libraries with funding for laptops and tablets, modems and routers, Wi-Fi hotspots, and broadband connectivity to support their communities.⁵⁰ Funding can be used to support educators and school staff, learners, and library patrons. Eligibility includes schools, libraries, and consortia that are eligible for support under the Federal Communication Commission's E-Rate program or Library Services and Technology Act.

EveryoneOn is a national nonprofit organization that provides affordable access to digital devices, high-speed internet, and digital skills training to low-income families.⁵¹

48 [Digital Equity Act](#)

49 [Affordable Connectivity Program](#)

50 [Emergency Connectivity Fund](#)

51 [Low-Cost Internet & Computers](#)



VOICES FROM THE FIELD

Francisco Pinedo | Lead Instructor | Soledad Adult School

Can you share some of the challenges and successes that you and your students have experienced related to technology access?

The digital divide is very evident here in the Salinas Valley, in Monterey County. We only have one internet provider in Soledad—now two, but at the beginning of the pandemic, it was only one. There were not a lot of resources for students. During the pandemic, we used a bus to set up a mobile hotspot in the school parking lot that our students could come and use from their cars. This was a popular way for our students to get internet access, and some of them still use the school Wi-Fi from the parking lot. We also partnered with an external agency to offer devices, mobile hotspots, and digital literacy classes for our students; there was also community access to Wi-Fi and other support.

With digital literacy, our students were well-prepared for the transition to online learning. In the 2018-2019 school year, we introduced iPads and laptops in ESL and also offered an introduction to computer literacy class at the school. So our students knew how to log on, how to connect—the basics we had down pretty well.

How did your school know which students needed help with device access or getting connected?

We are part of the Salinas Valley Adult Education Consortium. In the first week of remote learning, the members of the consortium got together to develop a survey asking students what resources they might need to continue learning. We sent out the survey to our students using Remind. Because we are a small school, we were able to keep track of who hadn't filled out the survey. We asked students to remind their peers to complete the survey. Because we're a small school—we only have about 400 students—our staff was able to call a lot of the students who didn't respond to our messages. Through the survey results, we were able to see who needed access and support, and we were able to connect them to the resources that they needed. One thing we found was that some students thought they'd have to spend a lot of money to buy a device or get internet access, but we helped connect them to low-cost options.

About 80 percent of our adult students have K-12 students, mainly in Soledad—so we got creative with scheduling. During the pandemic, the K-12 students were given iPads to take home. They had Zoom, they had all the things that we used in adult education. So, they were OK with the parents using their students' devices. I'm very grateful that they let us, it was a collaborative

effort to allow everyone to continue learning. Most of our classes shifted from the morning to the afternoon and evening, when the K–12 students weren't in session. Once K–12 students went back to in-person school, we started recommending our students to a local nonprofit agency where about 80 percent of our students qualified because of their low income to get a Chromebook for about \$20 to \$50—sometimes even free. That agency also provides a lot of digital literacy workshops, so they're such a great asset to our students.

What changes have you seen in digital literacy or how your students view the role of technology in their education?

Before, students didn't really feel the need of using technology in education, and now it's the other way around. They really value technology, and they see it as a tool for their education. After seeing how their children use it. How they could now attend a community college virtually—that has also encouraged some of our students to be co-enrolled at our local community college, where they're taking a hybrid or virtual class. I think it's opened a lot of opportunities. Before, they saw technology and education separate. Now, they see it as one. They say, if I go to the DMV, now the test isn't paper-based, it's now on a computer. If I go apply for a job, it's now on a computer. If I want to board an airplane, it's now all on a computer. So, they start to see how technology is important, whereas before, they asked “Why do we use technology in the classroom? Why do we have to do this on the iPad, why can't we just use the book? Why can't I just get a paper, why does it have to be on Google Docs?” Now, it's very seamless. It seems that now if I say we're going to do an activity on paper, they say “It's so much easier if we use technology. I could have it on my phone, I could have it on my tablet, it could be on my Chromebook. I could have it anywhere!” So, I think that has been the shift where students now appreciate and value technology, which is making things a lot easier for all of us.



VOICES FROM THE FIELD

Jaemi Nash | Director | Tamalpais Adult School

Can you share some of the challenges and successes that you and your students have experienced related to technology access?

Through the Emergency Connectivity Fund, we were able to purchase and lend Chromebooks to our students. Initially we didn't have enough Chromebooks for all our students who needed them, and so we had to order more. We

also heavily pushed the community library services because they loan Chromebooks and Wi-Fi hotspots. We didn't provide hotspots because it was not an easy process for us. Even though we got a grant, we're too short-staffed to be able to monitor and track, and it just felt out of our reach at the time. So, we were encouraging people to go to the library to get a hotspot.

We have a YouTube page where we added a lot of technology troubleshooting videos in both English and Spanish—how to find our school's website, how to access classes, how to open a Chromebook and get started. We also provide students with one-on-one, bilingual technology support as needed.

Our school is a member of the Marin Adult Education Program Consortium. One of our members agreed to fund a pilot for all the members in our area to provide bilingual digital literacy workshops through a nonprofit organization called *Technology 4 Life*. The workshops are small bursts, usually a few hours at a time, but they support using Google tools, Zoom, smartphone apps, Chromebook basics—we've been using them to provide information in English and Spanish, and it's been wonderful. Our students absolutely love it and they're excited for it. They've offered classes to the entire consortium and at our school site as guest presenters in some of our classes.

How did your school know which students needed help with device access or getting connected?

We used OTAN's Student Technology Intake Survey to determine access needs, but we also made some assumptions about our students. We thought that students who were logging in to classes on their mobile phones must need a computer, but we found that wasn't the reality. We found that some people didn't want a computer because they either didn't have great Wi-Fi at home or didn't have a private space to take their class. So, we offered our school as a place where they could come and use the Wi-Fi, and for those who did need laptops, we did a lot of outreach in their classes, letting them know that we had Chromebooks to lend out. Most of our outreach was in our lowest-level ESL classes because we felt that those students needed the most help and support.

Understanding Learners' Needs

To better understand learners' needs related to access, program providers can utilize multiple methods for gathering information from learners. During intake and program orientation, support staff and program administrators can conduct preassessments

of learners' digital literacy skills and gather specific information about the devices and connectivity they have access to at home. Adult education program providers can also periodically survey all adult learners to maintain up-to-date information about their access, connectivity, and digital literacy skills. However, these two main methods of gathering information from learners are reliant on learner disclosure. Sometimes, learners may not want to disclose personal information or may be unaware of the specifics of their access such as their internet bandwidth.

Another strategy for information-gathering about learners' access and connectivity needs is the relationship between the individual learner and educators or support staff. A strong personal relationship increases communication and comfort level in reaching out about potential issues or need for support. Beyond relationship-building, learner participation data can also help identify learners that need support. For example, if a learner is not attending virtual classes or not completing digital assignments, this might signal the instructor to reach out to the individual learner and have a conversation about access and potential support. At the program level, providers can establish outreach practices to mitigate challenges with access and connectivity and to further support attendance, participation, and retention efforts.

Building Digital Infrastructure

Access is not just a concern for learners, but also for educators and support staff. For individuals in rural locations, internet access may be lacking or unreliable. Additionally, staff who only work part-time may not be able to afford digital devices or sufficient at-home internet access. Beyond access and connectivity concerns, adult educators may not have prior professional development experiences or strong skills in designing digital learning experiences and purposeful technology integration. Programs can upskill their educators through technology-oriented professional development, mentoring, and opportunities for collaboration.

In establishing a strong digital infrastructure, program providers need to think about both short-term access and implementation, as well as long-term sustainability and growth. Some issues to consider in determining total cost of ownership include annual software licenses, device maintenance and upgrades, device lifespans, inflation costs, technical support, and training.⁵²

- **Software licensing:** Some digital materials and resources are provided for free for educational purposes (see chapter 4), but some programs require a cost to use. Licensing models for educational software vary, but typical offerings include monthly, yearly, or lifetime paid subscriptions. If purchasing access to

52 [Total Cost of Ownership](#)

software that requires individual accounts or licenses, sometimes companies will offer discounts for schools or consortia purchasing in bulk. Before making any major purchases, check with your institution to see what subscriptions already exist and research on different purchasing options.

- **Device maintenance and upgrades:** A digital device does not last forever. When purchasing devices, consider how long the device will be used in the classroom before being recycled or phased out of the program. Additionally, consider planning for or scheduling regular maintenance to extend the lifespan.
- **Inflation costs:** Over time, the cost of hardware, software, technical support, and any technology-related purchases will increase due to inflation. Be mindful of inflation when budget planning.
- **Technical support:** Even with new or well-maintained devices, things will go wrong. Someone drops a laptop and the screen cracks, the internet goes down, a copier jams—these are all problems that can be alleviated through proper technical support. When planning for technical support, consider the number of devices being managed and the number of users (educators, learners, support staff, volunteers, etc.). Technical support might be a dedicated staff member at the program site, a technical support team for the consortium or district, through a third-party provider, or even community volunteers.
- **Technology training:** Educators and support staff will require training on new devices, software, and tools used. When buying an institutional license, many technology companies will also provide some level of introductory training as part of the contract, but offerings vary depending on the company and size of the contract. State organizations like OTAN also provide technology-related professional development opportunities, from live and recorded webinars to professional learning communities to virtual conferences. When planning for technology training, consider both introductory training costs and the costs (and time) associated with sustained learning. For more on professional development, see chapter 3.

Digital Literacy Skills

Digital literacy includes the ability to find, evaluate, organize, create, and communicate digital information.⁵³

Digital literacy is an access issue, because digital literacy skills help users to successfully navigate digital devices and online resources. To participate in adult education,

53 [Digital Literacy](#)

learners need digital literacy skills to navigate a program provider’s website, contact program staff, apply to a program, sign up for courses, and complete course-work in hybrid courses. For educators, digital literacy skills are needed to design and teach hybrid courses—this might include communication with potential and enrolled learners, conducting online sessions, sharing digital content and resources, and providing feedback. For program providers, digital literacy skills can facilitate marketing and recruitment efforts as more potential learners interact with organizations in digital spaces.

The Maryland Department of Labor created a Digital Literacy Framework for Adult Learners to identify seven elements of digital literacy relevant for adult learners:⁵⁴

- **Technical:** Basic digital skills (e.g., turning on/off devices, basic troubleshooting)
- **Civic:** Individual rights and responsibilities in a digital space (e.g., digital citizenship, online safety)
- **Communicative:** Communication in digital contexts (e.g., email, social media)
- **Collaborative:** Working with others in digital contexts (e.g., participation in a discussion forum, teamwork)
- **Computational thinking:** Using digital tools to solve problems (e.g., creating a budgeting spreadsheet)
- **Investigative:** The ability to find and evaluate online information (e.g., researching prices)
- **Productive:** Curating and creation digital content (e.g., publishing a blog post)

An additional skills framework is the ISTE SkillRise **Profile of a Lifelong Learner**, a research-backed framework that defines the digital skills adults need to succeed in the future of work.⁵⁵ The profile offers a helpful “North Star” for aligning curriculum and instruction to ensure adult learners are building the digital and lifelong learning skills needed for success at work, in school, and in community life.

The profile includes five features, each with supporting practices, that sit at the intersection of digital and lifelong learning skills:

- **Lifelong Learners** access, analyze, and apply digital resources in order to build knowledge, advance their careers, and experience the best life possible. *Selected practices: setting and achieving individualized learning*

54 [Digital Literacy Framework](#)

55 [Profile of a Lifelong Learner](#)

goals; evaluating the accuracy, credibility, and relevance of online information; building digital literacy and exhibiting digital resilience.

- **Empowered Workers** persevere through challenges, shape career paths in alignment with personal interests and goals and upskill to be successful in a digital-age workforce. *Selected practices: building awareness of and pursuing career pathways; advocating for themselves in the workplace; utilizing digital and in-person networks to cultivate healthy relationships in life and work.*
- **Digital Citizens** are inclusive, equitable, and culturally aware as they live, learn, and work in an interconnected world. *Selected practices: expanding perspectives, developing empathy, and supporting more inclusive and equitable workplaces; using technology in a safe, legal, ethical, and culturally mindful manner; a willingness to challenge procedures, systems, and technologies that promote biases or perpetuate inequities.*
- **Solution Seekers** use technology to explore independent perspectives, amplify creative thinking, and develop smart solutions to practical problems in work and life. *Selected practices: curiosity, flexibility, and openness to new ideas; perseverance through open-ended challenges, working within design constraints, and discovering new solutions; leveraging digital tools for problem-solving.*
- **Mindful Colleagues** employ situational awareness and a collaborative team approach to effectively communicate, learn from, and work with diverse colleagues in digital and face-to-face environments. *Selected practices: awareness of interpersonal dynamics in the workplace; empathy, thoughtful communication, and supportive collaboration in-person and online; support of colleagues' successes while also advocating for their own career mobility.*

Additional Digital Literacy Resources

The Digital Navigator model, created by the EdTech Center @ World Education with funding from Walmart, is a comprehensive framework for addressing digital equity and inclusion. Digital Navigators can be adult educators, support staff, partners at community-based organizations, or volunteers—anyone who facilitates and supports digital inclusion for adult learners. The model is customizable, flexible, and personalized for each program provider and the individual learners within. The **Digital Navigator Playbook** serves as a starting point for program implementation, including information on program goal-setting, defining activities and services, measurement and evaluation, and designing an implementation plan.⁵⁶

56 [Digital Navigator Playbook](#)

The resource guide **Promoting Digital Literacy for Adult Learners** from the Barbara Bush Foundation and Digital Promise provides additional information about digital literacy skills, including research-based strategies for developing adult learner’s capacities.⁵⁷

The US Department of Education, Office of Career, Technical, and Adult Education funds digital literacy initiatives within adult education for students, teachers and tutors, and program providers.⁵⁸ The educator and support staff resources include a blog, lesson plans, self-paced courses, and webinars related to effective digital literacy and technology integration in the adult education classroom.

Accessibility

Access encompasses not only the devices and tools needed to access learning materials, but also the learning materials themselves need to be made accessible to all learners. Whether using existing learning materials and resources, or creating original content, educators need to consider the accessibility of the learning materials, programs, and tools they use within the classroom.

Accessibility measures the degree to which content, programs, or tools support and accommodate the needs and preferences of diverse learners. While accessibility might initially be a consideration for learners with disabilities, many accessibility features—such as closed captions or text-to-speech—are beneficial to all learners.

Why do educators need to consider accessibility? To better meet the needs of diverse learners with varying abilities and needs but also because *accessibility is the law*. Section 508 of the Rehabilitation Act requires that federal agencies and their contracted organizations—for example, adult education program providers that receive federal funding—make electronic information and technology accessible to individuals with disabilities.⁵⁹

For web content, the **Web Content Accessibility Guidelines (WCAG)** provide commonly accepted accessibility standards, applicable to web content and other digital materials, that emphasize four content principles:⁶⁰

- **Perceivable:** Clear content and user interface—usually, this means presenting information in multiple formats (e.g., audio, text, video).

57 [Digital Literacy Resource Guide](#)

58 [Digital Literacy Initiatives](#)

59 [IT Accessibility Laws and Policies](#)

60 [WCAG 2 Overview](#)

- **Operable:** Clear options for completing tasks and navigating resources—adequate wait time when completing forms, undo buttons, etc.
- **Understandable:** Content and user interface are easy to understand—does the content make sense? Is it easy to figure out how to complete certain tasks?
- **Robust:** Content can be reliably interpreted by a wide variety of users, including those using assistive technologies.

The **Americans with Disabilities Act** protects people with disabilities from discrimination. The goal of the Americans with Disabilities Act is to guarantee that people with disabilities receive equal opportunities in work, life, learning, and civic participation.⁶¹ The Act applies to all programs provided through government agencies, including public education. Programs are required to provide reasonable accommodations to individuals with disabilities.

While the number of accessibility-related laws and regulations might seem daunting to an educator, it is imperative to provide accessible learning environments and materials to help all individuals have equitable access to participation.

To help educators meet accessibility requirements and design more accessible learning materials, OTAN maintains an **Accessibility Resources** webpage that includes OTAN-created resources (e.g., infographics, webinars), general resources, resources for people with specific disabilities, and tool-specific resources.⁶²

The **National Center on Accessible Educational Materials** from CAST aims to “increase the availability and use of accessible educational materials and technologies for learners with disabilities across the lifespan.”⁶³ The Accessible Educational Materials Center is organized into sections that help individuals and programs acquire, create, use, and coordinate accessible educational materials and tools.

Universal Design for Learning

Universal Design for Learning is a flexible, learner-centered framework that helps educators design learning experiences that are accessible to all learners.⁶⁴ Rather than focusing on designing accommodations for individual learners, the framework encourages educators to provide multiple means of engagement, representation, and action and expression for all learners.

61 [Americans with Disabilities Act](#)

62 [OTAN Accessibility Resources](#)

63 [Accessible Educational Materials](#)

64 [Universal Design for Learning](#)

Multiple Means of Engagement

Learners differ in engagement and motivation to learn. Many factors can influence an individual's motivation to learn including background knowledge, culture, neurological factors, personal relevance, and more. Some learners seek out novelty in the learning experience, while others prefer routine. Because of the variance among individual learners, there is no one strategy that will work for engaging all learners. Therefore, educators should provide options for individual autonomy and learner choice when possible. Additionally, educators should aim to design learning experiences that are authentic, relevant, and valuable to individual learners—which aligns with adult learning theories as introduced in the next chapter.

To sustain learners' efforts, foster collaboration, increase mastery-oriented feedback, and clearly state learning goals and objectives. Self-regulation is another element of engagement that learners may use to sustain their efforts. Educators can foster self-regulation by providing learners opportunities to self-assess and self-reflect, along with explicit instruction in coping skills and strategies.

Multiple Means of Representation

Learners differ in the ways that they perceive information. Additionally, learners may have disabilities that prevent them from accessing certain content types or make it difficult to access. Educators should design lessons that represent key content in multiple modalities, such as audio, text, and video, to increase the accessibility of information to all learners. For example, a learner who is hard of hearing may have difficulty following a spoken lecture, so adding slides with visual cues and text of key concepts can be helpful. Not only does this help the learners with hearing loss but may help all learners more easily focus their attention on key concepts.

In addition to presenting information in multiple modalities, information should be presented in a manner that allows for customization. Digital content is more easily manipulated. Customization options for visual elements might include color and contrast, font, layout, and size; customization options for audiovisual elements might include speed and volume.

Multiple Means of Action and Expression

Learners differ in the ways they communicate, develop and act on plans, and physically interact with learning materials and tools. In a digital learning environment, learners might need assistive technologies (e.g., screen readers, touchscreen display). Additionally, providing options for how learners navigate the learning environment—whether digital or physical—and varying response requirements (e.g., method, response rate) helps meet the needs of all learners.

Executive functions are the skills that individuals must set long-term goals, plan strategies for reaching their goals, monitor their progress, and adjust as needed. Executive functions are helpful to maximize the impact of a learning experience. As such, adult educators, support staff, and adult education programs should help learners develop these skills through explicit instruction, support, and scaffolding. For example, learners may have varying levels of skill and experience with setting goals, creating a study schedule, or self-reflection.

A benefit of using digital tools in the classroom is they often provide multiple options for creating engaging multimedia content and communicating understanding of a topic. Learners (and educators) can express themselves at a level that they are most comfortable with, while still demonstrating the appropriate knowledge and skills.



CHAPTER

3

Foundations of Adult Education and Digital Learning

Educators cannot provide effective digital learning experiences without first understanding adult learners.

This chapter begins by introducing adult learning theories as a foundation for better understanding adult learners, while also acknowledging the unique characteristics, qualities, and strengths of each individual learner. It also highlights research focused on digital learning in adult education, including recommendations and strong practices for digital learning design and implementation. Next, this chapter introduces the various roles in adult education, including certified staff, classified staff, and the many other individuals that support learners. Then, relevant standards for adult education professionals are briefly introduced, with a connection to how those standards inform practice. Finally, the chapter concludes with a section on how professional development supports educators and support staff in preparing for digital learning.

Adult Learning Theories

Adult learning theories differ from the pedagogical approach of K–12 education, which focuses on educators transmitting content knowledge to learners through prescribed, sequential curriculum and instructional activities.⁶⁵ In pedagogical methods, the educator controls *what* content is learned and *how*. Alternatively, adult learning theories view learning as a collaborative process, where educators and learners are cocreators of the learning experience. Due to the nature of the adult learner, the learning process is often more self-directed, with a greater deal of choice, control, or input from the learner.

Andragogy

Andragogy is a practical and theoretical approach to adult learning that sees the learner as autonomous and self-directed, and the educator as a facilitator or guide of the learning process.⁶⁶ Andragogy provides a useful foundation to better understand adult learners and their unique needs. Andragogy is process-based, meaning that educators focus on the learning process, rather than the specific content to be taught.

Andragogy includes the following core adult learning principles.⁶⁷ Adult learners:

- need to know 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 experiences;
- are contextual and problem-centered (rather than theoretical); and
- have an intrinsic motivation to learn.

The andragogical process model includes the following steps:⁶⁸

1. Preparing learners for the learning experience
2. Establishing a collaborative, respectful, and open climate for learning
3. Mutual planning and decision-making about the learning process

65 [Pedagogy vs. Andragogy](#)

66 [Teaching Methodologies to Distance Learning](#)

67 [The Adult Learner](#)

68 [The Adult Learner](#)

4. Establishing learning needs; considering both individual and organizational goals
5. Mutual creation of learning goals and objectives
6. Designing the learning experience
7. Participating in learning activities (e.g., experiential or inquiry-based learning)
8. Evaluating learner outcomes and perceptions of the learning experience

Experiential Learning Model

The experiential learning model establishes a learner’s experiences as central to the learning process.⁶⁹ There are four stages to the experiential learning model: concrete experience, reflective observation, abstract conceptualization, and active experimentation. Learners cycle through each of these stages:

- **Concrete experience:** Learning occurs by being involved in a new experience. In a classroom, concrete experiences are activities in which learners actively engage with content. In a physical classroom, learners might participate in a hands-on demonstration or engage with relevant case studies. In a digital learning environment, learners might participate in simulations of real-world situations.
- **Reflective observation:** Learning occurs through observation (watching others) or reflection (observing the self). In a classroom, reflective observation might occur through small group or whole class discussions, or individually through self-reflection prompts. Using digital tools, educators can facilitate more flexible opportunities for participating in discussions—live video conferencing sessions, chat rooms, discussion boards, or collaborative creation tools.
- **Abstract conceptualization:** Learners make sense of their reflective observations by forming conclusions and establishing theories. In a classroom, learners might have the opportunity for abstract conceptualization through collaborative discussions, or in synthesizing content and sharing it with others (e.g., having to present a summary of an instructional unit or topic).
- **Active experimentation:** Learners use what they have learned in the previous stages to apply their knowledge to new experiences. In the adult education

69 [Experiential Learning](#)

classroom, this might occur in a lab environment or on-the-job training experiences.

Heutagogy

Heutagogy focuses on the individual learner as the center of the learning process. 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. Learners work in partnership with educators to negotiate what and how they learn.

The essential principles of heutagogy include:⁷⁰

- **Learner-centered:** Learners are autonomous and self-directed. Learners are responsible for deciding what will be learned, how it will be learned, and how it will be assessed.
- **Capability:** Learners have varying degrees of capability in communication, collaboration, applying skills to novel situations, positive values, and self-efficacy.
- **Self-reflection:** Reflection on both the content learned and how it is learned (metacognition) are essential to the learning process.
- **Double-loop learning:** Learners change actions and beliefs based on their learning experiences and what they have learned.
- **Nonlinear learning:** Learners choose their own path.

Self-Directed Learning

Before engaging in a learning experience, adult learners need information about the how, what, and why of learning. How will we learn new information? What new information will we learn? Why are we learning this information?

While adult learners are autonomous and self-directed, adult learners vary in their preferences toward self-directed learning. Individual factors that influence self-directed learning include previous experience with content, social orientation, efficiency, previous learning experiences, and locus of control.⁷¹ Some learners are more comfortable with independence, while others seek out support and guidance from their instructors. The educators' role then focuses on knowing each learner as an individual and taking their capabilities and preferences into account when designing learning experiences.

70 [Heutagogy and Lifelong Learning](#)

71 [Teaching Learners To Be Self-Directed](#)

The stages of self-directed learning include:⁷²

- **Stage 1:** The learner is dependent on the educator, who acts as an authority figure. Examples of learning experiences at this stage include coaching with immediate feedback, drill exercises, and informational lectures.
- **Stage 2:** The learner is interested in the learning process and the educator acts as a guide and motivator throughout the experience. Examples of learning experiences at this stage include inspirational lectures, guided discussions, explicit instruction in learning strategies, and goal-setting.
- **Stage 3:** The learner is involved in the learning process and the educator acts as a facilitator. Examples of learning experiences at this stage include group discussions or project-based learning.
- **Stage 4:** The student is self-directed and the educator acts as a consultant or delegator. Examples of learning experiences at this stage include internships, individual work, or self-directed study groups.

Digital learning facilitates self-directed learning, because it increases flexibility in accessing learning experiences. Through online or hybrid learning, learners can access the classroom anytime, anywhere—if they have access to a digital device and internet connection. Digital tools may further facilitate self-directed learning by providing options for engaging with content, communicating and collaborating with others, and demonstrating one’s understanding.

Transformative Learning

The goal of transformative learning is to use the learning experience to transform the learner’s assumptions and expectations to broaden their perspectives through dialogue and reflection.

Transformative learning is 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.⁷³

Where do problematic frames of reference exist? Some examples include cultural biases and stereotypes, fixed interpersonal relationships, ideologies, political orientations, religious beliefs, scientific paradigms, social frameworks, and even aesthetic standards and values. Educators can help address problematic frames of reference

72 [Teaching Learners To Be Self-Directed](#)

73 [Transformative Learning as Discourse](#)

by exposing learners to diverse content and perspectives, also through facilitating communicative learning.

A key component of transformative learning is communicative learning, or dialogue that involves empathetic listening, having an open mind, seeking common ground, and perspective taking. In order to ensure effective communication, an inclusive, supportive learning environment must first be established so that learners feel comfortable and open to transformation. Once a positive classroom community is established, then communicative learning can occur through small or whole group discussion, facilitated by the instructor.

Transformative learning can also occur internally through critical self-reflection and reflective judgment (perspective about one's own perspectives). Educators can help learners foster habits of mind and skills that promote an open mind and willingness to transform one's own beliefs, perspectives, and practices.

Research-Based Practices in Digital Learning

This section highlights key findings and recommendations from the formal literature review including the effectiveness of different delivery methods on learner outcomes, benefits of digital learning for adult learners and educators, and communication and learning design recommendations for educators when designing digital learning experiences.

Effectiveness of Different Delivery Methods

Studies that evaluated the effectiveness of distance education found no significant differences between instructional delivery methods on learner outcomes.^{74,75} Some studies even found that digital learning programs had a positive impact on learner outcomes.^{76,77} Rather than focusing on the delivery method, the critical component for impacting learner outcomes is the quality of learning design.⁷⁸

Benefits of Digital Learning

The main benefits of digital learning for learners include:

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- 74 [Second Language Studies](#)
 - 75 [GED Preparation](#)
 - 76 [Evaluating Digital Learning](#)
 - 77 [Blended Learning Guide](#)
 - 78 [Community College Participation](#)

- convenience and flexibility;
- building learner’s self-confidence; and
- building academic and digital literacy skills.^{79,80,81,82}

Digital learning tools provide educators with the ability to:

- differentiate instruction;
- facilitate personalized learning;
- monitor learner progress; and
- provide constructive feedback.^{83,84,85}

Recommendations for Digital Learning

In supporting adult learners within a digital space, educators should first and foremost respect adult learners as individuals and acknowledge their past experiences.^{86,87} Adult learners bring more diverse experiences and perspectives into the classroom, including experiences with digital learning. Adult education classrooms often include a wide range of learners with varying levels of access and digital literacy skills.

Technology must be utilized in meaningful and purposeful ways that are aligned with curriculum goals.⁸⁸ As with any learning experience, educators should be intentional in curriculum and instructional design in a digital learning environment. Digital learning is as effective as other methods of learning, but only if designed in a way that provides learners with meaningful, purposeful learning experiences.

Curriculum and learning design recommendations for adult educators:

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- 79** [Covid-19 Rapid Response Report](#)
 - 80** [Building a Digitally Resilient Workforce](#)
 - 81** [Adult Education’s Response to Emergency Remote Teaching and Learning](#)
 - 82** [Facing the Future](#)
 - 83** [GED Preparation](#)
 - 84** [Use of Newsela PRO in Precollege Program](#)
 - 85** [Blended Learning Guide](#)
 - 86** [A State Director’s Perspective](#)
 - 87** [Where Do We Go Now?](#)
 - 88** [Building a Digitally Resilient Workforce](#)

- **Facilitate flexible learning opportunities and personalized learning pathways.**^{89,90,91,92,93} Flexible learning opportunities means providing learners with options when possible. Educators might consider providing options for engaging with content, participating in class, and demonstrating understanding.
- **Design authentic, learner-centered experiences with real-world connections.**^{94,95,96} Authentic learning is learning by doing. Real-world connections mean that learning does not happen in isolation but is connected to real-world activities, concepts, or experiences. Example activities to facilitate authentic, real-world learning centered on the individual learner include journals or portfolios, which allow learners to showcase their learning and opportunities for self-reflection and demonstrating their growth.
- **Facilitate self-directed learning with scaffolded individual support as needed.**^{97,98,99} Digital learning allows educators to facilitate self-directed learning because learners have flexibility in deciding when and where to engage with content. Adaptive software that provides learners with personalized activities and content may provide additional support for learners who are struggling or need extension activities. Educators can help guide learners through this process.

Communication recommendations for adult educators:

- **Establish clear expectations and goals.**¹⁰⁰ At the beginning of a course or unit, make clear expectations for participation and success criteria. Provide learners the opportunity to set short- and long-term goals. Some adult learners

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- 89 [Covid-19 Rapid Response Report](#)
 - 90 [Building a Digitally Resilient Workforce](#)
 - 91 [Adult Education’s Response to Emergency Remote Teaching and Learning](#)
 - 92 [A State Director’s Perspective](#)
 - 93 [Blended Learning Guide](#)
 - 94 [Building a Digitally Resilient Workforce](#)
 - 95 [A State Director’s Perspective](#)
 - 96 [Where Do We Go Now?](#)
 - 97 [The Interconnectedness of Learning](#)
 - 98 [Evaluating Digital Learning](#)
 - 99 [Leveraging Technology](#)
 - 100 [Building a Digitally Resilient Workforce](#)

may have little to no experience with academic goal-setting, so this is an opportunity for educators and staff to provide additional support.

- **Engage in multiple forms of consistent communication and meaningful feedback with individual learners.**^{101,102} Communication will vary depending on the course delivery method, subject matter, and preferences of the educator and individual learners. Consider when and how you might communicate with learners. Provide options to allow learners to engage with you in a way that is most comfortable to them. Some learners may be more comfortable expressing themselves verbally (either in-person or in a videoconferencing session), while other learners may not feel comfortable speaking and prefer to communicate via email or text. Meaningful feedback provides information that is specific and personalized to the individual learner. Digital tools provide a variety of audio, visual, and text-based options for providing meaningful feedback.
- **Provide opportunities for academic and informal discussion and peer-to-peer interaction to help learners develop relationships and foster cultural competence.**^{103,104} Academic discussion reinforces content, while informal discussions build relationships, establishes a positive classroom community, and fosters cultural competence through perspective-taking. Discussions can be live, either in-person or online, or asynchronous using a digital discussion board or other collaborative tools that allow learner participation.
- **Provide opportunities for learner self-reflection.**^{105,106} Provide opportunities to reflect on the content learned and the learning process itself. Learners may need guidance and structured activities to engage in self-reflection if it is a new experience for them. Digital journals and portfolios facilitate self-reflection while still allowing learner individualization. Learners choose what learning artifacts to include in their portfolio or choose their own journaling prompts for engaging in self-reflection.

101 [Covid-19 Rapid Response Report](#)

102 [New Trends in Formative-Summative Evaluations](#)

103 [The Interconnectedness of Learning](#)

104 [Leveraging Adult Learning Theory](#)

105 [The Interconnectedness of Learning](#)

106 [Leveraging Adult Learning Theory](#)

Standards in Adult Education

Educators can use the standards included in this section to inform their practice. The California Standards for the Teaching Profession focus on best practices in teaching for California educators. The ISTE Educator Standards focus on best practices for using technology to facilitate meaningful learning in the digital age. The National Standards for Quality Online Learning include indicators for improving online courses, teaching, and implementation at the program level.

California Standards for the Teaching Profession (CSTP)

The CSTP standards are applicable to California educators in all contexts with varying levels of experience. The standards include:¹⁰⁷

- **Learner engagement and support:** Educators engage learners by getting to know them as individuals; connecting learning to an individual’s experiences, interests, and knowledge; connecting subject matter to real-life contexts; using varied instructional strategies to meet the needs of all learners; promoting critical thinking, inquiry, problem-based learning, and reflection; and employing adaptive, learner-centered instructional practices.
- **Creating and maintaining effective learning environments:** Educators promote a positive, respectful learning community; create learning environments that promote diverse perspectives and positive interactions; establish and maintain learning environments that are emotionally, intellectually, and physically safe; set high expectations for all learners while still providing adequate support when needed; foster appropriate learner behavior and interactions; codevelop classroom expectations, procedures, and routines; and use instructional time to optimize learning.
- **Understanding and organizing subject matter for optimal learning:** Educators maintain current knowledge of their subject matter; apply knowledge of adult learning theories to better support learners; organize curriculum to facilitate connection; utilize appropriate instructional strategies; and select materials, resources, and tools to ensure equitable access to all learners.
- **Designing inclusive learning experiences:** Educators establish and articulate learning goals and desired outcomes; develop short- and long-term instructional plans; and adapt content to learners’ individual needs.
- **Assessing students for learning:** Educators utilize multiple assessment methods to differentiate instruction, measure learner progress, and set

¹⁰⁷ [CSTP 2009](#)

individualized learner goals; use digital tools to facilitate assessment and data-driven instruction; and communicate assessment data with learners.

- **Developing as a professional educator:** Educators reflect on their own instructional practices; establish professional goals; collaborate with colleagues and the broader community; demonstrate lifelong learning; and demonstrate professional conduct.

ISTE Educator Standards

The ISTE Educator Standards provide a framework for educators to rethink teaching and learning using technology, with a learner-centered approach. The ISTE Educator Standards help adult educators to design effective and meaningful learning experiences with purposeful technology integration to empower learners.

The Educator Standards include:¹⁰⁸

- **Learner:** Educators continually improve their practice by learning from and with others and exploring proven and promising practices that leverage technology to improve student learning. *Example activities: setting professional learning goals; participating in professional learning communities; reading adult education and digital learning research.*
- **Leader:** Educators seek out opportunities for leadership to support student empowerment and success and to improve teaching and learning. *Example activities: engaging with education stakeholders; setting a shared vision; advocating for equitable access for all learners; modeling new strategies and tools for colleagues.*
- **Citizen:** Educators inspire students to positively contribute to and responsibly participate in the digital world. *Example activities: creating community-building activities; establishing a curious, engaged learning community; modeling and promoting the ethical use of digital content, materials, and tools; modeling and promoting a positive digital identity and protecting data privacy.*
- **Collaborator:** Educators dedicate time to collaborate with both colleagues and students to improve practice, discover and share resources and ideas, and solve problems. *Example activities: cocreating a lesson or unit; colearning with students to explore a new digital resource or tool; using collaborative tools to expand learners' perspectives through engaging with others; demonstrating cultural competence when communicating with learners.*

108 [ISTE Standards: Educators](#)

- **Designer:** Educators design authentic, learner-driven activities and environments that recognize and accommodate learner variability. *Example activities: using technology to create personalized learning pathways; using technology to design authentic learning activities that maximize active and deep learning; designing digital learning experiences that engage and support learners in achieving their learning goals.*
- **Facilitator:** Educators facilitate learning with technology to support student achievement of the ISTE Standards for Students. *Example activities: promoting self-directed learning; managing appropriate use of digital materials, settings, and tools; utilizing design thinking and problem-solving strategies to engage learners in real-world problems; modeling and encouraging creativity, creative expression, and communication.*
- **Analyst:** Educators understand and use data to drive their instruction and support students in achieving their learning goals. *Example activities: providing multiple pathways for learners to demonstrate understanding; using digital tools to implement formative and summative assessments, accommodate learner needs, provide meaningful feedback, and inform instruction; using assessment data to inform instruction and support self-directed learning.*

National Standards for Quality Online Learning

The National Standards for Quality Online Learning include three separate areas of standards.¹⁰⁹ Each set of standards includes corresponding indicators that can be used to provide guidance in a variety of online learning environments.

- The National Standards for Quality Online Teaching provide a framework for improving instruction in online teaching and learning. Standards focus on professional responsibilities, digital pedagogy, community building, learner engagement, digital citizenship, diverse instruction, assessment and measurement, and instructional design.
- The National Standards for Quality Online Programs provide a framework for program providers interested in implementing blended and online learning programs. Standards focus on the following categories: mission statement, governance, leadership, planning, organizational staff, financial and material resources, equity and access, integrity and accountability, curriculum and course design, instruction, assessment and learner performance, faculty and staff support, learner support, and program evaluation.

109 [Quality Online Learning](#)

- The National Standards for Quality Online Courses provide a framework for improving the quality of online learning courses. Standards cover the following course components: course overview, content, instructional design, learner assessment, accessibility and usability, technology, and course evaluation.



VOICES FROM THE FIELD

Francisco Pinedo | Lead Instructor | Soledad Adult School

How do you use standards in your teaching practice?

It seems like everything now is a combination of the academic and the digital literacy components, so I embed the ISTE Standards in all my classes. I also use the CASAS competencies and CCRS standards because those are required for testing.

When I'm teaching a lesson, I use an agenda and reference the relevant standards within the agenda. I'll add the standard number and in parentheses put the key concept of the standard. I'll also create a guiding question and put the standards in words that they can understand. Now we're introducing Canvas to all our classes and we're uploading the standards there as well.

Classroom Educators

In California, the credentials required to teach adult education differ by institution.¹¹⁰ Adult educators in K–12 school districts are required to be credentialed through the Commission on Teacher Credentialing, while adult educators in the community college system are not required to be credentialed. Instead, most adult educators in the community college system are required to hold relevant academic degrees. The difference in requirements adds complications for individual educators who aim to work at both institution types. Possible options for reciprocity include waiving portions of the requirements by verification of hours of experience or performance evaluations.

The primary role of a classroom educator is to design meaningful learning experiences and facilitate learning. Educators guide learners to help them integrate new material into their own personal contexts. Rather than acting as a “sage on the stage,”

¹¹⁰ [Requirements for California Instructors](#)

today’s educators are a “guide on the side.”¹¹¹ This idea of educators as a “guide on the side” acknowledges that adult learners enter the classroom with a wealth of experience and prior knowledge. It is therefore the responsibility of educators to provide opportunities for integrating learners’ experience and knowledge into the learning environment. Whether learning occurs in a physical classroom or online learning environment, the role of the educator remains the same. In either case, digital learning has no effect on learner achievement and outcomes—rather, high-quality instruction matters the most.

What makes educators effective, or how can educators provide high-quality instruction? Effective teaching starts with a learner-centered approach or by understanding learners as individuals. This requires educators to be “sensitive to the unique backgrounds, motivations, and goals of individual students,”¹¹² as well as acknowledging the complex social, emotional, and cultural dynamics influencing a learner’s experiences.

According to the Adult Education Teacher Competencies from the American Institutes for Research, core competencies of instructors in adult education include:¹¹³

- **Using data to monitor and manage learner progress and performance.** Educators assess learners’ needs, help learners set personalized learning goals, and monitor learning through formative and summative assessments.
- **Plan and deliver high-quality, evidence-based instruction.** Educators design learner-centered, standards-based learning experiences; understand adult learning theories; foster digital learning skills; and facilitate communication, higher-order thinking, and problem-solving skills.
- **Effectively communicate to motivate and engage learners.** Educators clearly communicate high expectations for learners; engage in active listening, dialogue, and questioning to facilitate and support learning; and model cultural competence.
- **Pursuing professionalism and continually building knowledge and skills.** Educators possess content knowledge and instructional skills, participate in professional development networks and learning communities, reflect on their own experiences, and participate in program improvement efforts.

111 [From Sage on the Stage to Guide on the Side](#)

112 [What Makes Teaching Effective?](#)

113 [Adult Education Teacher Competencies](#)

Support Staff

Many different roles support learners in adult education. Support staff differ across program sites depending on factors such as budget, specific program offerings, and number of students.

Academic support staff might include:

- **Counselors** help adult learners choose courses and pathways for learning; support the development and achievement of individualized learning goals; and provide additional academic, emotional, and social support as needed.
- **Digital navigators** help adult learners with access to digital devices and resources, connectivity, and development of foundational digital literacy skills. They also support adult learners to navigate digital job searches and upskilling opportunities.
- **Instructional aides** provide a bridge between educators and students. They reinforce and support learning objectives beyond regular classroom instruction through activities such as academic support, remote testing, and technology integration.
- **Transition specialists** provide support to adult learners as they transition among programs; for example, learners who complete their GED and want to pursue postsecondary education.

Classified staff might include:

- **Clerical and office staff** oversee the operations of adult education programs, provide information to potential and current adult learners, and constantly adapt to support the demands and needs of the school community.
- **Custodial and maintenance staff** work to make sure school facilities are clean and safe for all. They also often develop positive relationships with learners, providing encouragement or a listening ear.
- **Data and accountability specialists** ensure that data for state and federal reporting is accurate. They also often support clerical and office staff as needed.
- **Testing coordinators** work with program administrators to ensure a smooth testing experience for participating adult learners through scheduling, formatting, proctoring, and other duties as needed. Depending on the institution, testing coordinators may also serve as data and accountability specialists.



VOICES FROM THE FIELD

Pete Gonzalez | Transition Counselor | San Bernardino Valley College

Beyond classroom educators, who supports adult learners?

I think it's at all levels. In my experience, the campuses that have the most success are the ones that involve everyone—student workers, classified staff, full-time and adjunct instructors, and counselors. We're very fortunate to have the Inland Career Education Center, which is the largest adult school in our consortia. They've built a system where everyone is in line to help the students transition into postsecondary education once they've completed a high school diploma or GED. For instance, they have tutoring staff from the local university that work for them as tutors. The school trains the tutoring staff to help students complete the application process for college, including financial aid and orientation—all the stuff that needs to be done. They also have a transition center with staff that is also trained to support students through all these processes.

As a transition counselor, what is your role in supporting adult learners?

Our role coming into the adult schools is we are the face of the college. We come in and help students walk across the street, per se, but a lot of the work is already done. The motivation, the cheerleading. The advocates have already done their work with the students up to that point. It's a smooth hand-off to us and we help them continue with their process. We let the students know as well that our role isn't to get them to Valley College, but that our goal is to help them continue their education, whether it's at Valley College, a different community college, or trade school.

What role do classroom teachers play in supporting adult learners during the transition process?

At first, teachers were not included in our college counseling transition piece. We would conduct college information workshops for students that teachers would also attend. The teachers were mostly quiet during our presentations, but I quickly realized that our teachers had their own unique educational journeys, and it was important for them to share those stories with their students. Many of the teachers come from the same communities as the students that they teach. They understand what the students are going through and have faced many of the same barriers as the students. Including teachers encouraged the conversation of continuing education to take place, during and after our workshops. It was the teachers' encouragement that led many students

to make their first counseling appointment with me. Teacher participation is essential in the college transition process.

What role do students play in supporting their peers during the transition process?

Many are eager to act as advocates, mentors, and role models for other students. They provide informal testimonials, peer support, and help guide their peers through the application process and show them the path to take.



VOICES FROM THE FIELD

Suzy Kelly | CTE Instructor | Berkeley Adult School

Beyond classroom educators, who supports adult learners?

When students come to us, they know that they're part of the "Berkeley Adult School family". We're really focused on being student-centered, on supporting adult learning and lifelong learning. We provide a wraparound of services that includes counselors, learning specialists, technical support, and transition support for those who are going on to postsecondary education.

One example—our custodian also works with counseling services for people who struggle with addiction. We've had students who have struggled, and he's gotten them into meetings and given them amazing support. Now he teaches a custodial skills course because that's a great job market. So, somebody who was a custodian for our school transitioned into being a teacher, and he has a great course.

Digital Learning and Professional Development

Regardless of modality, programs that implement models for digital learning need to include basic digital literacy skills development for both learners and educators.¹¹⁴ In addition to basic digital literacy skills, educators need professional development in effective technology integration.^{115,116} As one research study noted:¹¹⁷

Adult educators need to learn more about effective methods of instructing, motivating, and supporting adult students working at a distance. They also need to learn more about how to best use existing and emerging technologies and products to meet student needs.

In spring 2020, WestEd conducted a survey of adult education administrators and educators to learn more about their challenges with teaching during COVID-19. While many respondents (58 percent) reported previous experience using a learning management system, most respondents (81 percent) reported no previous experience teaching a course through distance education. Educators were also critical of their success in the transition to online learning, with 40 percent of respondents rating themselves at 50 percent or lower in their success rate. Only 34 percent of respondents rated themselves at 80 percent or higher in their success rate. These results indicate a lack of self-confidence in educators' ability to successfully implement online learning. Along with a lack of self-confidence, many educators reported receiving minimal professional development and support in online learning—66 percent reported receiving fewer than 10 hours of training. Popular training topics included how to use their institution's learning management system and how to use video conferencing tools to conduct live sessions. Educators expressed a desire for more professional development and training in accessibility, addressing equity, and instructional strategies for online learning.

What does effective professional development look like? Effective professional development includes the following qualities:¹¹⁸

- Long-term, ongoing, sustained
- Opportunities for reflection and self-study
- Collaborative

114 [Blended Learning Guide](#)

115 [Covid-19 Rapid Response Report](#)

116 [A State Director's Perspective](#)

117 [Expanding Access to Adult Literacy](#)

118 [Best Practices in Professional Development](#)

- Applied and interactive—allows educators to engage in practical activities that connect content, design, implementation, and reflection to real-world problems
- Personalized—differentiated to individual interests and skill levels
- Building on strong instructional design—models strong teaching practices within the professional development
- Provides opportunities for coaching and peer learning
- Digital tools are integrated into the learning experience—technology training is not a separate professional development session but integrated throughout training

Through CDE and federal funding, OTAN offers professional development opportunities in both digital and physical formats. Training topics range from basic digital literacy skills to more advanced topics such as developing online communities, creation and collaboration tools, and other ways to integrate technology into the classroom.¹¹⁹ OTAN also offers a Digital Leadership Academy (DLAC) for California program providers and the annual Technology and Distance Learning Symposium for adult education professionals in California and beyond.



VOICES FROM THE FIELD

Elisia Doonan | Adjunct Faculty | San Diego Community College
Continuing Education

What professional development has been most impactful for you and why?

The professional development that has opened my eyes has been DLAC. That has been a whirlwind. In this cohort, I think I'm the only one working in AWD and the rest of the cohort is ESL or HSE. I've asked my teammates and cohort members what programs they are using, and I've shared them with my peers. That's been one of the best things, just learning from others.

Another great thing is the "Tech Slam" that we do at DLAC, where anyone in the cohort gets two or three minutes to share a tech tip or tool. There's so many ideas and so little time! Sometimes I can't use them because it's too high-functioning for my students, but there's always something that I can learn.

119 [OTAN Training](#)

For our DLAC project, we're creating a module in Canvas to help students learn the basics of Zoom—What is Zoom? How do you log on? What is the etiquette of Zoom? How do you mute/unmute? How do you sit? How do you turn on/off your video? It focuses on the beginning levels, and it's all in pictures because it needs to be super simple for my students. It's an entire module in Canvas about computer literacy and digital literacy basics and our goal is for all instructors to be able to use this with their students. We're also creating a chart about how to make digital documents more accessible in different programs as a resource for instructors.

Communities of Practice and Professional Learning Communities

A community of practice provides benefits in the following four areas:¹²⁰

- **Domain:** The area of shared inquiry and the key issues (e.g., improving adult learners' transition to postsecondary education)
- **Community member:** Professionals committed to a process of collective learning oriented toward achieving outcomes and improving practices
- **Practices:** Investigation of key questions, problems and gaps, identification of resources and expertise, sharpening of subject knowledge through professional learning, and development of new resources, processes, and methods
- **Continuous improvement:** Reflection on practice, evaluation of impact and outcomes, ongoing inquiry, refinement of practice and methods, development of new resources

Communities of practice have long been used as the organizing principle to problem-solving and strategic positioning in the business community and have more recently been adopted by education agencies and organizations. Communities of practice are beneficial professional learning opportunities for adult educators for the following reasons:¹²¹

- Investigate pertinent questions for improving practice
- Keep informed of developments in research and practice
- Sharpen subject knowledge and skills

120 [Communities of Practice](#)

121 [Integrating Basic Skills and Career Pathways](#)

- Gather resources and build new knowledge around teaching and learning issues
- Make changes to improve practice
- Build networks for learning and change

A professional learning community is committed to processes that help all learners succeed. By working collaboratively, these communities explore the following critical questions:¹²²

- What do we want students to learn?
- How will we know if they have learned it?
- What will we do if they don't learn it?
- What will we do if they already know it?



VOICES FROM THE FIELD

Merari Weber | Associate Professor | Santa Ana College

How do you help reluctant teachers embrace the learning process?

I think what's valuable in the learning process is giving teachers space to voice their frustration with change. You must allow them to voice the sadness that they feel for not having the needed knowledge that they are asked to have, and then, shaking it off and moving on. Saying, "OK, we're going to have two minutes of being really upset, and then we're going to learn how we're going to do it in a different way."

Some adult students come in with a lot more knowledge in technology than the instructor has themselves. For the instructor to be open and receive that strength the student has, and cocreate to make the classroom experience better, is such a gift that I think faculty have learned to receive. They don't have to be the sage on the stage, they can be cocreators in their classes.

How do you implement meaningful professional development in your context?

Good professional development should have teachers experience what the students will experience. Teachers should themselves experience new tools, go through the process of learning and relearning, and feel what their students will

¹²² [Learning by Doing](#)

feel. Then, they can be a model for their students—you empower your students that way.

How do you implement communities of practice within your context?

The work is really focused and intentional long-term professional development. In communities of practice, you're coming from an action-research mindset. You're coming together with other teachers on a common issue/concern, brainstorming, conducting research, and then putting it into practice. That's professional development. It's not me in the front of the room telling teachers which tools to use. Real learning takes reflection and deep thinking—if you're not giving teachers time to reflect, then nothing really changes long-term.

One of the things that we've been trying to do with our faculty is create communities of practice. With communities of practice, teachers are more curious and can bring inquiries of practice into the space to discuss with their peers. Then, they can test out potential solutions and come back and say what worked and didn't work. That iterative process maximizes learning.

At Santa Ana College we're currently leading an Equity-Minded Teaching and Learning Institute. Over the yearlong institute, we're doing 10 virtual sessions. Before the live session, faculty are doing remote work in our learning management system. They're reading, thinking, and reflecting. Then, during the live session, we come together and discuss how our thinking has potentially changed, how we applied our learnings in the classroom, and what were the results, if any, and next steps. For this, you need administrative support and faculty buy-in to make this successful since it takes time to do this well.



CHAPTER

4

Designing Flexible Learning Experiences

This chapter introduces strategies for designing flexible digital learning experiences and establishing learning goals and objectives as the starting point for design. Several technology integration frameworks and models are introduced to help educators with instructional design. Then, digital learning tools are discussed in terms of helping educators and learners to communicate, collaborate, be productive, and use a learning management system to organize learning experiences. Finally, the chapter discusses strategies for evaluating digital tools for classroom learning.

Designing Meaningful Blended Learning Experiences

What does an effective lesson look like in the digital age? Always begin instructional design with the following question: *What do learners need to know, understand, and apply at the end of a learning experience?* Once learning goals have been established, then educators may consider assessments, or how to determine if learners have achieved desired learning outcomes. Only then should educators begin to design the learning experience. Without clear and meaningful outcomes articulated in advance, it is difficult to establish details or determine what needs to be accomplished to be successful.

Technology Integration Frameworks and Models

Digital learning provides an opportunity to truly take advantage of the basic modalities available to engage learners—primarily through in-person learning or asynchronous and synchronous online learning activities. Each of the different modalities provides different opportunities to engage learners, share content, monitor learning, and provide feedback. How do educators know what tools to use and how to best integrate them to meet learners’ needs? Technology integration frameworks and models act as guidelines for integration, providing educators with a systematic opportunity to reflect on instruction design and teaching practices in their classrooms.

The **SAMR model**, created by Dr. Ruben Puentedura, includes four tiers of online learning, from enhancement to transformation.¹²³ While the model focuses on the what of technology integration, it is meant to be used in conjunction with the why. The goal of the SAMR model is to think purposefully about technology integration and how it can be used to engage learners and ultimately transform learning into authentic, real-world learning opportunities.

- **Substitution:** Technology is used to replace in-person activities and materials with digital versions. *Example activities:* Scanning paper worksheets; video recording an in-person lecture.
- **Augmentation:** Technology is used to enhance activities or content. Content remains the same, but digital elements like comments, hyperlinks, or multi-media are added. *Example activities:* Digital portfolios; virtual bulletin boards.
- **Modification:** Technology is used to provide more inclusive opportunities for learner engagement. *Example activities:* Backchannel chats during video conferencing sessions; using a learning management system.

123 [How to Apply the SAMP Model](#)

- **Redefinition:** Technology is used to facilitate new learning experiences that transform the curriculum. *Example activities:* Virtual field trips; learner-led, collaborative blogging or wiki creation.

The **Technological Pedagogical Content Knowledge (TPACK)** framework recognizes the complex nature of teaching and learning and identifies three core components of content, pedagogy, and technology as the foundation for good teaching.¹²⁴ Additionally, the framework acknowledges the complex interaction between these three components as critical to understanding how technology integration is implemented within various contexts.

- **Content Knowledge (C):** An educator’s knowledge of the specific subject matter they are teaching.
- **Pedagogical Knowledge (P):** An educator’s knowledge of best practices and methods for teaching, including understanding how students learn, classroom management skills, instructional design, and assessment. While the TPACK framework uses pedagogical knowledge, this type of knowledge may also translate to the adult learning context with andragogical or heutagogical knowledge (see chapter 3).
- **Technology Knowledge (T):** An educator’s knowledge of when and how to effectively integrate technology into the classroom curriculum.
- **Pedagogical Content Knowledge (PC):** An educator’s knowledge of subject matter content, how to best represent that content in multiple modalities, and the knowledge of how to adapt instructional materials to better help learners understand content.
- **Technological Content Knowledge (TC):** An educator’s knowledge of how technology integration impacts their specific subject matter.
- **Technological Pedagogical Knowledge (TP):** An educator’s knowledge of how purposeful technology integration can impact teaching and learning.
- **Technological Pedagogical Content Knowledge (TPACK):** Integrating all three components of effective teaching, purposeful technology integration, and subject matter knowledge.

The **Triple E Framework** is a research-based, reliable, and validated framework designed with the goal of helping educators implement effective technology integration.¹²⁵ The framework helps educators to evaluate educational technology tools for alignment with learning goals, design learning experiences that positively impact

124 [Technological Pedagogical Content Knowledge](#)

125 [Triple E Framework](#)

learning outcomes, and act as a coaching tool to support educators through the technology integration process. What makes the Triple E Framework distinct is its learner-centered focus. The framework includes three components:

- **Engagement:** Technology helps learners actively engage in the learning experience. Questions to ask about engagement include: Does the technology help learners focus on the learning activity? Does the technology motivate learners? Does the technology cause learners to be actively involved in the learning process as colearners?
- **Enhancement:** Technology adds value to the learning experience and transforms learning in a way that is not possible through traditional learning methods. Questions to ask about enhancement include: Does the technology help learners to more deeply understand content? Does the technology scaffold instruction to provide clear descriptions of content? Does the technology create personalized learning pathways for individualized instruction? Does the technology provide opportunities for creation and demonstrating understanding?
- **Extension:** Technology connects learners to authentic, real-world learning experiences. Questions to ask about extension include: Does the technology create opportunities for learners to learn outside the traditional classroom? Does the technology make connections between learning and real-world experiences? Does the technology facilitate skill-building?

Digital Learning Tools

Choosing the right digital tool depends on the intended learning goals and outcomes, as well as the purpose for using the tool within the learning environment. Digital tools can help educators and learners communicate, collaborate, and be more productive. Additionally, learning management systems provide an organizational structure that can be used in both blended and online learning environments to be more effective and efficient in accessing and using digital tools.

Digital Tools for Communication

Digital tools provide flexible options for facilitating communication and participation. In a digital format, communication may be audio-, text-, or video-based. Digital communication tools also provide options for both asynchronous and synchronous communication, allowing additional flexibility for both learners and their instructors.

Asynchronous learning is when 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. **Synchronous learning** is when 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).

Asynchronous communication tools include online discussion boards, email, and text (e.g., WhatsApp). Text, while not a common instructional method, has the potential to increase learner engagement because adult learners are often more comfortable using their mobile phones more than any other digital devices.

The most popular method for live or synchronous virtual instruction is through video conferencing sessions (e.g., Google Meet, Microsoft Teams, Zoom). This type of software allows educators and learners to communicate live using audio and video. Video conferencing platforms also include options for text-based communication through group and individual chat. Additional features to increase communication and participation include breakout rooms for small group work, polling the audience, screen sharing, and sharing files with participants.

Digital Tools for Collaboration

Collaborative activities enrich the learning experience by helping learners broaden their perspectives, connect with others, and learn how to contribute to a team. Just like with communication, digital tools provide flexible options for participating in collaborative activities. Digital tools help to establish a classroom community among all learners, regardless of learning modality. With device access and connectivity, learners can collaborate. This section shares a few example tools for facilitating collaboration. The tools listed in this section are free (or have free and paid options), and work on laptops, tablets, and mobile phones.

Flipgrid is a free, video-based digital discussion board.¹²⁶ Educators create grids with discussion prompts or questions for learners, with the option to include example videos, links, and supplemental resources. Learners then post their responses as video recordings in the corresponding grid. Depending on the specific grid's setup, learners can also respond to each other's posts through likes, text comments, or videos. Users can sign up for free with a Google or Microsoft account.

Padlet is a digital bulletin board tool that enables users to add text, links, multimedia, and upload files.¹²⁷ There are multiple formatting choices (e.g., displaying information in a canvas, grid, or stream layout) for displaying information in a meaningful

126 [How Flip Works](#)

127 [Padlet](#)

way based on the activity or content. Boards can be private, public, or shared with a specific group with options for moderation. Users can sign up for free with an Apple, Google, or Microsoft account.

Voicethread is an interactive collaboration tool that enables users to create multimedia presentations online.¹²⁸ Voice threads can include files, images, videos, and embedded files. Voicethread presentations can be shared with a group or individuals via link and allow for comment threads within the presentation.

In addition to the above-mentioned tools, various Google (e.g., Docs, Jamboard, Meet, Sheets, Slides) and Microsoft tools (e.g., Office, Teams) enable users to create collaborative documents, presentations, and spreadsheets. Within each platform, users can also create shared folders to organize files, utilize messaging to communicate asynchronously, and conduct video conferencing sessions to collaborate in real time.



VOICES FROM THE FIELD

Lynne Ruvalcaba | Administrator of Educational Technology |
California Department of Corrections and Rehabilitation

How has access to digital tools improved learner outcomes in your context?

Many of our students that are in the postsecondary program use college instead of employment right away and they go right into postsecondary education on the outside, earning bachelor's degrees and moving on that way. That's an interesting thing in and of itself because until they got access to laptops, they were literally researching and preparing term papers with a golf pencil and a piece of paper. That was their manner of achieving a degree. When I think of all the work I did to get through my bachelor's, master's, and doctorate, and the thousands of pages I wrote, if I hadn't had the device and I couldn't type it, I don't know what I would have done. I never saw my dissertation in print until after it was bound and done. Everything was electronic.

Our students that are participating in postsecondary programs have been writing these papers by hand. When we deployed our first round of laptops, within months the faculty at the outside institutions were reporting that the quality of work had increased exponentially and the papers they were receiving were on par with what they received from their on-campus students. Even

128 [VoiceThread](#)

something as simple as a word processor, something that we often take for granted, helps them use the devices to do things for themselves, and the opportunities expand exponentially. It's amazing to see them flourish.

How do you facilitate differentiated instruction and self-directed learning in your context?

Having access to technology engages our learners in a way that's not only about learning the content, but they're also thinking about what the technology can do for them. They're exploring the devices and teaching themselves things that we didn't anticipate. They're becoming self-advocates. They're becoming self-directed learners who try things out, and that really inspires them to keep going and to sustain interest in the learning process.

Bringing updated technology to our learners allows us to differentiate much easier. With features like interactive texts with built-in dictionaries or text-to-speech, our early literacy learners can do things they just couldn't before. It's also so much easier now for learners to engage with content that interests them but is still accessible at their reading level. Before, the content was limited. They'd have to sit and read a book about something a kid would read. Now, they can get sports, they can get politics, they can get almost anything that would interest them as an adult. Suddenly, they can engage in a conversation with their peers. They can have a meaningful conversation with a teacher. The engagement has really, really changed.

How do you use digital tools in your context to engage learners?

On the math side, I can't tell you the benefit of having gamified learning. For people who thought math wasn't for them, if you make it look like a game, they forget that they don't want to be there. Because the system requires them to attend class if they don't have a high school diploma, we have learners that are not only reluctant to participate but who are protesting being there. Now, they're getting into the games and gamified learning and suddenly they're all over it and don't care because it is so engaging to them. To me, that's the metamorphosis of our learners.

We also have installed interactive whiteboards in some of the classroom spaces. I love going into classrooms and watching teachers who introduce it well, because their learners are just amazed at first—"What's this thing on the wall?" You can touch and move things and it makes noise. They love these boards because they like to show what they know. Being in front of the class, it doesn't matter if you are in fifth grade or are 50, getting up there and knowing it, and demonstrating it, even if you're a little reluctant, once you're there and you can shine, it makes a difference. Our interactive whiteboards

are something that we really are pushing right now to standardize across our system and get more into our classrooms because of that. We understand that there are things that learners can do with those boards that really will expand their feelings and validate them as learners. We're also working on purchasing software that will allow extension beyond the classroom—video tours or meetings with subject matter experts—that will enrich the learning experience and be key in connecting students to the world.

Learning Management Systems

A **learning management system (LMS)** is a digital platform for storing and sharing digital content, managing assignments and feedback, and communicating with learners. An LMS provides organizational structure and can be used with a variety of learning environments. In the state of California, adult education program providers typically use Canvas or Google Classroom, depending on the individual institution.

Some of the benefits of using an LMS include:¹²⁹

- **Content organization:** Post digital content including audio, images, and video files. Organize content by lesson, topic, or unit to make it easier for learners to find and navigate course materials.
- **Embedding external content:** Link to external resources or websites. Often, LMS include integration with supplemental resources such as digital curriculum or textbooks. Integrating external content within an LMS streamlines the digital learning experience and simplifies the process for learners, especially those who are less adept at navigating digital spaces.
- **Communication and collaboration:** LMS usually include an option for direct communication between learners and the instructor through a direct messaging system or link to external email. Other popular LMS features for communication include announcements and discussion boards. Discussion boards can also foster a sense of classroom community among peers, as well as provide an opportunity for collaboration.
- **Monitoring learner progress:** Multiple options exist within an LMS for monitoring learner progress. Educators can monitor learner participation in discussion boards, check whether a learner has submitted assignments, and utilize built-in grading or gradebook features.

129 [IDEAL Distance Education and Blended Learning](#)

- **Providing feedback:** If learners submit assignments through an LMS, there is an option to provide learner feedback directly connected to the assignment. Feedback might include audio-, video-, or text-based comments. Using a rubric tool also provides learners with an additional level of feedback.
- **Automatic assessments:** Some LMS include the option of built-in assessments that are automatically graded. Auto-graded assessments provide instant feedback for learners and educators alike. Educators can quickly see an individual learner's performance and analyze assessment data for class-level patterns.



VOICES FROM THE FIELD

Francisco Pinedo | Lead Instructor | Soledad Adult School

Does your school use a learning management system? What are some of the benefits and challenges with using an LMS?

We transitioned to using a learning management system, Canvas, because that's what our local community college uses. We wanted to train our students at all levels to use Canvas, so that way, when they go to the new campus just down the street from us, that won't be another barrier. We started introducing Canvas here with ESL classes and we've had a lot of success. Next year, we're going to expand it into our high school diploma and high school equivalency programs.

The way we introduce students to Canvas is the first week of class, that's all we do. We teach them how to log in to Canvas, how to accept our campus invitation, and how to navigate Canvas. It takes a lot of initial investment of time, but it pays off. We don't have to deal with it for the rest of the school year. They know how to access the information from the beginning, which is great.



VOICES FROM THE FIELD

Jaemi Nash | Director | Tamalpais Adult School

Does your school use a learning management system? What are some of the benefits and challenges with using an LMS?

One of the big things that we've done is getting involved in the Canvas pilot. While I was familiar with using Canvas as an educator, what was new to me was rolling it out with my staff. Instead of focusing primarily on the folks who are always early adopters of things, I tried to put it out to the whole staff. Mostly the GED teaching staff is interested in it, but they are liking it and using it. It's led to us purchasing more training from Instructure to really support our teachers to use the platform and to have better confidence and excitement about using it.

In addition to the Instructure training, OTAN hired some great people to do Canvas training at several different levels. They've had training sessions for administrators, for new users, for intermediate users. It's a lot of training, but it's been provided for program sites that are participating in the pilot and I've really appreciated being part of the pilot. The administrator training made me realize that I wasn't doing all that I needed to do for my new staff who were using Canvas, so it influenced me to do things differently to better support my staff.

Open Educational Resources

If budgets are limited, then how can educators implement high-quality digital content and resources? **Open educational resources (OER)** include freely accessible, openly licensed digital materials for teaching and learning.¹³⁰ There are many OERs designed for use in adult or general education to supplement classroom curriculum or help adults develop digital literacy skills—see appendix A of this guide for an annotated list of OERs.

Evaluating Digital Content, Resources, and Tools

As educators search for digital content and resources, they may discover that the information stream never ends. How then do educators determine what content,

130 [Open Educational Resources](#)

resources, and tools contain quality content that will benefit their learners? When evaluating a new digital tool, educators should evaluate the educational and technical usability of the tool to decide whether to implement it within their classroom. Be sure to consider the *added value* in implementing a new digital tool and how the tool will help educators guide their learners to meet desired learning goals and outcomes.

Pedagogical usability focuses on how well a tool facilitates the learning process. It includes the following criteria:¹³¹

- **Understandability:** The tool includes clear and concise descriptions of content.
- **Added value:** The tool facilitates an improved learning experience through improved processes (e.g., improved feedback process, increased flexibility).
- **Goal-orientation:** The tool helps learners meet their established learning goals.
- **Time:** The tool helps learners engage with content in an efficient manner.
- **Interactivity:** The tool helps educators and learners be active participants in the learning experience.
- **Multimedia:** The tool uses a variety of media elements (e.g., graphics, text, video) to represent content.

Technical usability focuses on the ease of use and interaction between users and the tool.¹³² Several frameworks and guidelines for evaluating educational technology tools exist, though most focus on K–12 learning environments. However, the concepts tend to be broadly focused on using tools to improve the learning experience and thus also are applicable to adult education.

The **4A Framework** evaluates edtech tools based on the following four elements:¹³³

- **Accessibility:** Digital instructional materials are accessible when they adhere to applicable legal standards, and users can open, view, and interact with digital material.
- **Active Engagement:** Digital instructional materials attend to multiple dimensions of active engagement when they invite students to invest effort and energy into learning concepts.

131 [A Conceptual Framework Web-Based Learning](#)

132 [A Conceptual Framework Web-Based Learning](#)

133 [Evaluating Digital Instructional Materials](#)

- **Advocacy for Inclusion:** Digital instructional materials promote advocacy for inclusion when they represent diverse peoples with contextual nuance, compassion, and respect.
- **Accountability:** Digital instructional materials demonstrate accountability when they are transparent about their origins and purposes, based on standards or principles, and are open about personal information and user data collection-sharing processes.

The EdTech Center @ World Education has created the **Criteria for Evaluating Workforce EdTech Tools** to evaluate edtech tools for workforce education on the following topics: effectiveness, accessibility, ease of use, digital literacy, language and culture, affordability, engagement, quality and effective content, logical flow, user-centered design, user support, data privacy and security, and vendor reliability and support.¹³⁴ The full rubric is available as a PDF download or editable Google Sheet and created with adult learners in mind.

134 [Tool Evaluation Criteria](#)



CHAPTER

5

Adopting Models that Work

This chapter introduces the most widely used digital learning models used in adult education—distance education, blended learning, hybrid learning, and the HyFlex model. While multiple digital learning models are presented, each program provider should think carefully about which models work best for their unique context. This chapter also addresses the challenges of implementation, including reporting considerations for federal and state funding.

Digital Learning Models

Distance Education

Distance education is a broad term that encompasses any learning that occurs away from a physical classroom. This includes courses at satellite campuses,

correspondence courses, and online learning.¹³⁵ In turn, **online learning** includes asynchronous and synchronous learning experiences that occur online, either in fully online courses or through other digital learning models such as blended learning.

Blended Learning

Blended learning is any time a student learns at least in part at a supervised brick-and-mortar location away from home and at least in part through online delivery with some element of student control over time, place, path, and/or pace.¹³⁶

The key elements of blended learning include learning experiences that combine in-person and online spaces, along with an element of learner control. Blended learning aligns well with the adult learner characteristics of autonomous, self-directed learning.¹³⁷ Blended learning also facilitates competency-based models of learning, especially when learners control the pace and path of the learning experience.

Blended learning is a powerful way to differentiate and personalize instruction, as well as to help move away from time-based models of achievement toward competency-based ones. Blending is a strategy for helping teachers achieve what they strive to do every day—deeply understand and enable each student they work with to reach the very highest levels of educational mastery.¹³⁸

Multiple models exist for implementing blended learning in the classroom:¹³⁹

- **Flipped classroom:** Learners interact with content and online learning activities at home and participate in teacher-guided practice or project-based learning in the classroom. A flipped classroom allows educators to focus on application, extension, and personalized support rather than delivering lectures. Educators can use existing content (e.g., electronic textbook, online videos) or create their own content (e.g., interactive presentations, screencasts).
- **Station rotation:** All learners rotate through collaborative activities, online learning, and teacher-led instruction. Station rotation is a popular blended learning model for K–12 schools.

135 [Distance Learning](#)

136 [The Rise of K-12 Blended Learning](#)

137 [The Adult Learner](#)

138 [iNACOL Blended Learning](#)

139 [Blended Learning Models](#)

- **Lab rotation:** Learners rotate through activities like station rotation, but direct instruction and online learning occur in a dedicated computer lab. This allows schools to maximize the use of existing resources and support staff.
- **Individual rotation:** Learners rotate through stations, but on a personalized learning plan. The learner has an individualized schedule, created with the guidance of their instructor or adaptive software. Unlike in a station or lab rotation model, individual learners do not always participate in all activities. Instead, learners only complete the learning activities that are most beneficial to them and their individual learning goals.
- **Flex:** Online learning is the foundation of the flex model. Educators provide instruction and support on a flexible, as-needed basis while individual learners move through learning activities at their own pace according to their individual needs. The flex model provides a high degree of learner control and can be implemented in both physical and virtual classrooms.

HyFlex Models

Most blended learning models require learners to participate in both in-person and online modalities.¹⁴⁰ The **HyFlex model** provides greater learner choice and flexibility by offering multiple modalities for participation. A HyFlex course includes class sessions that allow students to choose whether to attend classes face-to-face or online, synchronously or asynchronously.¹⁴¹

The fundamental principles and values underlying the HyFlex model include:¹⁴²

- **Learner choice:** Learners can choose between alternative participation modes on a regular basis either by schedule or topic.
- **Equivalency:** Activities in all participation modes are equivalent and lead to equivalent outcomes.
- **Reusability:** Learning materials are shared between participation modes (e.g., a handout for in-person class is also provided in a digital format).
- **Accessibility:** Learners possess (or develop) basic digital literacy skills; “equitable access to all participation modes.”

There are several benefits to various stakeholders using the HyFlex model:¹⁴³

140 [Hybrid-Flexible Course Design](#)

141 [Online Education Policy](#)

142 [Hybrid-Flexible Course Design](#)

143 [Hybrid-Flexible Course Design](#)

- **Students:** increased course access; increased flexibility in participation; more robust instructional materials; increased opportunities for learning
- **Faculty:** develop online instructional skills without losing in-person instructional skills; provide a built-in alternative to classroom instruction; serve more learners with the same resources
- **Program providers:** increase enrollment; increase individual course offerings; support innovative instructional approaches.



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, 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. It makes it more enjoyable for me as a teacher to be able to reach them, and I feel like I can give them so much more of this class than I ever did before. Technology, surprisingly, has created more access to learning. Before, it was all me teaching, and now I’ve been able to go out into the world and use all these other people, which is really fantastic. They get me, plus more.

Planning and Implementation

Regardless of delivery method, adult education programs need to comply with federal and state policies. Additionally, program providers need to consider which models will work within different program areas or specific course levels. Whether offering blended, hybrid, HyFlex, or online learning models—adult education programs must first address potential barriers to learner participation and successful implementation.

Addressing Challenges to Implementation

Potential challenges to successful digital learning experiences for adult learners include: [144](#), [145](#), [146](#), [147](#), [148](#)

- Access (devices, hardware, software) and connectivity (high-speed internet access)—addressed in chapter 2
- Insufficient digital literacy skills, or a lack of experience using digital tools for learning—addressed in chapter 2
- Competing demands for attention and time—adult learners navigate multiple roles and responsibilities, and adult education programs need to accommodate competing learner demands through learner choice, flexible programming, and support services
- Inadequate communication with educators (e.g., ambiguous instructions, inadequate feedback, insufficient advising and support services)—see chapter 3 for more information on how to prepare educators for digital learning

Potential challenges to successful digital learning experiences for educators: [149](#), [150](#), [151](#), [152](#), [153](#)

- A lack of effective and meaningful professional development, including basic digital literacy skills and technology integration—see chapter 3 for more information on how to prepare educators for digital learning
- Insufficient time for curriculum design, instruction in multiple modalities, communicating with learners, providing learner feedback, technical support, and more

To adequately address the numerous challenges for learners and educators, programs must be **deliberate** and **thoughtful** in all aspects and steps of the planning

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- [144](#) [Covid-19 Rapid Response Report](#)
 - [145](#) [Building a Digitally Resilient Workforce](#)
 - [146](#) [A State Director’s Perspective](#)
 - [147](#) [Blended Learning Guide](#)
 - [148](#) [Where Do We Go Now?](#)
 - [149](#) [Covid-19 Rapid Response Report](#)
 - [150](#) [Building a Digitally Resilient Workforce](#)
 - [151](#) [A State Director’s Perspective](#)
 - [152](#) [Blended Learning Guide](#)
 - [153](#) [Where Do We Go Now?](#)

and implementation process.^{154,155,156} A strong infrastructure that includes appropriate levels of funding, professional development, technical support, time, and learner support addresses many of the challenges and concerns. A collaborative approach to curriculum development and implementation can help to integrate a broad range of perspectives. Finally, any new program will take time to fully implement, so programs need to both address short-term challenges while also establishing a long-term vision for sustainable program maintenance and growth.¹⁵⁷

Interoperability

Interoperability is the controlled, seamless, and secure exchange of data across applications.¹⁵⁸ The goal of interoperability is to help learners focus on the learning experience and meeting goals and objectives, rather than spending time on digital literacy, 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?
- Will learners need digital support to use each tool?
- How can we remain mindful of learners’ digital identities when using multiple accounts (e.g., Canvas, Padlet)?

Reporting Considerations

With most funding for adult education programs coming from federal and state levels, accountability is an important consideration not only for adult education program providers but for individual educators within each program. Everyone is responsible for demonstrating program effectiveness through mandated reporting requirements. In the state of California, program providers must provide annual reports on data integrity; payment point summaries; fiscal reports; professional development, technology and distance learning plans; and assessment plans.

154 [Covid-19 Rapid Response Report](#)

155 [A State Director’s Perspective](#)

156 [Where Do We Go Now?](#)

157 [Evaluating Digital Learning](#)

158 [Interoperability Crash Course](#)

NRS Reporting

NRS uses specific definitions related to distance education programs:¹⁵⁹

- **Distance education:** A formal learning experience where educators and learners are separated by geography, time, or both for most of the learning experience
- **Participants:** Learners with at least 12 contact hours with an adult education program provider
- **Contact hours:** In distance education, contact hours may be a combination of in-person, online, and remote communication
- **Proxy contact hours:** Accrue after the initial 12 contact hours. For distance education, proxy contact hours mainly come from the following methods:
 - **Clock time model:** Hours are based on learner participation data within online learning tools (e.g., how long a learner is logged in and active on a specific platform)
 - **Teacher verification model:** Educators determine hours based on learner participation in activities or learner completion of an assignment
 - **Learner mastery model:** A fixed number of hours is awarded based on earning a minimum score on a formal assessment

NRS requires adult education courses to align with NRS definitions. However, within online learning environments, determining participation is more complex than a simple recording of “seat time.” In addition to the three models listed above, data collection for contact hours might come from attendance logs in synchronous sessions, digital assignments, discussion board participation, and even tool-specific participation data.

Program providers need to establish clear guidelines for determining proxy contact hours and recording learner participation. It is important for educators to design effective learning activities but meeting federal and state requirements also needs to be a consideration, as those requirements drive funding. While bureaucratic demands can force content use and limit innovation, a benefit of alignment is an increased clarity for learners in the course selection and scheduling processes.

Workforce Innovation and Opportunity Act (WIOA) Requirements

In addition to NRS requirements, the **Workforce Innovation and Opportunity Act (WIOA)** requires states to align workforce education programs with performance

¹⁵⁹ [NRS Tips](#)

goals focused on accountability, transparency, and improved workforce development. Under WIOA, programs evaluate effectiveness using the measurable skill gains indicator. For adult education programs, 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.¹⁶⁰ Program providers can administer pre- and post-testing in person at a proctored and secured program site or through virtual proctoring. Virtual proctoring requires use of NRS-approved tests and includes procedures for administration such as learner identification, technology requirements, test security, and training proctors.

States use WIOA in making funding decisions for adult education programs, including funds for digital learning programming, professional development, and technical support. WIOA lists three considerations related to digital learning. Program providers must demonstrate:¹⁶¹

- effective use of technology to increase high-quality learning and improved learning outcomes;
- digital learning activities are delivered by high-quality, well-trained administrators, counselors, and educators who have access to high-quality professional development opportunities; and
- use of a high-quality information management system.

¹⁶⁰ [NRS Tips](#)

¹⁶¹ [Integrating Technology in WIOA](#)



CHAPTER

6

Data-Driven Instruction and Digital Assessments

This chapter begins by exploring the purposes of assessments and how digital assessments inform instruction and enhance teaching and learning. Then, various assessments are considered—standardized assessments and remote testing, and also digital skills assessments and other informal assessments. Finally, this chapter explores various digital assessment tools.

Purposes of Assessment

The primary purpose of assessment is to inform instruction and improve learning outcomes. Educators can use routine assessment and data collection to measure learner progress over time. Measuring learner progress encourages regular self-reflection and helps educators determine mastery of competencies and skills. A

major benefit of digital learning tools for assessment purposes is the rich data collection that happens within various digital tools. Educators can use digital tools, both assessments and nonassessment data sources, to inform instruction and better meet learners' needs.

Assessments also empower learners to better understand their own strengths and areas of potential growth. Assessment data helps learners to focus their attention and efforts on areas of need and ensure their efforts align with personal learning goals.

Advantages of Digital Assessments

There are several advantages to using computer-based assessments over paper tests:

- **Increased accessibility, differentiation, and flexibility:** Digital assessments provide increased accessibility options for learners with disabilities; offer multiple, diverse item formats; and increase flexibility for learners to complete assessments.
- **Streamlined test administration, scoring, and reporting:** Digital assessments eliminate the time-consuming tasks associated with paper testing such as managing and securing paper test materials, manual scoring, and manual data entry and reporting.
- **Immediate feedback and results:** Instant feedback and results allow learners to better understand their areas of need and recognize their accomplishments. Educators can also more easily use assessment data to inform instruction and target competencies and skills where learners need the most support.

Analyzing Data from Digital Assessments

Data from digital assessments provides a wealth of information. Often, programs provide instant feedback and reporting options that provide educators insight into individual and group learner strengths and needs. Educators can then use this data to inform instruction moving forward, providing additional scaffolding and support for areas of need. Educators and learners can also use assessment data to predict readiness for formal certification tests, such as the GED or the HiSET, and readiness for transition into postsecondary education and workforce preparation programs.

When analyzing assessment data, educators should consider timing of assessment in relation to instruction, learner attendance, and external influences to construct a more accurate reflection of learner outcomes.

Classified staff often support classroom teachers and learners in the testing process through multiple supports, such as:

- entering demographic and testing data into CASAS;
- entering testing results into data management systems, including data from pre- and post-tests;
- running reports for administrators and classroom teachers (benchmarks, competencies, student gains, etc.); and
- proctoring parking-lot and remote testing.

Standardized Assessments

There are numerous reasons for educators and program providers to use standardized assessments in the adult education classroom. Standardized assessments:

- measure learner progress at the individual and group level;
- indicate learner readiness for progression into more advanced educational opportunities or workforce education programs;
- provide a common metric for measuring learner outcomes across all instructional levels and programs and comparing learner outcomes at their institution with other program providers in the same region or state;
- provide consistent, longitudinal data to identify performance trends across all instructional levels and programs within an institution; and
- establish a common language across learners, program providers, employers, and states.

Assessments for placement purposes place learners into the appropriate instructional course, level, or program depending on the learner's skill level. The most accurate placement for learners involves multiple measures—standardized test results, but also education/work experience, short- and long-term goals, oral interviews, and writing samples. For CTE program placement, there is a particular interest in job-specific skills, previous work experience, and training certifications.

Diagnostic assessments help learners establish an individual learning plan based on existing competencies and skills, along with desired competencies and skills within an instructional course or level.

Formative and summative assessments monitor learner progress over a specific time period. Formative assessments are ongoing and assess a learner's progress after a specific lesson or module within an instructional course or level. Summative assessments occur at the end of an instructional course or level and demonstrate a

learner's mastery of competencies needed to progress to the next course, level, or for certification. Common types of formal, summative assessments include the following categories:

- **Certificates:** Formal certificates indicate completion of an educational or training program in a specific area. K–12 adult schools award in-house certificates that are then validated through employer and industry recognition. Community college certificates are approved by the California Community Colleges Chancellor's Office. Adult education CTE certificates may also be approved by the California Department of Rehabilitation, the California Veterans Administrator, CalWORKs, and WIOA.
- **Credentials:** Credentials indicate successful completion of an advanced level examination delivered through a third-party testing service. Adult education program providers may offer these in place of or in addition to their own certificates.
- **CTE assessments:** Usually competency-based, CTE assessments measure learners' proficiency in a technical field, along with relevant literacy and mathematics skills.

Standardized Assessments

The following list includes the primary NRS-approved standardized assessments for use in California:

- **ABE/ASE**
 - CASAS Reading GOALS (8 forms)
 - CASAS Math GOALS (4 forms)
- **ESL**
 - CASAS Life and Work Reading (8 forms)
 - CASAS Life and Work Listening (6 forms)
 - CASAS Reading for Citizenship (4 forms)
 - CASAS Adult Secondary Reading
- **AWD**
 - CASAS Providing Options for the Workplace, Education, and Rehabilitation (CASAS Levels 2A to 4A)
 - CASAS Adult Life Skills Assessment (CASAS Levels 2A to 5A)
 - CASAS Braille Reading Assessment (CASAS Levels A/B using form 837 to test reading abilities in braille format)

High School Diploma/High School Equivalency

Learners who pass a high school equivalency test earn a state-issued HSE credential, which is an alternative to a high school diploma. California has two state-approved high school equivalency tests: GED and HiSET. The GED includes four separate exams: mathematical reasoning, reasoning through language arts, social studies, and science. The HiSET, governed by ETS, includes five separate sections: language arts—reading; language arts—writing; mathematics; science; and social studies.

Adult learners may also earn a high school diploma, awarded by their board of education, by earning credits in traditional high school courses including English, math, science, social studies, and more. Alternatively, the National External Diploma Program (NEDP) is a competency-based and performance-based assessment that allows California adult learners to earn a regular high school diploma through their board of education.¹⁶² NEDP participants build an electronic portfolio to demonstrate their academic and digital skills through a series of life and work tasks. NEDP tasks require learners to demonstrate—among other things—digital literacy skills such as basic keyboarding and internet search, conducting research, organizing data, communicating information, creating original works, and practicing responsible use of information and communication technology.

Performance-Based Assessments

Since the mid-1980s, California has utilized a competency-based approach to delivering adult education, focusing on the application of basic language and literacy skills in context. Along with standardized assessments, programs began to use performance-based assessments to document learner progress and outcomes. Initially, the lack of standardized data and reporting for performance-based assessments was a barrier to widespread implementation. To address this barrier, the California Department of Education (in partnership with CASAS) established the Civic Objectives and Additional Assessment Plans (COAAPs).

The COAAPs augment existing ESL programs with performance-based civic education and assessments. Performance-based assessments include learner demonstration of real-life tasks, such as filling out a job application, and are graded using standardized rubrics.

162 [National External Diploma Program](#)

Citizenship Tests

For adult learners studying for the US citizenship test, CASAS offers several assessments through its citizenship programs. These assessments measure a learner's ability to successfully complete the citizenship interview and knowledge of US government and history. There are in-class and remote testing options available for citizenship tests. These assessments earn payment points and are included in state-level reports.

Remote Testing

Remote testing is a form of computer-based assessment where learners take the assessment from their homes or somewhere other than an approved testing location.

Remote Testing Policies in California

In 2020, the CDE received authorization from the Office of Career, Technical, and Adult Education to allow WIOA, Title II agencies to implement remote testing.^{163,164} Requirements for remote testing include: proper learner identification, proper security measures for any NRS-approved assessments, and adequate training for remote testing proctors.

In addition, WIOA, Title II agencies must follow the guidelines listed below:¹⁶⁵

- CASAS assessments are the only remote tests approved at this time.
- Administrators of California WIOA, Title II agencies must complete and submit the test publisher's Remote Testing Authorization Form (see Attachment 1 below—CASAS Agency Remote Testing Agreement) to CDE Education Programs Consultants and CASAS Program Specialists before conducting remote testing.
- Testing administrators or proctors of California WIOA, Title II must have a certificate of completion for CASAS eTests Proctor training before commencing remote testing. There is no specific extra training required for remote testing, but anyone administering it must have completed the regular training.
- The testing credentials or training records of each administrator or proctor must be available to the CDE upon request for monitoring purposes.

163 [Adult Ed Covid-19 FAQ Memo](#)

164 [Adult Ed Covid-19 FAQ Memo](#)

165 [CDE - Adult Ed Remote Testing Policy Memo](#)

- California WIOA, Title II-funded agencies must incorporate a written, standard operating procedure for remote testing into the current Local Assessment Policy which addresses:
 - test security;
 - test integrity;
 - the protection of personally identifying information (PII);
 - the specification of certification or trainings required for staff before conducting assessment tests;
 - the process for prescreening students to verify identity;
 - the orientation of students in remote, online testing environment;
 - the list technology tools used to test, per publisher guidance; and
 - a plan to respond to video or technical glitches and communicate clearly with students.

Proctors in Remote Testing

Proctors play a critical role in providing successful remote testing experiences for learners. Administrators, classroom educators, instructional aides, and office staff often all serve as remote testing proctors to ensure proper learner support.

Remote testing proctors:

- ensure environmental and technology requirements are met by the learner;
- ensure learner understands remote testing policies and procedures;
- conduct a pretest orientation session, including step-by-step instructions;
- monitor the learner(s) during the remote testing session; and
- follow all remote testing administration policies and procedures.

Benefits and Challenges of Remote Testing

A major benefit of distance learning is that it provides increased access and greater flexibility for adult learners who experience challenges with scheduling or transportation. However, many challenges exist within the current model of remote testing. First, remote testing requires access to a digital device that can run testing software, connectivity to the internet, and sufficient digital literacy skills for successfully navigating remote testing platforms. Proctors need training to adequately prepare for remote testing administration, including technical support. Program providers

must allot adequate time for proctors to administer additional remote tests and must consider the cost of training and administering remote tests.

Digital Skills Assessments

Several adult education programs and assessment tools focus specifically on measuring the digital literacy skills of adult learners.

Northstar Digital Literacy Assessment measures basic digital literacy skills in three areas: Essential Computer Skills, Essential Software Skills, and Using Technology to Accomplish Tasks.¹⁶⁶ The assessments include online self-guided modules with practical performance tasks. Learners can earn certificates and digital badges for passing assessments in a proctored setting, either in-person or remote. Northstar also offers curricula with interactive, learner-centered lesson plans for classroom use, as well as online content for individual learners.

ISTE's SkillRise has partnered with the Northstar team to develop an assessment and credential aligned with the SkillRise **Profile of a Lifelong Learner**.¹⁶⁷ The assessment is designed to build on top of the foundational skills used in the Northstar assessment by exploring the intersection of digital and lifelong learning skills. The related micro-credential can be used to signal that job seekers understand how to use technology to create, collaborate, communicate, and think critically in the 21st century economy.

The NEDP includes the following standards related to computer and information technology use:¹⁶⁸

- **3.1** Demonstrate computer skills including keyboarding, software applications, and the internet (e.g., word processing, spreadsheets)
- **3.2** Demonstrate the use of technology to conduct research, organize data, communicate information, create original work, and solve problems
- **3.3** Identify and practice responsible and informed use of information and communication technology

The EL Civics program includes internet safety and online communication as covered topics. Additionally, most COAAPs have integrated digital literacy components, such as using the internet to search or apply for a job.

166 [Northstar Digital Literacy](#)

167 [Profile of a Lifelong Learner](#)

168 [National External Diploma Program](#)



VOICES FROM THE FIELD

Francisco Pinedo | Lead Instructor | Soledad Adult School

How do you assess digital literacy skills?

In the past, our consortium paid for the membership to use the Northstar Digital Literacy Assessment. With some of the CASAS competencies, the competencies are related to digital literacy skills. For example, the competency might be to write a cover letter for a job, and we'll do it in a digital format with our students. We must use a specific rubric to meet the competencies requirements, but the digital literacy skills are embedded in projects within the course.



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.

Informal Assessments

Beyond formal standardized or performance-based assessments, educators can use informal assessments within the classroom learning environment (whether in-person, hybrid, or remote) for a variety of educational purposes. Informal assessments help educators to know which concepts to review or where learners need additional support. Learners also benefit from informal assessments—recognizing what they have learned, advocating for more practice or review, and gaining confidence in their skills.

Often, informal assessments are designed by the educators and support staff working directly with learners. How can educators ensure they are developing

effective informal assessments? First, think about the purpose of the assessment. Consider the following questions in designing assessments:¹⁶⁹

- What is being measured?
- How will assessment data be used to inform instruction?
- What should learners be able to do?
- How will learners demonstrate their knowledge or skills?
- What are short-term and long-term goals?

Digital Badging

One form of informal assessment is digital badging. These programs can assist learners in representing personal learning achievements. Digital badges use validated metadata from a program provider to document a learner's successful completion of work. Program providers can offer multiple levels of digital badges that culminate in a program completion badge. Digital badges can then be shared with other educational institutions or potential employers in a digital portfolio format. Digital badges are awarded to learners upon successful completion of a course, demonstration of a particular skill, or upon achievement of a specific learning objective. Digital badges can empower individual learners to maintain a comprehensive, validated portfolio of their learning achievements.

An example of digital badges in adult education is the ABOUT Students digital badges program, developed using CASAS assessment results.¹⁷⁰ The ABOUT Students system developed digital badges aligned with literacy levels. Learners earn digital badges based on their assessment scores and culminate in a program completion badge. The system includes an ABE program to demonstrate basic literacy skills, an ASE program to indicate completion of high school equivalency requirements, and an ESL program to demonstrate language acquisition in reading.

Benefits go beyond the ease of efficiency of implementing a digital badging system. Additional benefits include acknowledging learner achievements, increasing credibility, and recognition of skills. Including validated metadata provides formal recognition and legitimacy to the learner's accomplishments. As learners collect digital badges in an individual portfolio, learners receive recognition and reinforcement of all their hard work and progress toward personal learning goals and outcomes. Thus, digital badges serve as a visual reminder of learner progress and achievement.

¹⁶⁹ [Assessment and Adult Learners](#)

¹⁷⁰ [Digital Badges](#)

Digital Assessment Tools

Many different types of digital tools can be used for assessment purposes. Before choosing a particular tool, educators should think first about the purpose of the assessment, what existing resources are available to them, and their learners' familiarity with the tool. As a starting point, below are some examples of digital assessment tools:

- **Discussion:** Learners can demonstrate their understanding of a topic through participating in group discussions.
- **Gamification:** The “use of game design elements in nongame contexts.”¹⁷¹ Gamified learning is gamification with intent to increase learner engagement, motivation, and retention. Popular gamification elements include badges, competitions, or point systems. Tools like Kahoot and Quizizz allow educators to create or modify quizzes that incorporate gamification elements.
- **Polling:** Polling tools (e.g., Mentimeter, Poll Everywhere) allow educators to do a quick check for understanding before, during, or after instruction. Digital polling tools offer a variety of question types including multiple choice, open-ended responses, word clouds, and more.
- **Quizzes:** Educators can use quiz creation tools (e.g., Google Forms, Microsoft Forms, Quizizz) to create custom assessments or adapt existing assessments shared by other educators. Most quiz tools include a variety of question types, allow users to embed multimedia content or link to external sites, and some have the option for auto-grading (depending on the question type).
- **Portfolios:** Digital portfolios allow learners to collect, document, and reflect on their growth throughout the learning process. Learners choose which assignments, projects, and other learning artifacts to include in their portfolios. LMS often include a built-in portfolio feature. Otherwise, educators and learners can use presentation software (e.g., Google Slides, Microsoft PowerPoint) to create digital portfolios and embed or link to learning artifacts. Digital portfolios often include some type of reflection, whether text-based or audio-visual.

¹⁷¹ [From game design elements to gamefulness](#)



VOICES FROM THE FIELD

Archana Nekkar | HSE Instructor | Campbell Adult School

How do you use digital tools to assess learners?

I'm an HSE instructor, so I teach a class where students work on getting their high school equivalency. This is a test prep class, so I give a lot of assessments in the classroom. After an initial assessment on the first day of class, I decide the course of plan for that student. Then, I continually assess to see what level students are at with each of the tests—if students understand the material or have something they need to be working on. Assessment is a daily process—I'm constantly checking in.

We have test prep software that is specific to the five tests they need to take for getting their high school equivalency—language arts, reading; language arts, writing; social studies; science; and math. In the software, I can masquerade as a student and see exactly how they've done on a particular assessment. The students take pre- and post-tests and quizzes throughout while they are learning the material.

I have a drawing board that connects to my laptop, and we do math problems together on Zoom. I ask the students to put their answers in the chat. It's difficult for some students because they don't want to get the answer wrong, but it's helpful for me to see what they know and what they need to review. I also use Newsela, a reading platform, which gives me data on how long students take to read an article and has quizzes for each article. The tangible data and results are helpful in supporting students.



VOICES FROM THE FIELD

Suzy Kelly | CTE Instructor | Berkeley Adult School

How has technology impacted the way that you assess students?

I had so much more data once we went online! I could assess students daily—their participation in the chat, daily assignments with pictures and videos of what they are working on, and written reflection questions. Some of them really like to make videos.

For my quizzes, I use Quizizz to assess students. It's a fun game. Before, I would do quizzes verbally or individually written. With Quizizz now, the nice

thing is it gives me the data. I can look back and see what they struggled with. Also, because it's a game, there's no "pass-fail." They can always go back and retake the quiz or look at their answers to review. Some of my students are also high school students, so they must get a grade, but for my adult learners I try to create a really comfortable, supportive learning environment. For them, the assessment is less about a grade and more about a review and helping them to be prepared for jobs.



CHAPTER

7

Fostering Healthy, Equitable, and Inclusive Digital Communities

For adults, “learner” is just one of multiple competing roles for an individual. Learning cannot be isolated from learners’ lived experiences. This chapter addresses the social–emotional aspects of learning, including the importance of building relationships and healthy, equitable, and inclusive digital communities. Additionally, this chapter explores the concept of digital citizenship and its role in adult education.

Community-Building

Healthy, equitable, and inclusive communities are precursors to deep learning and developing meaningful relationships in online spaces. Cultivating a positive, safe, and supportive classroom community can be challenging and requires effort—it doesn’t just “happen.” Educators must be intentional about creating conditions that actively

support learners, especially in a digital learning environment. Considerations for classroom community-building include:

- Find ways to build relationships between learners and their peers beyond the academic content being covered. This might be as simple as a daily greeting or include “fun” activities like themed video conferencing sessions.
- Provide opportunities for learners to collaborate with each other in a supportive manner—whether through informal “tips and tricks” tech shares or more formal collaborative project-based learning activities.
- Use the classroom as an opportunity to practice positive digital communication and learn what it means to be a digital citizen through active participation in class activities.



VOICES FROM THE FIELD

Merari Weber | Associate Professor | Santa Ana College

How do you cultivate a positive classroom community, both in-person and online?

I always invite students into the spaces that I’m in. The mural you see behind me? That was done by a student. I also try to find out from teachers what their gifts and interests are.

In Santa Ana, there’s a mural that was done to commemorate veterans from Santa Ana, and apparently there was graffiti on the mural and the whole community came together to advocate for the artist, and they supported the work to fix the mural. I wanted to introduce the students to the mural—elevating the community, exploring what the mural means, and connecting it to the history of Santa Ana. We did a big project connected to the mural with our Academic ESL pathway. I talked to the teachers about the project, and as we’re having this conversation, one teacher shared that she has a degree in art. So, she volunteered to introduce our Academic ESL students to art, and she took the lesson in a different direction, our Academic ESL students did their own mural, what you see behind me. Each student did a little square within a bigger mural; some of the students had never held a paint brush before, which proved an excellent interdisciplinary experience. We invited the muralist to present at our Academic ESL Student Project Presentation and had a big conversation about art, history, and the significance of the mural to the community.

Through all the steps of this community-based project, the students are using technology. They're using it to research art, culture, and history. They're creating Google Slides and PowerPoint presentations to explain what the art experience meant to them, or what the mural means to them. They're presenting what they experienced and what they learned. We invited all the different college classes and the broader community to come and listen to our ESL students give presentations. So, it is a language class, but you see the language in context. You see art and technology and the community coming together. The goal of the lesson might be having them find the letters on the keyboard—but they're also learning so much more and developing skills beyond what they could have imagined.

Social–Emotional Learning

Learning is a social experience. Social and emotional learning skills are foundational to successful participation in learning, life, and work. **Social and Emotional Learning (SEL)** includes the ability to:¹⁷²

- set and achieve positive goals;
- feel and show empathy for others;
- establish and maintain positive relationships;
- make responsible decisions; and
- understand and manage emotions.

The Collaborative for Academic, Social, and Emotional Learning created a framework with five core SEL competencies:¹⁷³

- **Self-Awareness:** The ability to recognize and identify emotions and how they influence behavior across contexts; the ability to recognize one's strengths and areas for growth
- **Self-Management:** The ability to manage one's emotions, thoughts, and behaviors in different contexts to achieve personal goals
- **Social Awareness:** The ability to understand and empathize with others from diverse backgrounds, cultures, and contexts

172 [Social and Emotional Learning](#)

173 [California Transformative SEL Competencies](#)

- **Relationship Skills:** The ability to develop and maintain healthy relationships with others
- **Responsible Decision-Making:** The ability to make constructive personal decisions and act accordingly

Integrating SEL into the classroom learning environment, whether digital or physical, helps learners to feel accepted and supported as individuals. However, if learners are anxious, fearful, or stressed, those negative emotions can impact a learner's ability to focus their attention, follow instructions, or engage with learning activities. While there are broader, systemic economic and social inequities that adult learners might face—schools are not powerless to address social-emotional needs. Institutions can connect learners to resources and create a safe and supportive learning environment with the classroom setting (whether in-person or online). This may be challenging with some adult learners who experienced difficult or discouraging educational experiences in the past or are experiencing the negative effects of chronic stress or long-term trauma.

Building positive, safe, and supportive relationships with learners is an essential component of SEL and the learning experience. Strategies to foster positive relationships among educators and learners:

- Educators engage in self-reflection about their own beliefs, biases, and values.
- Educators are culturally competent and strive to learn about, understand, and empathize with learners from diverse backgrounds, cultures, and experiences.
- Educators are encouraging and positive in their communication with learners.
- Educators have high expectations, but support learners as needed to achieve their personal learning goals.
- Educators utilize adult learning theories to address the unique needs of adult learners.
- Educators involve learners in the learning process by helping them to set goals and discussing strategies for self-monitoring and self-regulation.
- Educators are intentional about building a healthy, equitable, and inclusive learning environment, whether in-person or online.
- Educators provide learners with opportunities for building relationships with their peers, through both casual and academically focused collaborative learning activities.

Cultivating Educator Well-Being

Educator SEL is also important for several reasons:¹⁷⁴

- Educators' SEL competencies influence their ability to build relationships with their learners. When educators are calm and positive, they are better equipped to respond in a caring and supportive manner to learners' needs and any challenges that might arise in the classroom.
- Educators' SEL competencies influence classroom management and help to cultivate a healthy, equitable, and inclusive classroom community, whether in-person or online.
- Educators model SEL skills for their learners, including how to handle conflict, respond to challenges, and interact with others.

Educators are not solely responsible for their well-being. Institutional policies and strategies can foster well-being in their staff:

- Gather data from staff to identify current SEL needs and areas for support.
- Provide staff space and time to build relationships and problem solve challenges.
- Be mindful of the demands of different digital learning models and how they might impact various individuals.
- Provide support for staff in developing a self-care plan.
- Ensure access to mental health support.
- Include SEL and well-being activities or goals in professional development plans.
- Offer in-person and virtual opportunities for cultivating well-being (e.g., mindfulness exercises; journaling/self-reflection prompts).
- Check-in and communicate with staff on a regular basis.

See appendix A for more resources related to cultivating educator and staff well-being.

Digital Citizenship

As our world becomes more and more digital, it is critical to consider what it means to be a citizen in a digital world. The concept of digital citizenship can help educators and learners to take a proactive approach to interacting with others in digital spaces.

174 [Educator's Social and Emotional Skills to Learning](#)

The classroom provides a safe, supportive environment for developing as a positive digital citizen and model for others.

The **Profile of a Lifelong Learner** from ISTE’s SkillRise Initiative includes a Digital Citizen Feature that looks specifically at digital citizenship from the perspective of adult learners. The profile defines a **digital citizen** as someone who is “inclusive, equitable, and culturally aware as they live, learn, and work in an interconnected world,” and includes three supporting practices:¹⁷⁵

- **Practice 3a:** Digital citizens expand their perspectives, develop greater empathy, and support more inclusive and equitable workplaces using digital tools and resources.
- **Practice 3b:** Digital citizens use technology in a safe, legal, ethical, and culturally mindful manner in order to advance inclusion and equity in local and global communities.
- **Practice 3c:** Digital citizens are willing to challenge systems, procedures, and technologies that promote biases or perpetuate racism and inequity.

The **DigCitCommit** program from ISTE focuses on K–12 learners, but the DigCitCommit Competencies can be broadly applied to adult learners as well. The competencies take a proactive approach to digital citizenship, shifting the conversation from “don’ts” to “do’s”:¹⁷⁶

- **Inclusive**—I am open to hearing and respectfully recognizing multiple viewpoints, and I engage with others online with respect and empathy.
- **Informed**—I evaluate the accuracy, perspective, and validity of digital media and social posts.
- **Engaged**—I use technology and digital channels for civic engagement, to solve problems, and be a force for good in both physical and virtual communities.
- **Balanced**—I make informed decisions about how to prioritize my time and activities online and off.
- **Alert**—I am aware of my online actions and know how to be safe and create safe spaces for others online.

¹⁷⁵ [Profile of a Lifelong Learner](#)

¹⁷⁶ [DigCitCommit](#)



VOICES FROM THE FIELD

Suzy Kelly | CTE Instructor | Berkeley Adult School

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.



Afterword

In 2021, the California Department of Education published the *California Digital Learning Integration and Standards Guidance* to support K–12 schools in effective technology integration. We felt that we also needed a resource to support adult schools, which were also forced to pivot and deliver online instruction during the COVID-19 pandemic. Our hope is that educators and readers of this guidance will feel more confident and better prepared to facilitate meaningful digital learning experiences. This will be a living document that we can review on an annual basis as a collaborative to ensure that it continues to meet the needs of adult educators in the state of California.

We are so proud of California adult educators. During the pandemic, they embraced online learning through any means that they could and looked for ways to ensure that their students had the proper access. Some schools opened their parking lots so that students could access the school Wi-Fi—and then, they turned those same parking lots into testing centers later during remote testing. Educators, support staff, and school administrators focused on how to help adult learners continue access, get connected, and continue their learning journey.

Technology increases the accessibility and flexibility of the learning experience for students immensely—not just through scheduling but also improved content and pacing. Students can take advantage of online instruction to meet their individual learning goals in a way that makes sense for them and their families. Flexible learning models can provide learners with personalized learning pathways that accelerate or scaffold learning experiences so that learners are more successful in achieving their learning goals. We sincerely hope that the guide will help make this vision of digital empowerment a reality in adult education within the state of California—and beyond

Sincerely,

Dr. Carolyn Zachry

Education Administrator/State Director, Adult Education Office
California Department of Education

Pete Callas

Division Director, Career and College Transition
California Department of Education

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.¹⁷⁷

Accessibility

The degree to which content, programs, or tools support and accommodate the needs and preferences of diverse learners.

Andragogy

A practical and theoretical approach to adult education, where learners are autonomous and self-directed, and educators act as facilitators.¹⁷⁸

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.

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.¹⁷⁹

177 [Evaluating Digital Instructional Materials](#)

178 [The Adult Learner](#)

179 [Evaluating Digital Learning](#)

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.

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.¹⁸⁰

Digital Citizen

Someone who is “inclusive, equitable, and culturally aware as they live, learn, and work in an interconnected world.”¹⁸¹

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.”¹⁸²

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.¹⁸³

Digital Resilience

“The awareness, skills, agility, and confidence to be empowered users of new technologies and adapt to changing digital skill demands.”¹⁸⁴

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.¹⁸⁵

180 [What Is Competency-Based Education](#)

181 [Profile of a Lifelong Learner](#)

182 [Public Law 117-58](#)

183 [Digital Literacy](#)

184 [Building a Digitally Resilient Workforce](#)

185 [Distance Learning](#)

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.¹⁸⁶

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.

Heutagogy

Focuses on the individual learner as the center of the learning process.¹⁸⁷ 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 Model

Learning experiences that utilize digital or online learning tools, but digital learning and face-to-face instruction are not connected.¹⁸⁸

HyFlex Learning Model

Learning occurs concurrently in physical and virtual spaces; learners choose whether to attend class face-to-face or online.

186 [Experiential Learning](#)

187 [Heutagogy and Lifelong Learning](#)

188 [Evaluating Digital Learning](#)

Interoperability

The controlled, seamless, and secure exchange of data between applications.¹⁸⁹

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.¹⁹⁰

National External Diploma Program (NEDP)

A competency-based and performance-based assessment that allows adult learners to earn a regular high school diploma.¹⁹¹ 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 learning¹⁹².

Pedagogical Usability

How well a tool facilitates the learning process.¹⁹³

Remote Testing

A form of computer-based assessment where learners take the assessment from their homes or somewhere other than an approved testing location.

189 [Interoperability Crash Course](#)

190 [NRS Tips](#)

191 [National External Diploma Program](#)

192 [Open Educational Resources](#)

193 [A Conceptual Framework Web-Based Learning](#)

SAMR Model

A model for technology integration that includes four stages of substitution, augmentation, modification, and redefinition.¹⁹⁴

Social–Emotional Learning (SEL)

Includes the ability to:

- set and achieve positive goals;
- feel and show empathy for others;
- establish and maintain positive relationships;
- make responsible decisions; and
- understand and manage emotions.¹⁹⁵

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.¹⁹⁶

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.¹⁹⁷

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.¹⁹⁸

194 [How to Apply the SAMP Model](#)

195 [Social and Emotional Learning](#)

196 [Teaching Learners To Be Self-Directed](#)

197 [A Conceptual Framework Web-Based Learning](#)

198 [Technological Pedagogical Content Knowledge](#)

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.”¹⁹⁹

Triple E Framework

A learner-centered instructional framework for helping educators implement effective technology integration through engagement, enhancement, and extension.²⁰⁰

Web Content Accessibility Guidelines (WCAG)

Commonly accepted digital accessibility standards that emphasize four content principles: perceivable, operable, understandable, and robust.²⁰¹

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.

199 [Transformative Learning as Discourse](#)

200 [Triple E Framework](#)

201 [WCAG 2 Overview](#)



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Supplemental Resources

This appendix includes supplemental resources by topic—accessibility, educator and staff well-being, digital equity and access, digital literacy, digital tools, OERs, and standards—to support the implementation of concepts and strategies introduced in the guide. Programs exercise local control when selecting digital resources and tools. Inclusion in the *Guidance* should not be considered an endorsement by the CDE.

Accessibility

Accessibility Resources

A resource collection from OTAN that provides infographics, webinar recordings, and other resources to help educators meet accessibility requirements and design more accessible learning materials.

<https://otan.us/resources/accessibility-resources/>

National Center on Accessible Educational Materials

The Accessible Educational Materials Center from CAST helps individuals and programs acquire, create, use, and coordinate accessible educational materials and tools for learners with disabilities.

<https://aem.cast.org/>

Educator and Staff Well-Being

Adult SEL Self-Assessment

A personal self-reflection tool from CASEL designed for educators to assess their strengths and areas for growth related to SEL competencies.

<https://schoolguide.casel.org/resource/adult-sel-self-assessment-ost/>

SEL Center

A WestEd project in partnership with the US Department of Education, the SEL Center maintains a list of resources including action guides, informational articles, and multimedia resources focused on various SEL topics—including SEL for adults.

<https://selcenter.wested.org/resources>

Educator Resilience and Trauma-Informed Self-Care

A self-assessment and planning tool from the Center on Great Teachers & Leaders at the American Institutes for Research to support educators in identifying areas of strength and growth related to self-care.

<https://gtlcenter.org/sites/default/files/Educator-Resilience-Trauma-Informed-Self-Care-Self-Assessment.pdf>

Digital Equity and Access

Affordable Connectivity Program

Provides discounted monthly internet access (and one-time device discounts) for qualified individuals or households through funds from the Federal Communications Commission. Eligibility includes households at or below 200 percent of the Federal Poverty Guidelines, participation in certain assistance programs (e.g., Medicaid), participation in tribal-specific programs, participation in the National School Breakfast/Lunch programs, and Federal Pell Grant recipients.

<https://www.fcc.gov/acp>

Closing the Digital Divide

A California initiative that provides funding and support to help learners obtain digital devices needed to access learning including laptops and tablets, modems and routers, and Wi-Fi hotspots.

<https://www.cde.ca.gov/eo/in/digitaldivide.asp>

Digital Equity Act

A component of the bipartisan Infrastructure Investment and Jobs Act that includes \$2.75 billion in federal funding to address issues of digital equity and inclusion. This includes funding for digital-skills training for low-income populations, improving accessibility of online social service programs, and empowering rural communities to measure broadband access and adoption.

<https://www.digitalequityact.org/>

Emergency Connectivity Fund

Provides eligible schools and libraries with funding for laptops and tablets, modems and routers, Wi-Fi hotspots, and broadband connectivity to support their communities through funds from the Federal Communications Commission. Funding can be used to support educators and school staff, learners, and library patrons. Eligibility includes schools, libraries, and consortia that are eligible for support under the Federal Communication Commission's E-Rate program or Library Services and Technology Act.

<https://www.fcc.gov/emergency-connectivity-fund>

EveryoneOn

A national nonprofit organization that provides affordable access to digital devices, high-speed internet, and digital skills training to low-income families.

<https://www.everyoneon.org/>

Total Cost of Ownership Tool

The CoSN Total Cost of Ownership tool helps school leaders measure and understand the complete costs of technology systems.

<https://www.cosn.org/tco/>

Digital Literacy

Digital Literacy Initiatives

Resources funded by the US Department of Education, Office of Career, Technical, and Adult Education to help adult learners be successful in developing digital literacy skills.

<https://lincs.ed.gov/state-resources/federal-initiatives/digital-literacy>

Digital Literacy Framework for Adult Learners

The Maryland Department of Labor created a Digital Literacy Framework for Adult Learners to identify the following seven elements of digital literacy relevant for adult learners: technical, civic, communicative, collaborative, computational thinking, investigative, and productive.

<http://labor.maryland.gov/gedmd/digitalalliteracyframework.pdf>

Digital Navigator Playbook

A resource for implementing digital learning programs, including information on program goal-setting, defining activities and services, measurement and evaluation, and designing an implementation plan.

<https://digitalus.org/digital-navigator-playbook/>

Northstar Digital Literacy Skills Assessment

Northstar, a program of Literacy Minnesota, provides digital literacy skills assessments and online learning modules in three main areas: essential computer skills, essential software skills, and using technology in daily life.

<https://www.digitalliteracyassessment.org/about>

Promoting Digital Literacy for Adult Learners

A resource guide for educators to improve the effectiveness and quality of digital literacy programs for adult learners.

<https://www.barbarabush.org/wp-content/uploads/2022/04/Digital-Literacy-Resource-Guide-for-Adult-Learners-.pdf>

Digital Tools

Criteria for Evaluating Workforce EdTech Tools

A rubric from EdTech Center @ World Education for evaluating edtech tools for adult learners based on the following criteria: effectiveness, accessibility, ease of use, digital literacy, language and culture, affordability, engagement, quality and effective content, logical flow, user-centered design, user support, data privacy and security, and vendor reliability and support.

<https://workforceedtech.org/tool-evaluation-criteria/>

Flipgrid

A free, video-based digital discussion board. Educators create grids with discussion prompts or questions for learners, with the option to include example videos, links, and supplemental resources. Learners then post their responses as video recordings in the corresponding grid. Depending on the specific grid's setup, learners can also respond to each other's posts through likes, text comments, or videos. Users can sign up for free with a Google or Microsoft account.

<https://info.flipgrid.com/getting-started.html>

Padlet

A digital bulletin board tool that enables users to add text, links, multimedia, and upload files. There are multiple formatting choices (e.g., displaying information in a canvas, grid, or stream layout) for displaying information in a meaningful way based on the activity or content. Boards can be private, public, or shared with a specific group with options for moderation. Users can sign up for free with an Apple, Google, or Microsoft account.

<https://padlet.com/>

Voicethread

An interactive collaboration tool that enables users to create multimedia presentations online. Voice threads can include files, images, videos, and embedded files. VoiceThread presentations can be shared with a group or individuals via link and allow for comment threads within the presentation.

<https://voicethread.com/>

Open Educational Resources (OERs)**Adult Education CK12**

In partnership with OTAN, CK-12 created customizable FlexBooks, interactives, and personalized, adaptive practice exercises for adult educators and learners. Current offerings support ABE, ASE, and CTE programs.

<https://www.ck12.org/pages/adult-education/>

Adult Education Open Community of Resources

With over 300 resources and 500 members, this OER Commons group shares high-quality, high-interest learning materials for adult learners with low literacy levels preparing for the GED, family literacy, ESL, upskilling, and more.

<https://www.oercommons.org/groups/adult-education-open-community-of-resources/45/>

Digital Skills Library

An open repository managed by the EdTech Center @ World Education that contains free learning resources to help adult learners develop digital skills for personal, civic, educational, and career goals.

<https://digitalskillslibrary.org/>

EdReady

A learning platform that provides resources and support for adult education programs and standardized assessments including CASAS, GED/HSE, TABE, and college readiness.

<https://aedemo.edready.org/home>

Google Applied Digital Skills

A series of 100-plus video-based lessons that help adult learners gain practical digital literacy skills for life and work. Lessons are designed for beginner computer users and include project-based lessons to help learners apply what they learn in each lesson. Google Applied Digital Skills may be completed as an individual, or educators with a Google account can create a class to assign lessons and monitor learner progress.

<https://applieddigitalskills.withgoogle.com/en/learn>

HippoCampus

A website with multimedia content designed for middle to high school content levels, including animations and simulations, on general education topics. Educators may assign learners specific content to complete, or learners can use the site as an individual.

<https://hippocampus.org/>

LINCS Learner Center

Connects learners with online resources on learning English, reading, math, and science; obtaining US citizenship; and developing job skills. Resources are offered in English and Spanish.

<https://lincs.ed.gov/learner/>

MERLOT

Originally created through the California State University Center for Distributed Learning, the Merlot collection contains tens of thousands of free resources including bookmark collections, discipline-specific content, learning exercises, and multimedia resources.

<http://www.merlot.org/merlot/index.htm>

Microsoft Digital Literacy Certification

Free LinkedIn Learning courses on the following topics: working with computers, accessing online information, communicating online, safe and responsible online participation, creating digital content, and collaborating and managing digital content. Resources are offered in Arabic, English, and Spanish.

<https://www.microsoft.com/en-us/digital-literacy>

Northstar Online Learning

The full Northstar Online Learning program is only available to certified Northstar locations, but several digital literacy online courses are available to the public for free. Topics available for free at the time of publication include basic computer skills, email, Microsoft Word, and career search skills.

<https://www.digitalliteracyassessment.org/features#nso>

USA Learns

A free website hosted by the Sacramento County Office of Education that helps adults learn beginning and intermediate English online. Self-paced courses include thousands of educational videos and hundreds of lessons on listening, speaking, reading, and writing in English. The website also includes content on Life Skills in English and a US citizenship course.

<https://www.usalearns.org/>

Standards

College and Career Readiness Standards (CCRS)

Standards for adult education intended to prepare adult learners for success in college, career and workforce preparation, and citizenship. Subject areas include literacy and mathematics, and standards align with the Common Core State Standards.

<https://lincs.ed.gov/publications/pdf/CCRStandardsAdultEd.pdf>

California Standards for the Teaching Profession (CSTP)

Standards for California educators at all experience levels and for varying contexts and roles. Includes six standards of learner engagement and support, creating and maintaining effective learning environments, understanding and organizing subject matter for learning, designing learning experiences for all learners, learner assessment, and developing as a professional educator.

<https://www.ctc.ca.gov/docs/default-source/educator-prep/standards/cstp-2009.pdf>

Comprehensive Adult Student Assessment Systems (CASAS)

An organization that provides resources for adult education programs, mainly through research-based assessment systems that measure individual learner and program-level outcomes.

<https://www.casas.org/about-casas/faqs>

DigCitCommit

A proactive approach to digital citizenship with five competencies: inclusive, informed, balanced, engage, and alert.

<https://digcitcommit.org/>

ISTE Standards

Competencies for effective learning, teaching, and leading in the digital age with standards for students, educators, education leaders, and coaches.

<https://www.iste.org/iste-standards>

ISTE Educator Standards

A learner-centered framework for educators to design effective and meaningful learning experiences with purposeful technology integration to empower learners.

<https://www.iste.org/standards/iste-standards-for-teachers>

National Standards for Quality Online Learning (NSQOL)

A framework and flexible guidance for education programs to improve online teaching, online programs, and online courses.

<https://www.nsqol.org/>

SkillRise Profile of a Lifelong Learner

A resource from the ISTE SkillRise program designed to help define, measure, and advance the digital and lifelong learning skills required for adult learners to succeed in today's workforce (and beyond). The profile includes the following qualities: lifelong learner, empowered worker, solution seeker, mindful colleague, and digital citizen.

<https://skillrise.org/profile>

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