Teacher Guide: Instruction and EdTech

EDUCATION TO CAREER NETWORK
of North San Diego County

Ramona Adult School
Poway Adult School
Escondido Adult School
San Marcos Adult School
Vista Adult School
Palomar College

About this Document

The goal of this book is to provide ETCN teachers with a background on all things ETCN, instruction, EdTech, and our various support tools. Our goal is to give our teachers and staff the best resources and tools to support our students across all of our schools.

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Important Websites Supporting this Document

- **Education to Career Network**
- **ETCN EdTech and Instruction Website**
- **ETCN Student Portal**

Chapter 1: ETCN Background and Teaching and Learning Philosophy

The Education to Career Network of North San Diego County (ETCN) is one of five adult education consortia in San Diego County and one of 71 throughout the state. Through our five-member districts - Escondido Adult School, Poway Adult School, Ramona Adult School, San Marcos Adult School, and Vista Adult School – together with Palomar College, we provide adult students with ongoing learning opportunities by offering high-quality, relevant, and responsive courses, programs and services. As the largest adult education consortium in San Diego County, our five adult education campuses along with Palomar College support and train a diverse population of adult learners. Serving more than 15,000 students each year, our mission is to provide students with ongoing learning opportunities by offering high-quality, relevant, and responsive courses, programs, and services – all for low or no fee.

Our Campuses

- Escondido Adult School
- Palomar College
- Poway Adult School
- Ramona Adult School
- San Marcos Adult School
- Vista Adult School

The mission of ETCN has been to assist adult students in reaching their individual educational goals including career advancement, college preparation, workforce re-entry, and life enrichment. Together, we continue to work to leverage resources and increase collaboration and partnerships among providers of adult education and support services within the region.

ETCN Programs

Learning has no age limit. Whether a student is looking for career advancement, college preparation, or workforce re-entry, we help them gain the necessary skills to reach their individual educational and career goals. From English as a Second Language (ESL) and high school diploma programs, to technical hands-on training and certification programs, our campuses offer classes and programs focused on high-paying, in-demand careers to meet today's and tomorrow’s industry demands.

Our campuses offer programs and training in:

- English as a Second Language
- High School Diploma/Adult Secondary Education
- Automotive Technology

- Business/Accounting
- Certified Nursing Assistant
- Construction/Manufacturing
- Cybersecurity/IT
- Medical Assistant
- Pharmacy Technician
- Phlebotomy Technician
- Veterinary Assistant
- Welding and Metal Fabrication
- Court Reporting
- Community Education
- **And many more**

Our Goals as a Consortium

Our goals as a consortium come from our three-year plans. These goals shift each three-year plan and are revisited and reviewed based on the data we collect to support program improvement and services for our students. Besides the three-year plan, each school has its own goals to meet their student's needs. Based on member self-assessments and survey results from key stakeholders, and together with analysis of labor market data and local workforce current and projected needs, we have developed five overarching Smart Goals for 2019-2022 (goals will be revised as years progress). Each goal includes how they will be measured and the percentage increase we hope to obtain at the end of the next year three cycle:

- **Goal 1**. Shorten the timeframe for students to successfully transition to post-secondary education and careers (by 25% as measured by professional development outcomes, new curriculum, new pathways, and student surveys.)
- **Goal 2**. Increase successful student transitions to post-secondary education and careers (by 25% as measured by student interviews, data collected, and surveys completed.)
- **Goal 3**. Incorporate the regular use of data in decision-making (by implementing a digital dialogue as measured by professional development, professional learning community artifacts, and implementation protocols.)
- **Goal 4.** Expand and enhance community and business partnerships and overall awareness of Adult Education in the region (through community forums, Strong Workforce Partnerships, Job Fairs, and cross-consortia referrals as measured by professional development artifacts, agendas, event information, community surveys, and partnership lists.)
- **Goal 5.** Promote healthy communities and civic participation through family literacy and immigrant integration efforts (through parent education and professional development as

measured by class artifacts, survey results, professional development agendas, communications, and enrollment data).

ETCN Teaching and Learning Philosophy

At ETCN, we envision a community where adult education is a gateway to personal and professional transformation, embracing the challenges and opportunities of the digital age. Our commitment is to provide inclusive, innovative, and future-focused education, empowering learners to navigate and succeed in an ever-changing digital landscape.

Teaching and Learning Instructional Philosophy in Action

Our teaching and learning philosophy integrates the principles of learner-centered education, experiential learning, and Universal Design for Learning (UDL), with a strong emphasis on digital literacy and meaningful technology integration. We believe in creating a learning environment that respects and leverages the diverse experiences and digital fluency of our adult learners to meet the needs of our ever-changing community, industry, and world.

Respect for Adult Learners and Their Experiences: Recognizing the rich tapestry of experiences adult learners bring, including their varying levels of content knowledge, skills, and digital literacy, we tailor our educational approach to respect and build upon these diverse backgrounds.

Meaningful and Purposeful Technology Use: In aligning with our curriculum goals, technology is not just an add-on but a central component of our educational strategy. Digital tools and platforms are chosen and utilized to enhance learning outcomes, ensuring that our learners are equipped for today's digital world.

Intentional Curriculum Design: Our educators are adept at designing curriculum that meets in-person and digital learning experiences. We focus on creating digital content that is engaging, accessible for in-person, blended, and online coursework, and aligned with the dynamic needs of our learners.

Navigating the Digital Landscape: As we prepare our learners for tomorrow's challenges, we emphasize the development of digital skills and the ability to adapt to new technologies. This includes not just technical skills but also an understanding of digital citizenship and the ethical use of technology.

Inclusivity: We strive to ensure that our classroom environments are inclusive and accessible to all, providing support and resources to bridge any physical and digital access divides.

Ongoing Support for Teachers and Professional Developing in Instruction and EdTech Integration

ETCN is committed to supporting teachers through comprehensive professional development, coaching, and extensive resources available on the ETCN EdTech and Instruction website. Our initiatives are designed to empower teachers with the skills and knowledge necessary for high-impact instruction and effective curriculum delivery. Key components of our support include:

- **Professional Development:** Offering workshops and seminars focused on the latest instructional strategies and EdTech tools.
- **Coaching:** Providing one-on-one and group coaching sessions to help teachers implement new teaching practices and technologies in their classrooms. Coaching involves observation classrooms and providing feedback, one on one sessions, small group PD, PLC PD, and co-teaching.
- **ETCN EdTech and Instruction Website:** A central hub featuring recorded PD sessions, blogs, tech resources, research articles, and more, aimed at enhancing teacher expertise in instructional strategies and EdTech integration.

The goal of our EdTech Integrationist is to ensure all teachers receive the support needed to achieve our collective goals as schools and a consortium, enhancing student learning and access to quality instruction within in-person, online, and blended learning classrooms.

Important Resources Supporting This Chapter's Content

- **www.educationtocareer.net**
- **ETCN EdTech and Instruction Website**

Chapter 2: Adult Learning Theory

Adult learning theories view learning as a collaborative process between students and educators, where educators and learners are co-creators of the learning experience. For adult learners, the learning process is often more self-directed, with a greater deal of choice, control, or input from the learner. This can be broken down into several practical and theoretical models, which are translated into classroom instruction. In this chapter, we will be outlining andragogy, experiential learning, heatugogy, and transformative learning

Andragogy

Andragogy is anchored in several core principles that acknowledge the unique needs and characteristics of adult learners. These individuals often enter educational settings with a clear understanding of why they want to learn, desiring an educational experience that is immediately relevant and practical. They tend to be autonomous, self-directed, and draw extensively on their prior experiences as valuable resources for new learning. Adult learners exhibit a readiness to engage in learning activities that are closely related to their life experiences or professional aspirations. They prefer learning that is contextual, problem-centered, and directly applicable to real-world challenges, as opposed to purely theoretical knowledge. Intrinsic motivation plays a pivotal role in their learning journey, driving them to seek knowledge and skills that fulfill their personal and professional goals.

The andragogical process model, designed to cater to these unique adult learning characteristics, comprises several critical steps. It starts with preparing learners for their educational journey, and establishing a collaborative, respectful, and open learning environment. This process involves mutual planning and decision-making regarding the learning experience, ensuring that both individual and organizational goals are taken into account. The creation of learning goals and objectives is a shared responsibility, followed by the careful design of the learning experience itself. Active participation in learning activities, which could be experiential or inquiry-based, is encouraged. Finally, the evaluation of learner outcomes is an essential step, ensuring that the learning process has been effective and meaningful.

Table 1. Andragogy Classroom Examples

Adult Learning Principle	Classroom Example
1. Need to know the why, what, and how of learning	Begin each course with an orientation session explaining the course's relevance to real-life scenarios and professional development.
2. Autonomous and self-directed	Offer choices in assignments to allow learners to pursue topics that align with their interests and career goals.

3. Use of prior experiences	Encourage learners to share their work experiences in discussions, enriching the learning environment with diverse perspectives.
4. Readiness to learn and seek life-related learning experiences	Design projects that address current challenges in the learners' professions, enabling immediate application of skills.
5. Contextual and problem-centered learning	Integrate case studies and problem-solving activities that reflect real-world issues relevant to the learners' fields.
6. Intrinsic motivation to learn	Provide opportunities for self-reflection and personal growth, linking learning outcomes to personal and professional aspirations.
7. Preparing learners for the learning experience	Conduct pre-course surveys to tailor content to learners' backgrounds and expectations.
8. Establishing a collaborative learning climate	Use group projects and peer-review exercises to foster teamwork and mutual respect.
9. Mutual planning and decision-making	Involve learners in setting class norms and deciding on project topics.
10. Establishing learning needs	Use formative assessments to identify and address individual learning gaps.
11. Mutual creation of goals and objectives	Co-develop course objectives with learners, ensuring alignment with their goals.

12. Designing the learning experience	Utilize a mix of teaching methods (lectures, discussions, hands-on activities) to cater to different learning styles.
13. Participating in learning activities	Incorporate experiential learning through simulations, role-plays, or field trips.
14. Evaluating learner outcomes	Implement a combination of self-assessments, peer assessments, and instructor evaluations to measure learning achievements.

Experiential Learning Model

The Experiential Learning Model, a pivotal framework in modern education, places a learner's direct experiences at the heart of the learning process. This model unfolds in four distinct stages: concrete experience, reflective observation, abstract conceptualization, and active experimentation, creating a dynamic cycle that promotes continuous learning and application. In the initial stage, learners immerse themselves in new experiences, such as hands-on activities or real-world simulations, to gain practical exposure to the content. This is followed by reflective observation, where learners engage in thoughtful examination of their experiences, either through personal introspection or group discussions, facilitated by both traditional and digital platforms.

Abstract conceptualization is the third stage, where learners digest their observations, draw conclusions, and formulate theories that encapsulate their understanding. This stage often involves collaborative discussions and synthesis of content, leading to the creation of presentations or summaries that articulate their newfound knowledge. The final stage, active experimentation, empowers learners to apply their conceptual understanding in new, real-world situations. This could manifest as practical tasks in a lab setting or as part of on-the-job training, particularly relevant in adult education contexts. This cyclical model underscores the importance of experience and reflection in learning, ensuring that education is not just about absorbing information, but about making meaningful connections and applying knowledge in practical scenarios.

Table 2. Experimental Learning Classroom Examples

Stage of Experiential Learning	Classroom Example
Concrete Experience	Conduct hands-on demonstrations or use case studies in physical classrooms; Implement simulations in digital environments to mimic real-world situations.
Reflective Observation	Facilitate group or class discussions, or prompt individual self-reflection; Utilize digital tools like video conferencing, chat rooms, and discussion boards for flexible participation.
Abstract Conceptualization	Encourage collaborative discussions and synthesis of content; Assign tasks where learners present summaries or insights from instructional units.
Active Experimentation	Provide opportunities in lab environments or on-the-job training for practical application of learned concepts; Encourage learners to test theories in real-world scenarios.

Heautagogy and Transformative Learning

Heutagogy, a learner-centered approach to education, emphasizes the learner's central role in steering their learning journey. Essentially, heutagogy refers to self-determine learning, which focuses on what the learner wants to learn and how they might learn it. This approach aligns closely with andragogy in that educators facilitate learning by providing resources and support. However, in heutagogy, learners take full ownership of their learning path, including decisions about what to learn, how to learn it, and how it will be assessed. This partnership between learners and educators is marked by negotiation and collaboration.

Key principles of heutagogy include learner autonomy, varying capabilities in communication and collaboration, the importance of self-reflection, and the concept of double-loop learning,

where learners adjust their actions and beliefs based on their experiences. Nonlinear learning is also a hallmark of this approach, allowing learners to chart their own course.

In the realm of self-directed learning, adult learners' preferences vary, influenced by factors such as previous experience and personal learning styles. Educators play a crucial role in understanding and accommodating these individual differences. Self-directed learning unfolds in stages, ranging from dependency on the educator to complete learner autonomy, each stage characterized by specific types of learning experiences and educator roles.

Additionally, digital learning environments significantly enhance self-directed learning by offering flexibility and a range of tools for content engagement, communication, and collaboration.

Transformative learning, another critical aspect of modern education, seeks to reshape learners' frames of reference, challenging their assumptions and broadening their perspectives through dialogue and reflection. This process involves addressing biases and fixed beliefs, and it requires an inclusive and supportive learning environment. Communicative learning, critical self-reflection, and reflective judgment are essential components of transformative learning, enabling learners to reevaluate and evolve their viewpoints and practices.

Table 3. Heautagogy and Transformative Learning Classroom Examples

Concept	Stage/Principle	Classroom Example
Heutagogy	Learner-centered approach	Provide options for learners to choose their own research topics or project formats.
	Capability	Assess individual learner capabilities and offer varied resources tailored to different skill levels.
	Self-reflection	Implement reflective journals or portfolios where learners document and evaluate their learning processes.

	Double-loop learning	Encourage learners to modify their project approaches based on feedback and self-assessment.
	Nonlinear learning	Allow learners to select learning modules or activities in an order that suits their personal learning path.
Self-Directed Learning	Stage 1: Dependent	Offer structured learning experiences like informational lectures and guided exercises.
	Stage 2: Interested	Use inspirational lectures and explicit instruction in learning strategies to engage learners.
	Stage 3: Involved	Facilitate group discussions and project-based learning to encourage deeper involvement.
	Stage 4: Self-directed	Support internships, individual research projects, or self-directed study groups.
Digital Learning		Utilize online platforms for flexible access to learning materials and interactive forums for collaboration.
Transformative Learning		Introduce diverse content and perspectives to challenge existing beliefs and biases. Foster dialogue and empathetic listening in group discussions.

Important Resources Supporting This Chapter's Content

- **Knowles 6 Assumptions of Adult Learners**

Chapter 3: Universal Design for Learning and Instructional Strategies Based on Cognitive Science

The Universal Design for Learning (UDL) and instructional strategies we utilize in our classrooms are based upon the principles of cognitive science and neuroscience. The instructional strategies formulated from the body of research on each of these domains are what we want teachers to strive to deliver while they are teaching. Additionally, for each student, we want to create many different opportunities for students to take in the content and skills they are learning in their classroom and remember and apply what they have learned. As a result, our goal for this chapter is to showcase how teachers can harness the Universal Design for Learning as an instructional framework along with instructional strategies based on cognitive science to support their instruction.

Universal Design of Learning

Universal Design for Learning (UDL) is an educational framework that aims to improve and optimize teaching and learning for all people based on scientific insights into how humans learn. UDL guides the design of instructional goals, assessments, methods, and materials that can be customized and adjusted to meet individual needs. The core of UDL lies in its three primary principles: providing multiple means of representation, offering multiple means of action and expression, and supplying multiple means of engagement.

- **Multiple Means of Representation:** This principle is about presenting information and content in different ways to address the diverse needs of learners. It encompasses the use of varied methods to present content and information to ensure accessibility and comprehension for all learners.
- **Multiple Means of Action and Expression:** This focuses on providing learners with various ways to demonstrate what they know. Recognizing that individuals express comprehension and mastery differently, this principle emphasizes flexibility in the ways learners can express their knowledge and skills.
- **Multiple Means of Engagement:** This principle is about stimulating interest and motivation for learning. It involves offering diverse ways to engage learners, considering their interests, offering appropriate challenges, and increasing motivation.

In the context of adult education, where learners come with varied backgrounds, abilities, and learning preferences, UDL plays a crucial role in creating inclusive learning environments. It

ensures that all learners, regardless of their learning style or ability, have equal opportunities to learn and succeed.

Table 4. UDL Elements in Adult Education Classrooms

UDL Principle	Element	Classroom Example
Multiple Means of Representation	Varied Presentation Methods	Use a mix of text, audio, video, and interactive content to deliver course material.
	Accessible Content	Ensure all materials are accessible, including subtitles for videos and alternative text for images.
Multiple Means of Action and Expression	Flexible Assessment Methods	Offer a choice between written assignments, presentations, or projects to demonstrate understanding.
	Technology Integration	Utilize digital tools that allow for varied forms of student response, such as blogs, video recordings, or interactive quizzes.
Multiple Means of Engagement	Interest-based Learning	Allow learners to choose project topics or activities based on their interests or career goals.
	Adjustable Challenge Levels	Provide learning materials and activities at varying difficulty levels to accommodate all learners.

	Collaborative Learning	Encourage group work and peer-learning opportunities to foster a sense of community and shared learning.

Instructional Strategies Based on Cognitive Science

Human learning is a complex and dynamic process, deeply rooted in cognitive science. Cognitive science reveals how different teaching strategies align with the way our brains process, understand, and retain information. In the realm of adult education, understanding these mechanisms is crucial for developing effective teaching practices. Key instructional strategies that have emerged from cognitive science include Direct Instruction, Modeling, Scaffolding, Feedback, Collaboration, Think-Pair-Share, Worked Examples and Frontloading Models, and Formative Assessment.

- **Direct Instruction:** This approach involves explicit teaching of a skill set using lectures or demonstrations. It is highly effective in systematically breaking down complex information into manageable parts, ensuring clarity and comprehension.
- **Scaffolding:** This approach involves providing temporary support to learners as they acquire new skills or knowledge. As learners become more proficient, the support is gradually withdrawn.
- **Modeling:** Educators demonstrate a process or skill, providing learners with a clear example to emulate. This strategy helps in visualizing the application of theoretical concepts.
- **Collaborative Learning:** This strategy involves learners working together to solve problems, complete tasks, or create projects, enhancing communication and teamwork skills.
- **Feedback:** Providing timely, specific, and constructive feedback to the entire class, groups of students, or individual students is crucial in helping learners understand their progress and areas for improvement.
- **Think, Write, Pair, Share:** This interactive strategy enhances critical thinking and communication skills. Learners first think about a question or problem individually, then write down their thoughts, pair up with another learner to discuss, and finally share with the larger group.
- **Worked Examples and Frontloading Models:** Providing learners with worked examples helps them understand the application of a concept before they attempt it themselves. Frontloading, or presenting essential information at the beginning, prepares learners for upcoming challenges.

- **Formative Assessment:** Regular, informal assessments during the learning process provide essential feedback to both learners and educators, allowing for real-time adjustments in teaching and understanding.

Table 5. Instructional Strategies in Action within Adult Education Classrooms

Instructional Strategy	Description	Classroom Example
Direct Instruction	Systematic, explicit teaching of skills	Lectures on key concepts related to a topic followed by step-by-step demonstrations using visuals or graphics demonstrating each step.
Scaffolding	Providing temporary support that gradually decreases as learners gain proficiency	In a welding course, initially guiding learners through techniques, then progressively allowing more independent work.
Modeling	Demonstrating a process or skill for learners	In a business class, the instructor models how to analyze a case study before students attempt it.
Think, Write, Pair, Share	Interactive method for critical thinking and communication	In an ESL class, learners think about a topic, write a short paragraph, discuss it with a partner, and then share with the class.
Collaborative Learning	Learners work together to solve problems or complete tasks	Group projects in a cybersecurity course where students collaborate to create a secure network design.

Worked Examples and Frontloading Models	Showing complete examples and presenting essential info upfront	In a math class, providing solved problems before asking students to solve similar ones; starting a course with an overview of key concepts.
Formative Assessment	Ongoing assessments to gauge learning progress	Regular quizzes in a medical assistant program to assess knowledge of medical terminology and procedures.
Feedback	Providing timely, specific, and constructive feedback to learners	In a writing class, giving detailed comments on drafts, focusing on both strengths and areas for improvement.

Important Resources Supporting This Chapter's Content

- **Digital Promise Learner Variability Tool**

Chapter 4: EdTech Integration, Adult Digital Literacy, and Artificial Intelligence

EdTech integration in adult education involves the strategic use of technology to enhance teaching and learning. It's not merely about using digital tools, but about integrating them in a way that enriches the educational experience and facilitates effective learning. In this chapter, we will discuss EdTech integration with the TPACK and Multimedia Principles in mind, followed by examples of EdTech tools and their classroom applications. Last, we will be discussing Adult Digital Literacy and Artificial Intelligence. For Artificial Intelligence (AI), we will outline how to utilize it as a teacher and how we can help our students employ it in our classrooms.

EdTech Integration and the TPACK

The Technological Pedagogical Content Knowledge (TPACK) framework is crucial for understanding effective technology integration in education. It comprises three core components: Content Knowledge (C), Pedagogical Knowledge (P), and Technology Knowledge (T). The TPACK framework emphasizes the intersection of these components, recognizing that effective teaching leverages the synergy between a deep understanding of subject matter (Content

Knowledge), effective teaching strategies (Pedagogical Knowledge), and the appropriate use of technology (Technology Knowledge).

Table 6. Demonstrating TPACK in Action in Adult Education Classrooms

TPACK Component	Description	EdTech Tool Example	Classroom Application
Content Knowledge (C)	Educator's expertise in specific subject matter	E-books, Online Databases	Providing access to digital resources for in-depth subject research.
Pedagogical Knowledge (P)	Knowledge of teaching methods and student learning	Learning Management Systems (LMS)	Utilizing LMS for customized learning paths and assessments.
Technology Knowledge (T)	Understanding of technology integration in education	Tablets, Smartboards	Employing interactive technology for engaging classroom experiences.
Pedagogical Content Knowledge (PC)	Combining subject matter with effective teaching strategies	Interactive Simulations	Using simulations to demonstrate complex concepts in a practical manner.
Technological Content Knowledge (TC)	Impact of technology on specific subject matter	Educational Apps	Integrating subject-specific apps to reinforce learning concepts.

Technological Pedagogical Knowledge (TP)	Effect of technology on teaching and learning	Virtual Reality (VR)	Enhancing learning experiences with VR for immersive educational scenarios.
Technological Pedagogical Content Knowledge (TPACK)	Integration of content, pedagogy, and technology	Blended Learning Environments	Combining online and face-to-face instruction for a comprehensive learning experience.

The Multimedia Principle

The Multimedia Principle emphasizes the use of words and pictures in teaching, rather than words alone, to improve learning. It's grounded in the cognitive theory of multimedia learning, suggesting that people learn more effectively from multimedia presentations. Below is a table that outlines each aspect of the Multimedia Principle and its classroom applications.

Table 7. The Multimedia Principle and Classroom Applications

Principle Aspect	Description	Classroom Application
Multimedia Use	Integrating both text and visuals to convey information.	Incorporating slides with diagrams and verbal explanations in a science class.
Spatial Contiguity	Placing related text and images close together.	Designing worksheets where explanations directly accompany corresponding images.

Temporal Contiguity	Presenting spoken words and corresponding visuals simultaneously.	Using real-time video demonstrations in a cooking class to illustrate techniques.
Coherence Principle	Avoiding extraneous content that doesn't support learning objectives.	Streamlining digital content to focus on key concepts in an online course.
Modality Principle	Using spoken text with pictures rather than written text for complex topics.	Providing audio explanations for charts and graphs in economics.
Redundancy Principle	Avoiding duplicating information in both text and audio simultaneously for complex explanations.	Choosing either spoken narration or on-screen text in a history documentary, not both.
Personalization Principle	Using conversational style and virtual coaches.	Implementing interactive software with a guide character for language learning.
Segmenting Principle	Breaking content into smaller chunks.	Creating short, topic-specific videos for a modular online course.
Pre-training Principle	Introducing key concepts before delving into complex topics.	Offering a primer on basic concepts in a web development course before advanced programming.

Common EdTech Tools and Their Classroom Applications

EdTech tools have become integral to modern education, offering dynamic ways to enhance learning and teaching. These tools align with various instructional strategies, adult learning theories, and Universal Design for Learning (UDL) principles. Here's an overview of common EdTech tools and their potential classroom applications, considering their alignment with educational methodologies.

Table 8. Demonstrating EdTech Tools in Classroom Examples

EdTech Tool	Classroom Application	Alignment with Educational Strategies/Theories
Canvas	Learning Management System for course content delivery, assignments, and feedback.	Scaffolding, UDL (providing multiple means of representation and engagement)
Google Workspace (Docs, Slides, Sheets, Draw)	Collaborative projects, presentations, and data analysis activities.	Collaborative Learning, Direct Instruction, UDL (multiple means of action and expression)
Padlet	Interactive boards for brainstorming, discussion, and resource sharing.	Think, Write, Pair, Share; Collaborative Learning
Canva	Creating visual content such as infographics and posters for projects.	Modelling, UDL (multiple means of representation)
Curipod	Customizable lesson planning and curriculum development.	Direct Instruction, Scaffolding

EdPuzzle	Interactive video lessons with embedded quizzes and annotations.	Formative Assessment, Direct Instruction
YouTube	Access to educational videos for various subjects and skills.	Modeling, UDL (multiple means of representation)
Duolingo	Language learning through interactive exercises and gamification.	Direct Instruction, Self-Directed Learning
Khan Academy	Online courses and tutorials for a wide range of subjects.	Direct Instruction, Worked Examples and Frontloading Models
Pear Deck	Interactive presentations with real-time student engagement tools.	Formative Assessment, UDL (multiple means of engagement)
Quizizz	Gamified quizzes for assessment and learner engagement.	Formative Assessment, UDL (multiple means of engagement)

Digital Literacy for Adults

Teaching digital literacy is crucial in empowering adult learners to navigate today's technology-driven world effectively. It involves equipping them with the skills to use digital devices like computers and smartphones, as well as understanding how to navigate and utilize various learning applications. The goal is to build confidence and competence in digital spaces, enabling learners to access information, communicate, and participate in society digitally.

Strategies to Support Teaching Digital Literacy

In teaching digital literacy to adult learners, a strategic approach that combines modeling and guided practice proves highly effective. Initially, instructors focus on the basics, demonstrating the fundamental operations of a computer—such as powering on and utilizing key components like the mouse and keyboard. This hands-on demonstration is followed by supervised practice sessions, where learners independently explore these functions. Progressing to navigation, teachers model how to efficiently use a web browser, emphasizing the use of the address bar and navigation buttons, then guide learners through practicing these skills with websites of their interest. Additionally, on top of this, teachers can utilize the elements of UDL to provide information in several different formats to ensure students can process and see the information they need to navigate when accessing various technology tools. An example of this would be presenting the directions visually on a piece of paper, creating a paper keyboard, and developing video step-by-step instructions to support students in learning how to access and navigate a learning application.

The introduction of learning applications involves supervised navigation to ensure learners can confidently find, access, and use these new tools. Safe browsing practices are taught through modeling the identification of secure versus insecure websites, with learners then applying these skills in practice. Encouragement of exploration is key, with learners assigned tasks that require them to engage with new digital tools, supported by a variety of resources provided by the instructor.

Collaborative learning is facilitated through group activities that utilize digital platforms, promoting peer support. Lastly, integrating real-life tasks such as online shopping simulations serves as practical applications of digital literacy skills. This methodical approach ensures learners not only understand digital tools but can apply them effectively in real-world scenarios.

Table 9. Digital Literacy Strategy Classroom Examples

Strategy	Classroom Example	Tools/Resources Used
Start with the Basics	Demonstrate turning on a computer, using a mouse and keyboard.	PCs, Laptops
Practice Navigation	Organize a scavenger hunt to find information online and to access classroom learning applications such	Web Browsers

	as the ETCN Student Portal and Canvas.	
Introduce to Learning Applications	Walkthrough of signing up and using a language learning app.	Duolingo, Khan Academy
Ensure Safe Browsing	Discuss and identify secure websites and phishing emails.	Interactive Online Quiz
Encourage Exploration	Assign a project requiring research and presentation using a new app.	Canva, Google Slides
Provide Supportive Resources	Distribute printed guides on using email and social media.	Printed Handouts, Online Tutorials
Facilitate Collaborative Learning	Design group activity to create a shared document on cloud storage.	Google Docs, Google Drive
Integrate Real-life Tasks	Simulate booking an appointment online or shopping.	Simulation Websites, eCommerce Platforms like Amazon

Artificial Intelligence

Artificial Intelligence (AI) permeates every aspect of our contemporary existence, influencing how we interact with technology in personal and professional spheres. From the smartphones in our pockets to the computers on our desks, from the vehicles we drive to the financial, travel, business, and trade systems we rely on, AI is revolutionizing our daily routines and operational frameworks. The specific focus of our discussion is on Generative AI and Large Language Models (LLMs), which are sophisticated systems trained on extensive datasets. These models leverage the vast information to predict outcomes from user-generated prompts, offering insights and solutions across a range of contexts. For educators, the imperative is to integrate AI seamlessly into pedagogical strategies, thereby equipping students with the skills to thrive in a

world increasingly dominated by AI applications across all industries. This discourse aims to explore practical methods by which teachers can incorporate AI into their teaching, enhancing the learning experience and preparing students to effectively utilize AI technologies in their academic and future professional work.

AI Use by Teachers

Teachers can use AI for support in teaching and in planning. Many AI tools such as ChatGPT, Google Gemini, and Claude can be used to develop content for lessons, differentiate instruction, create rubrics and assessments, and provide us with opportunities to complete administrative tasks such as email, reports, and grading much more efficiently. To utilize AI, we recommend using the framework provided by OpenAI and from the book AI Educator. This framework provides uses with the following prompt structure:

- Role of AI.
- Task for the AI.
- Specific directions related to the task.
- Constraints and further specifications to the task.
- Tone and engagement of output.
- The medium in which you want the AI to deliver the output (table, photo, video, etc).
- Revise as necessary based upon the output of the AI tool.

There are a variety of other AI tools available and we will ultimately see AI integrated into every application and workspace. We recommend the following AI-infused EdTech tools beyond ChatGPT, Google Gemini, and Claude, which we can provide additional support as you learn how to utilize them.

- Curipod
- MagicSchool.ai
- Canva
- Quizizz
- Speakable.io

AI Use by Students

We encourage you to have students use Generative AI tools in your classroom such as Google Gemini to analyze documents, generate images, support in data analysis, and writing (students using the ETCN student portal have access to Google Gemini). In the workplace, students will need to use AI to support them in their job capacity. However, we want students to use AI for long-term projects and support them in their learning. Be sure to have language in your syllabus

regarding HOW students can use AI in your class and how THEY SHOULD NOT use AI in your classroom. For example, language in a syllabus may look like this:

> *In this course, we embrace the cutting-edge advancements in Artificial Intelligence (AI) as a tool to augment our learning and exploration of subject matter. Students are encouraged to utilize AI technologies, including Generative AI and Large Language Models, as resources to support research, enhance creativity, and facilitate problem-solving in assignments and projects. AI use in this classroom is guided by principles of ethical and responsible application, aiming to foster critical thinking, digital literacy, and a deeper understanding of AI's role in our evolving world. Specific guidelines on how AI can be integrated into coursework will be provided, and students are expected to engage with these technologies thoughtfully, reflecting on their implications and potential to transform how we learn and interact with information. AI can be utilized in this class, specifically within the context of long-term projects:*
>
> - *Research and Information Gathering: Use AI to compile and synthesize information from a wide range of sources, providing a comprehensive background for your project topic.*
> - *Idea Generation and Brainstorming: Leverage AI to generate creative ideas, themes, and potential project directions based on initial input parameters.*
> - *Drafting and Editing: Employ AI tools for drafting project components, from written sections to design elements, and for subsequent editing and refinement processes.*
> - *Data Analysis: Utilize AI for analyzing datasets related to your project, identifying patterns, trends, and insights that can inform your conclusions.*

All students within their @pas, @eas, and @vas portal accounts for Canvas and Google Workspace, our students have access to Google Gemini. Google Gemini can be used by having students log into their Google Account and then searching Google Gemini on the internet browser.

Important Resources Supporting This Chapter's Content

- **ETCN Edtech Website Blog**
- **Google Basic Digital Skills for Adults**
- **Artificial Intelligence In Our Schools and Classrooms - Is it Plagiarism**

Chapter 5: Canvas LMS

Canvas Learning Management System (LMS) is a comprehensive platform designed to enhance teaching and learning experiences. It offers a range of functionalities including course content delivery, assignment submission and feedback, discussion forums, quizzes and surveys, grade books, and analytics. Canvas supports a variety of media formats and integrates with numerous third-party tools.

Canvas LMS aligns well with various instructional strategies. It facilitates direct instruction through organized content delivery, supports scaffolding by allowing incremental learning progress, and promotes collaborative learning via discussion forums and group projects. It also aligns with UDL principles by providing multiple means of representation, action, and engagement.

Table 10. Illustrating Canvas LMS Use in Adult Education Classrooms

Function	Classroom Application	Instructional Strategy Alignment
Course Content Delivery	Organizing course modules and resources	Direct Instruction, Scaffolding
Assignment Submission & Feedback	Online submission of assignments and providing feedback	Formative Assessment, Feedback
Discussion Forums	Facilitating class discussions and peer interaction	Collaborative Learning, Think-Pair-Share
Quizzes and Surveys	Conducting assessments and surveys for feedback	Formative Assessment, Self-Directed Learning
Gradebooks	Tracking learner progress and performance	Feedback, Scaffolding

Analytics	Monitoring student engagement and course interaction	Data-Driven Decision Making
Media Integration	Incorporating videos, audios, and interactive content	UDL (Multiple Means of Representation)
Third-Party Tool Integration	Integrating tools like Turnitin, Google Workspace	UDL (Multiple Means of Action and Expression), Collaborative Learning

Important Resources Supporting This Chapter's Content

- **ETCN EdTech Support Canvas Page**

Chapter 6: RapidID Student Portal

The use of RapidID in the Education to Career Network (ETCN) serves as a streamlined and secure method for managing student and teacher accounts throughout their educational lifecycle. This system simplifies the process of accessing educational tools like Canvas, ensuring a more efficient and user-friendly experience for both students and educators. It plays a crucial role in maintaining the security and integrity of user data while providing easy access to essential educational resources.

Steps for Students to Log Into Canvas via RapidID

- **Claiming Account through Username:** Go to Rapid Identity portal (**portal.educationtocareer.net**), click claim account, insert student ID, and student username that is given to teachers for students, and then students will create their password.
- **Alternative Method:** Go to the Rapid Identity portal (**portal.educationtocareer.net**), enter the student username provided by a teacher, click go, click "forgot password," and then create a password.

Important Notes for Teachers at PAS, EAS, and VAS

A few quick important notes. Teachers with both morning and evening classes require separate Canvas course shells. ASAP roster students are connected to each Canvas course shell. Utilize the 'Copy' feature to duplicate content from one course to another.

Important Resources Supporting This Chapter's Content

- ETCN Rapid Identity Slideshow

Chapter 7: ASAP Student Information System

ASAP (Automated Student and Adult Learner Program) is a comprehensive student information system designed to streamline various administrative and academic processes in education settings. It serves as a vital tool for teachers in managing student data, attendance, class schedules, and more. With ASAP, educators can efficiently handle administrative tasks, allowing them to focus more on teaching and student engagement. The system is divided into two versions: ASAP 3 and ASAP 4, each offering specific functionalities tailored to the needs of educational institutions. Our goal is to provide step-by-step instructions on how to take attendance and log service hours, which is important for our accountability purposes for state and federal funding.

Taking Attendance on ASAP 3 and 4

Please follow these steps to take attendance in ASAP 3.

1. Log into ASAP 3.
2. Go to the schedule overview by choosing the data range of when class occurs.
3. Find the class that occurs within that date range.
4. Click on Attendance options - Take Attendance
5. You can then choose for which class session you will take attendance.
6. You can either do the following:
    a. Click on the present box to automatically take attendance
    b. All present button and then deselect students.
    c. Place times manually for each student.
7. Click SAVE, and you are done

Please follow these steps to take attendance on ASAP 4.

1. Log in to the ASAP system using your School ID number, email, and password.
2. Go to your profile page "classes."
3. Click on the "Take Attendance" button.
4. Select the date range that you want to take attendance for.
5. Select the attendance option for each student.
6. Click on the "Save" button.
7. To communicate with students, go to their profile page and click on the "Email" button.
8. Type in a message and send it to the student.

9. You can also send messages to all of the students in a class at once.

Logging Service Hours

Service hours are the time spent working with a student outside of instructional time. Please follow these steps to log these hours in ASAP 3.

1. Pick the student for whom you provided the service and click the name
2. Scroll toward the bottom of the page and select the "Service Hours" tab
3. Select "Add New Record"
    a. A pop-up window will open you where you can enter the type of service you provided from the dropdown. Pick the one that most closely resembles the nature of your meeting. Notes can be kept brief or blank for confidentiality purposes.
4. Hit Update and You're Done!

Important Resources Supporting This Chapter's Content

- **ETCN EdTech Website - ASAP Support**
- **Navigating ASAP 3 Slideshow**
- **ASAP 4 PD Slideshow**