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.

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Active Learning Classrooms Series
PART 2: Strategies for Effectively Managing in the Active Learning Classroom

Teaching in an active learning classroom can be an exciting yet challenging experience for instructors. One of the main differences between a traditional classroom and an active learning classroom is the design of the space. For example, in place of a podium at the front of the room and rows of desks bolted to the floor, an active learning classroom may have a podium in the middle of the classroom and tables surrounded by rolling chairs, among other configurations (Baepler et al., 2016). Additionally, because students may be unfamiliar with both these classrooms and the active learning activities they afford, it can be important to establish course policies that address issues like communication and personal technology use. Here are a few strategies for how to manage active learning classroom spaces and course policies:

Strategies	Explanation	Teaching Suggestion
Clearly define the goals of each class.	Starting class with a clearly defined objective(s) will shape the class and allow you to bring the discussion back to these goals if necessary.	Start each class by writing the day's objectives on the board, or include a slide with this information in a PowerPoint. Refer back to these objectives as you move between tasks during class.
Identify a central location(s) to stand.	Some ALCs have the instructor podium at the middle while others do not. This means that your back may be to some students at times, which may feel strange. Telling your students where you plan to present and that you may not be facing them at all times can mitigate any strangeness, and will help direct their attention and help to regain focus after small group work.	Consider circling around the podium so that you can see all students throughout the class. Also, consider using apps like Doceri for the iPad so that you can move more freely around the classroom while still changing slides and/or annotating diagrams and writing equations.
Circulate and facilitate.	ALCs are designed so instructors can check-in with teams during collaborative work. Instructors can also use guided instructional practices like step-by-step activities to facilitate learning when teams are problem-solving.	Some students may not be used to an active learning format that prioritizes group work. Therefore, it is important that instructors have an active presence in the classroom by circulating between groups and guiding learning when groups get stuck. If you have TAs, consider breaking the classroom up into zones so that all tables have access to an instructor.
Establish policies for communication.	Setting students expectations for communicating with you, and other instructional members (e.g., teaching assistants) is important. Students may expect immediacy, but need to understand there are demands on your time.	Consider outlining your policy for answering emails and/or communicating via Canvas or other forums, such as Piazza, in your syllabus. Emphasize to students that while you may not respond immediately, you will get back to them, and suggest that they contact you again if you do not respond within 2 days.
Establish policies for technology use.	With the increasing presence of student-owned internet-capable devices in the classroom, digital	Establish a policy that will address digital distractions like texting and social media use, and circulate around the room to help

	distractions are a real concern for any instructor in any classroom (Taneja, Fiore, & Fischer, 2015). This can be especially true in active learning classroom, where technology may play a larger part in in-class student activities.	keep students on task. If students are using technology in the classroom, clarify why you have implemented the policy, how the technology will advance your teaching/their learning, how it will be enforced, whether it complies with ADA regulations, and if an "all or nothing" approach is appropriate.

Managing discussions in the active learning classroom

Small and large group discussions can help students engage more actively with class content than a traditional lecture, and can to gains in understanding of course content. For example, Smith et al. (2009) found that students were more likely to provide correct answers to clicker quizzes when they engaged in peer discussion about those questions. However, managing classroom discussions can be challenging, especially for larger classrooms. Here are a few suggestions for how to facilitate small and large group discussions in active learning classrooms:

Strategies	Explanation	Teaching Suggestion
Establish ground rules for discussions.	These ground rules can help ensure that everyone gets a chance to participate, and that the discussion is respectful of all students' voices. Additionally, collaborating with students to determine and establish ground rules can be one way to ensure all students feel comfortable, respected, and included.	Possible ground rules include: listen respectfully, without interrupting; respect one another's view; criticize ideas, not individuals; avoid blame and speculation; avoid inflammatory language. When a 'hot moment' comes up, remind students of these guidelines.
Build structure into a discussion.	When discussions are too open-ended, the conversation can tend to steer off topic and content instruction can get lost. Building structure into a discussion so it's not just free form for students to say anything can help to ensure that the discussion is fruitful for both instructors and students.	Some examples of discussion structures include assigning specific questions for students to discuss in small groups and then turn in a summary of their discussion, or assigning students to investigate and present different sides of a debate or issue to the rest of the class.
Talk to students about how to make valid arguments and substantiating claims using evidence.	To promote civility and liveliness, have students link their claims to evidence. Model citing the literature/research in your own responses and allow them opportunities to practice doing so.	When possible, ask students to tie their responses to specific course readings, theories, and major concepts. For example, you could have students respond to discussion questions in small groups, and require that they cite course readings in their summaries.
Try to clarify the student's point.	Sometimes, students may intentionally or unintentionally say something offensive during a class discussion. It is important to address these moments in a way that avoids singling out the speaker, but ensures your students understand what is and is not appropriate.	Before reacting to what you interpret to be insulting or inappropriate, give the student a chance to explain by saying "what do you mean by X?" or "I heard you saying X, is that what you meant to say?" For additional suggestions on managing difficult moments in discussions, see our resource on "Charged Discussions."
Use discussion strategies that	It can be difficult to manage students' attention during discussions, especially given the	One strategy to encourage listening is to require the next speaker to paraphrase the ideas expressed by the previous

require students to listen carefully.	distractions presented by digital devices. Davidson (2017) suggests incorporating metacognitive activities that ask students to reflect on what they have learned through the discussion.	speaker. Davidson (2017) also suggests taking the last three minutes of each class to have students write and turn in an "exit ticket." This could be one question they still have about the day's topic, or one thing they learned in class. You can then use these tickets to begin a discussion in the next class.

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