Choosing Educational Technology Tools

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Introduction

Different technology tools serve different instructional needs. Intentionally selecting using technology can support student engagement and collaborative learning through interactive activities (Bond & Bedenlier, 2019; Borup et al., 2020). Such activities may also encourage students to apply, discuss, and create knowledge in more active ways (Freeman et al., 2014).

Thoughtfully designed, technology-supported activities can shift learners from passive users to active creators of digital work (Klein, 2011), which allows students to demonstrate and enhance their learning. Such activities may also support student workforce readiness by developing technological fluency and other real-world skills associated with specific types of tools.

Consider a few common instructional needs and the types of technology tools that may help support them:

- **Real-time feedback and participation**: polling tools
  - Related TLC resource: *In-Class Polling Guide*
- **Collaborative engagement with readings**: annotation tools
  - Related TLC resource: *Social Annotation Tool Guide*
- **Ongoing discussion and peer interaction**: communication tools
  - Related TLC resource: *Course Communication Tool Guide*
- **Efficient and scalable feedback practices**: assessment tools
  - Related TLC resource: *Efficient Assessments & Grading Strategies*

These tools are further detailed with recommendations in the comparison table below.

Practices to Consider When Evaluating Tools

Start With Learning Goals, Not Tech Features

Begin by evaluating the instructional purpose of an educational technology rather than the tool itself. Educational technologies are most effective when they are selected to support specific learning objectives and course goals rather than for their novelty or features (Center for Teaching and Learning, 2021).

Focus on Equity and Access

Consider device requirements, internet bandwidth, accessibility features, and potential barriers for students with disabilities or limited technological resources. Refer to the rubric for evaluating technology tools (Anstey and Watson, 2018), which highlights the importance of selecting accessible, inclusive, and adaptable technologies that support diverse learners.

Prioritize Human Connection

Tools should amplify instructor presence and peer engagement rather than replace them. These interactions can help foster meaningful dialogue and community-building within the course (Garrison et al., 2000). Student-instructor, student-to-student, and student-to-content relationships take on new dimensions with the presence of AI in the classroom.

Keep it Simple

Students may experience cognitive overload if tools are overly complicated (Sweller, 2020), which limits their ability to process course content. Instructors should also consider the time and effort required to learn, implement, maintain, and assess technology tools within their courses. Effective technology integration requires balancing technological and instructional considerations (Mishra & Koehler, 2006).

Plan for Technology Limitations and Contingencies

Technology does not always function as expected. Planning ahead helps support student success while minimizing disruptions. Below are some contingencies to account for in case of technological disruptions in class:

Consider

- How will students access course materials if internet connectivity is interrupted during or outside class?
- Can the activity be adapted without the tool?
- Does the tool allow for offline or asynchronous participation?
- Are there privacy or data-sharing considerations associated with the tool?

Strategies

- Prepare low-tech backups, such as downloadable access to materials when possible.
- Select tools that work across devices.
- Allow for flexible participation options.
- Review institutional policies and Third Party Risk Management (TPRM) guidance from DTS before adopting new tools.

How to Get Started

The following steps provide a practical starting point for selecting and implementing educational technology.

Step 1: Identify an Instructional Goal

Technology is most meaningful when addressing specific bottlenecks in a course (Center for Teaching and Learning, 2021). Start by identifying a specific learning challenge or "pinch point" in your course. Consider where students struggle to engage, understand or apply course materials. Identifying these challenges allows instructors to select tools that directly support student learning rather than adding unnecessary layers to the course.

Common pinch points may include:

- Limited participation in large classes
- Difficulty understanding complex readings
- Lack of real-time feedback on learning
- Low engagement in asynchronous or online environments
- Misalignment between preparation and in-class activities

Step 2: Select a Tool That Supports the Desired Learning Outcome

Once you've identified the challenge, consider what students need to do differently to overcome it. Choose a tool that supports what learners should be able to understand or demonstrate using the comparison table below.

Step 3: Start Small

Pilot the tool in a single activity or assignment before scaling broadly. This provides an opportunity to evaluate its effectiveness without overcommitting.

Step 4: Gather Feedback

Solicit student feedback on usability, clarity, and how the tool supported their learning.

Step 5: Document and Refine

Adjust your approach based on student feedback and your own observations.

Examples from UCLA Faculty

Example 1: Improving Learner Engagement

Michelle Rensel, PhD | SocGen M144, Cluster 71A, and Cluster 71B

Michelle Rensel used iClicker, a polling tool, to incorporate active learning and encourage participation in her courses. Students can test their understanding in the moment while the instructor receives immediate feedback on their learning. In SocGen M144, students met in small groups to analyze scholarly articles. iClicker questions before and after these discussions helped students examine key methods, results, and conclusions. These questions also prompted students to consider the rigor of the research.

Example 2: Enhancing Collaborative Learning

Dorothy Wiley, PhD, RN, FAAN | Nursing

Dorothy Wiley turned to Perusall, a social annotation tool, when students' strong pre-class test scores on assigned readings were not consistently reflected in their understanding during class. Students now annotate readings, respond to critical thinking prompts, and engage with their peers directly in the text. Wiley observed stronger critical thinking and applied learning in their responses. Overall, students were better prepared to apply foundational course material during subsequent discussions and collaborative activities.

Technology Tools Comparison Table

Adapted from UCLA Bruin Learn Academic Technology and Collaboration Tools resources

The tools below illustrate how different technologies can support specific instructional needs. Consider how each option aligns with your course goals and identified pinch points.

Instructional Purpose	Tool	When to Use This Tool
Check student understanding in real time and increase participation during class sessions	**Polling Tools** (e.g., iClicker, Zoom Polling, Poll Everywhere)	In high-enrollment or lecture-based courses where students may be hesitant to speak, or when immediate feedback can help guide instruction
Support active reading and collaborative analysis of course materials	**Annotation Tools** (e.g., Perusall, Hypothes.is)	When students struggle to engage with readings or need structured opportunities to interpret and discuss course content before class
Facilitate ongoing communication, peer support, and	**Course Communication Tools** (e.g.,	When students need a centralized space to ask questions, collaborate, and receive timely responses from peers or instructors

question-asking outside of class	Campuswire, Slack, Piazza)	
Support structured, course-based discussion and reflection within the learning management system	**Bruin Learn Discussions**	When you want to promote sustained dialogue, reflection, or graded participation aligned with course activities
Collect responses, conduct low-stakes assessments, and gather student feedback asynchronously	**Google Forms**	For quizzes, surveys, or exit tickets that students can complete independently, especially outside of class time
Streamline grading and provide consistent, structured feedback across assignments	**Gradescope**	In courses with high enrollment or multiple graders where efficiency, consistency, and feedback management are important
Support collaborative writing, peer review, and group-based learning activities	**Collaborative Documents** (e.g., Google Docs)	When students are co-creating content, providing feedback, or working together synchronously or asynchronously

Additional Resources

UCLA Resources

UCLA Teaching and Learning Center. (2025, September). *Efficient assessments & grading strategies*. UCLA Teaching and Learning Center. TLC Resource | Efficient Grading

UCLA Teaching and Learning Center (TLC). (2025, April). *Using generative AI reflectively and responsibly in teaching and learning*. UCLA Teaching and Learning Center. Retrieved August 18, 2026. Using Generative AI Reflectively and Responsibly in Teaching and Learning

Instructor Consultations

The UCLA Teaching and Learning Center (TLC) and other campus teaching support units are available for confidential, non-evaluative individual consultations. We encourage you to reach out to the TLC to discuss ways to enhance your teaching, create or revise course materials,

and determine actionable next steps from student feedback. Request a TLC Consultation or email the TLC instructional design team directly at idmp@teaching.ucla.edu.

To stay connected to the TLC for professional development programs, resources, and workshops, sign up for the TLC's newsletter and check the UCLA Community Calendar for programs.

The Center for Educational Innovation and Learning in the Sciences (CEILS) supports teaching and learning in the Life and Physical Sciences at UCLA. Contact CEILS to consult with a STEM pedagogy consultant at media@ceils.ucla.edu.

The Bruin Learn Center of Excellence (CoE) holds Office Hours for technical support on using Bruin Learn tools and other setup needs.

UCLA Humanities Technology (HumTech) provides live, drop-in online instructional support for the humanities, and provides an online support page: Using Bruin Learn at UCLA.

Beyond UCLA[1]

Anstey, L. M., & Watson, G. P. L. (2018). *Rubric for eLearning tool evaluation*. Centre for Teaching and Learning, Western University. https://teaching.uwo.ca/pdf/elearning/Rubric-for-eLearning-Tool-Evaluation.pdf

Bond, M., & Bedenlier, S. (2019). Facilitating student engagement through educational technology: Towards a conceptual framework. *Journal of Interactive Media in Education, 2019*(1), 1–14. https://doi.org/10.5334/jime.528

Borup, J., Graham, C. R., West, R. E., Archambault, L., & Spring, K. J. (2020). Academic communities of engagement: An expansive lens for examining support structures in blended and online learning. *Educational Technology Research and Development, 68*(2), 807–832. https://doi.org/10.1007/s11423-020-09744-x

Center for Teaching and Learning. (2021, August 22). Choosing EdTech tools. Washington University in St. Louis. https://ctl.wustl.edu/resources/choosing-edtech-tools/

Freeman, S., Eddy, S. L., McDonough, M., Smith, M. K., Okoroafor, N., Jordt, H., & Wenderoth, M. P. (2014). Active learning increases student performance in science, engineering, and mathematics. Proceedings of the National Academy of Sciences, 111(23), 8410–8415. https://doi.org/10.1073/pnas.1319030111

[1] The ideas represented by the individuals and organizations listed do not necessarily reflect the views of the UCLA Teaching and Learning Center, UCLA, or the University of California.

Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education, 2*(2–3), 87–105. https://www.researchgate.net/publication/222474115_Critical_Inquiry_in_a_Text-Based_Environment_Computer_Conferencing_in_Higher_Education

Klein, L. (2011). Hacking the field: Teaching digital humanities with off-the-shelf tools. *Transformations: The Journal of Inclusive Scholarship and Pedagogy, 22*(1), 37–52. https://www.jstor.org/stable/10.5325/trajincschped.22.1.0037

Mishra, P., & Koehler, M. J. (2006). *Technological pedagogical content knowledge: A framework for teacher knowledge*. *Teachers College Record, 108*(6), 1017–1054. https://doi.org/10.1111/j.1467-9620.2006.00684.x

Sweller, J. (2020). Cognitive load theory and educational technology. *Educational technology research and development, 68*(1), 1-16. https://doi.org/10.1007/s11423-019-09701-3