



Active Learning Classrooms Series

PART 1: Basic Principles for Teaching in an Active Learning Classroom

Active Learning Classrooms (ALCs) are increasingly prevalent on college campuses. This model dates back nearly 25 years, and there is significant evidence to support the institutional investment in these kinds of spaces (see below). While there are various institutional examples of these classrooms (e.g., [SCALE-UP](#), [TEAL](#), [TILE](#), etc.), all ALC models share a consistent emphasis on using flexible classroom design as a method for incorporating more active learning. Although, it is true any classroom can be “active,” an ALC features tables (often round), multiple writing surfaces (e.g., whiteboards), and enhanced technology (e.g., robust wireless connectivity, numerous monitors). Below are some “first steps” to consider if you are a new instructor in an active learning space or a seasoned instructor looking to solidify the basics.



Figure 1: Active Learning Classroom—Olson Hall, Room #250, UC Davis

Common Questions	Explanation	Teaching Suggestion
What is the first step?	Instructors with experience teaching in ALCs always emphasize intentional preparation before the first class in the space.	Preparation includes revisiting the course learning objectives, activities, and assessments, but also getting a sense of the space itself, so visiting the classroom before you teach in it is a good idea.
Will I be able to cover as much content?	One of the biggest concerns instructors often have with adopting an ALC model is that they may have to trade-off content “coverage” for active learning. The concern is that it will be impossible to address all of the course content if not delivered to the students during class time. However, research suggests that students can learn more by engaging with the subject area through their own self-defined research and projects (Davidson, 2017).	Carefully review your learning objectives and articulate them in a manner that aligns with course goals. For example, consider how much of class time is spent reviewing the textbook versus time spent applying its concepts. While it will take time to develop materials, the exchange of depth of learning for coverage of content is one instructors are frequently most excited about. For more suggestions on incorporating active learning while also covering necessary content, see resources on “Covering Content” and “Activating Your Lecture.”



What if students resist?	Students' resistance to active learning is well documented; however, many instructors use this resistance as a teaching moment to get students to consider how learning works, through an activity where students reflect about their own goals (Davidson, 2017).	For example, an article by Smith (2008) provides a framework for an activity that instructors can use to engage their class on the first day. The activity asks students to consider reasons why they enrolled in college and what they want out of the experience. Many instructors use this activity to illustrate the following points: learning is social; it takes practice, which is often challenging; and it requires frequent feedback. They close with the point that ALCs are specifically designed to foster conditions that promote the previous points. For more suggestions on encouraging motivation, see our resource on " Student Motivation ."
What are some other ways I can generate student buy-in?	It can be helpful to consider why students may be resistant to active learning activities. For example, many students have little experience with these types of activities, and therefore feel more comfortable with the routines they are more used to (e.g., receiving information passively).	One way to elicit buy-in from students is to use student performance data from previous version of the class to show learning gains in ALCs. (Instructors who do not have previous data can point to academic papers and studies whose findings support active learning (e.g., Freeman, et al., 2014; Prince, 2004). Seasoned ALC instructors also suggest routinely mentioning the merits of active learning and the intention and relevance behind the pedagogical methods throughout the length of the term.
Should I redesign my entire course?	When preparing to teach in an ALC, especially for the first time, take a measured approach. Sometimes a full course redesign makes sense, but often it is better to make several smaller changes and adapt as you and your students become more comfortable in the space (Petersen & Gorman, 2014).	Research suggests (Walker, Cotner, Baepler, and Decker, 2008) that a balance between active learning and more traditional approaches (e.g., lecture) can be a sweet spot for those teaching in ALCs. For example, Smith et al. (2005) suggest breaking up your lecture into smaller parts, and using brief active learning activities to bookend each part. See our resource on " Activating your Lecture " for more on this lecture model.
What about all of the technology?	Most ALCs will have the same instructor stations as traditional classrooms, but the connectivity is vastly improved so that students' devices have consistent web access. Due to the robust connectivity, instructors face increasing potential for student distraction.	Many instructors place a technology policy in their syllabus and reiterate that the amount of activity that will take place during class will not allow students to engage in social loafing. Other instructors simply indicate when technology is and is not going to be used. The flat floor of the ALCs often makes monitoring student technology use a bit easier, especially if the instructor enlists help from teaching assistants (graduate or undergraduate).
Where can I find help?	Enlisting education specialists, instructional designers, and faculty developers can reduce anxiety and provide you with the pedagogical tools needed to successfully teach	You can consult with the education specialists at CEE and/or with the technology experts at ATS , for feedback on your plans for teaching in an ALC. The staff are willing collaborators and can



	in an ALC (Baepler et al., 2016; Van Horne et al., 2014).	help you think about innovative course design, methods for forming groups, develop engaging activities, ensure assessments align with outcomes, and can make sure the technology in the room is accessible to all students.
--	---	---

Citation

Center for Educational Effectiveness [CEE]. (2018). Active Learning Classrooms Series. *Just-in-Time Teaching Resources*. Retrieved from <https://cee.ucdavis.edu/JITT>

References

- Baepler, P., Walker, J. D., Brooks, D. C. Saichaie, K., & Peterson, C. I. (2016). *A guide to teaching in the active learning classrooms: History, research, and practice*. Sterling, VA: Stylus Publishing.
- Davidson, C. (2017). *An "Active Learning" Kit: Rationale, Methods, Models, Research, Bibliography*. Retrieved from <https://www.hastac.org/blogs/cathy-davidson/2017/11/15/active-learning-kit-rationale-methods-models-research-bibliography>
- 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.
- Petersen, C. I., & Gorman, K. S. (2014). Strategies to Address Common Challenges When Teaching in an Active Learning Classroom. *New Directions for Teaching and Learning*, *2014*(137), 63-70.
- Prince, M. (2004). Does active learning work? A review of the research. *Journal of Engineering Education*, *93*(3), 223-231.
- Smith, K. A., Sheppard, S. D., Johnson, D. W., & Johnson, R. T. (2005). Pedagogies of engagement: Classroom-based practices. *Journal of engineering education*, *94*(1), 87-101.
- Smith, G. A. (2008). First-Day Questions for the Learner-Centered Classroom. *National Teaching and Learning Forum*, *17*(5), 1-4. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1002/ntlf.10101/epdf>
- Van Horne, S., Murniati, C., Saichaie, K., Jesse, M., Florman, J. C., & Ingram, B.F. (2014). Using qualitative research to assess teaching and learning in technology-infused TILE classrooms. *New Directions for Teaching and Learning*, *2014*(137), 17-26. doi: 10.1002/tl.20082.
- Walker, J. D., Cotner, S. H., Baepler, P. M., & Decker, M. D. (2008). A delicate balance: integrating active learning into a large lecture course. *CBE-Life Sciences Education*, *7*(4), 361-367.