



Designing for the Future: Accessibility, Equity, and Innovation in the California Community Colleges

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LEVERAGING TECHNOLOGY FOR UNIVERSAL ACCESS

California's community colleges are adapting to serve increasingly diverse populations at a pivotal moment when artificial intelligence offers unprecedented opportunities to serve as a tool for inclusive learning. Rather than relying on reactive accommodations, **AI enables colleges to streamline the process of proactively designing inclusive educational experiences that serve all learners while enabling colleges to swiftly comply with changing disability laws.**

The promise of AI and emerging technologies lies not in replacing human connection or professional expertise, but in amplifying our capacity to recognize and proactively respond to the full range of student needs. When implemented thoughtfully, AI becomes a strategic tool in achieving equity across the system. The California Community Colleges can lead this transformation by advancing the following system-level strategies:

- **Institutionalize Accessibility-Centered Design Practices.** Promote professional development and faculty support for embedding AI-enabled accessibility features (e.g., alternative text generation, multimodal content delivery, automatic captioning) into course development and digital resource creation from the outset.
- **Create Inclusive Content Discovery and Curation Systems.** Develop AI-powered tools and repositories that facilitate the identification and integration of diverse, culturally responsive, and accessible instructional materials into curricula.
- **Expand AI-Enabled Cognitive and Linguistic Supports.** Leverage natural language processing and adaptive interfaces to support students with cognitive, language-based, or neurodiverse learning needs through tools like real-time translation, summarization, and simplified language outputs.
- **Deploy Scalable, On-Demand Academic Support Tools.** Integrate AI tutors, chatbots, and learning assistants across learning management systems to provide timely academic guidance and reduce barriers to support services for diverse learners.
- **Embed AI Tools for Comprehension and Executive Function.** Offer built-in tools that scaffold comprehension, organization, time management, and self-regulation—key areas of executive functioning that disproportionately impact students with disabilities or learning challenges.
- **Promote Equitable Course Design Through AI-Driven Insights.** Equip faculty with AI-informed analytics and course audit tools that identify accessibility gaps, recommend inclusive practices, and support iterative improvement in course delivery.

- **Foster Personalized and Immersive Learning Environments.** Encourage the use of AI and extended reality (XR) technologies to create personalized, multimodal, and immersive learning experiences that meet students where they are, both pedagogically and cognitively.

This shift from accommodation to anticipation represents more than a technological upgrade—it marks a fundamental paradigm shift in how we approach equity in higher education. By leveraging AI and emerging tools to design flexibility and accessibility from the start, we move beyond serving only students with documented needs and begin creating environments where all learners can thrive. To support this shift, the California Community Colleges will provide disciplinary, regional, and systemwide professional development focused on leveraging AI to support inclusive and equitable learning environments.

THE REALITY OF OUR STUDENT BODY

California’s community colleges, consists of nearly 2.2 million learners across 116 colleges bringing diverse backgrounds, experiences, and learning needs to our classrooms every day. Over 120,000 students officially receive services through Disabled Students Programs and Services (DSPS) each year, research shows that 15–20% of college students may be neurodivergent, experiencing conditions like attention deficit hyperactivity disorder (ADHD), autism, or dyslexia. Yet nearly 60% of students choose not to disclose their disability to their college, often due to fear of stigma.¹ Others face barriers to diagnosis, due to financial barriers to evaluation, or lack of access to formal testing. Many students with learning differences face challenges with executive functioning—difficulties with focus, planning, memory, and time management that can make or break academic success.²

These numbers reveal something profound: variability isn’t the exception in our classrooms—it’s the rule. Our students include working parents, first-generation college students, multilingual learners, and students with both visible and invisible disabilities. Each brings unique strengths and faces distinct challenges.

FROM ACCOMMODATION TO ANTICIPATION

For decades, accessibility in higher education has largely been approached through individualized accommodations—an essential and ongoing responsibility, supported with dedication by DSPS across our colleges. At the same time, we now have an opportunity to complement and expand this approach by proactively designing learning environments that are inclusive from the outset. Emerging technologies, including artificial intelligence, play a critical role in this shift. By leveraging tools that support accessibility and account for learner variability, colleges can move toward anticipatory design practices that ensure all students—whether or not they seek formal accommodations—encounter environments built for equity and inclusion from the start. As we embrace AI and other emerging technologies, it is essential to remember that human connection remains at the core of education. These tools are not a substitute for the relationships that inspire curiosity, motivation, and lifelong learning—they are enablers that can help faculty and staff extend their reach and deepen their impact. In doing so, we strengthen our shared commitment to access, belonging, and student success.

1 National Center for Education Statistics. (2022, April 26). A Majority of College Students with Disabilities Do Not Inform School, New NCES Data Show. U.S. Department of Education. https://nces.ed.gov/whatsnew/press_releases/4_26_2022.asp

2 Homayoun, A. (2024, March 15). A New College Lesson Plan for Improving Executive Functioning. Inside Higher Ed. <https://www.insidehighered.com/opinion/views/2024/03/15/supporting-students-executive-function-struggles-opinion>

TECHNOLOGY TOOLS THAT SUPPORT INCLUSIVE LEARNING

AI tools are rapidly transforming teaching and learning across the California Community Colleges. The [Universal Access Bot in PlayLab](#) revises HTML for Canvas accessibility, converts PDFs to screen-reader-friendly HTML, and suggests Universal Design for Learning (UDL) enhancements—no technical expertise required. [Google Gemini](#) and [Perplexity](#) drastically reduce time spent locating instructional materials by surfacing differentiated videos, infographics, and readings. They also reduce cognitive load with level-adjusted text, simplified explanations, and one-click translations.

Within courses, AI-powered companions like [PlayLab](#) and [Nectir](#) act as supportive learning assistants, offering summaries, alternative content formats, and safe spaces for students to ask for help. [Canvas Immersive Reader](#), powered by Microsoft, supports comprehension with read-aloud features, adjustable text layout, translation tools, and picture dictionaries.

Faculty benefit from AI-generated alt text, image descriptions, rubric creation, syllabus revisions, and personalized feedback. Tools like [Microsoft Copilot](#) can create engaging, customized presentations. AI also supports students with executive functioning challenges: Gemini can organize tasks and build schedules; [ChatGPT](#) supports reflection and goal-setting; [Google NotebookLM](#) visually organizes ideas into mind maps; and [OtterAI](#) transcribes lectures to help students stay focused.

Finally, immersive and adaptive platforms, like [Dreamscape Learn](#), introduce hands-on learning and personalize instruction by level, pace, and need—expanding access for students who struggle in traditional settings. And this is just a glimpse of what AI can do to support faculty and students in building more inclusive, accessible, and equitable learning environments.

The potential for technology to streamline accessibility and creative flexible learning environments is impressive. However, the key principle is that AI and technology require **constant human evaluation and oversight**. While these tools provide efficiency, they cannot make educational decisions independently—every output needs human review and wisdom.

PROFESSIONAL DEVELOPMENT

Advancing Accessibility & Learner Variability Through Professional Development

To meaningfully support accessibility and learner variability in the age of AI, professional development must go beyond compliance—it must empower faculty to proactively design inclusive, flexible, and equitable learning environments from the start. The California Community Colleges system is well-positioned to lead this work by aligning efforts with its faculty professional development framework, which emphasizes systemwide learning, disciplinary innovation, and regional responsiveness.

- **Expand system-wide, AI-enabled training for inclusive, accessible teaching.** Through platforms such as the Vision Resource Center, CVC@One, and the Accessibility Center, faculty and staff will access modular, high-quality training on AI-enabled tools that support neurodiverse learners, multilingual access, executive functioning, and Universal Design for Learning (UDL). Training will emphasize real classroom applications and inclusive pedagogy, ensuring faculty can apply emerging technologies in ways that reduce barriers for all students.

- **Support discipline-specific approaches to inclusive design.** AI Faculty Fellows and field-based leaders will guide faculty in integrating accessibility into core teaching practices across disciplines. From AI-driven scaffolding in language courses to adaptive simulations in CTE, faculty will explore how to align AI tools with the learning goals and access needs specific to their fields—ensuring that accessibility is embedded, not added on.
- **Foster regional communities of practice for accessible and equitable learning.** Professional development coordinators, instructional designers, and librarians will be equipped to lead AI-informed, accessibility-focused efforts at both the campus and regional levels. Through Regional Professional Development Networks (RPDNs), these leaders will cultivate peer-led communities of practice that offer practical support for accessible course design, inclusive assessment, and adaptive instruction—ensuring inclusive innovation reaches all corners of the system.

By aligning professional development with this integrated framework—and with support from the Faculty Professional Development Workgroup and partners in DSPS and at the Accessibility Center—the system can ensure that accessibility is not reactive or isolated, but built into the fabric of AI-informed teaching. This alignment transforms accessibility from obligation to innovation—and from retrofit to readiness.

EVOLVING LEGAL STANDARDS AND MOVING FORWARD TOGETHER

Continual updates to federal accessibility laws—including the Americans with Disabilities Act (ADA) and Section 508 of the Rehabilitation Act—make clear that access is not optional. These standards reflect a commitment to inclusive design from the outset, and AI offers a powerful tool to streamline compliance to evolving legal requirements.

By embracing AI and emerging technologies as a tool for equity, we can remove barriers, support executive functioning, and create environments that anticipate the full range of learner needs. This transformation requires more than isolated initiatives—it requires a systemwide, human-centered commitment.

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