



Strategies for Active Learning Classrooms

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Welcome! Purpose & Objectives

- ▶ New Active Learning Classrooms
- ▶ Practice and Reflect on Fundamentals before classes start

Objectives:

1. Simulate the Active Learning Classrooms and reflect on how this could impact our teaching practice.
2. Share our own successful strategies, and brainstorm ways to address challenges together
3. Experience and discuss a couple of active learning techniques:
 1. Deconstruct them to see what made them productive.
 2. Consider how you might tweak them for your classes



New Active Learning Classrooms – Spaces can constrain or provide opportunities for our teaching practice, so this is an opportunity to collectively think about the affordances the Active Learning Classrooms may have, and what that means for our teaching.

For the folks who are in this room today, this is not a workshop on new techniques, though I do have some tweaks that can make things more productive. Instead, it's an opportunity to come together and think about and refine the basics. Even pro athletes do drills outside of games. The idea is that you want to get so good at something you free up your mind during the game, or the actual class, for more complex things. You practice so that you can see, hmm, I'm shooting too high or too far left, and then adjust, which can be difficult to reflect on during an actual class – but you actually need to do something (throw the ball) in order to have this reflection. So, I'm not offering a new way to throw a basketball, though I have tips. (about teaching, not basketball). But just sitting in a chair and thinking by ourselves is not productive either, or at least not as productive as talking with colleagues and sharing a common experience, like a common teaching moment, to talk about. The setting we are imagining today are the active learning classrooms, but if you are not scheduled to teach in one, imagine how you might adapt various techniques.

Agenda

1. Deborah Gelch – What Technology Will Be Available in the Active Learning Classrooms?
2. Mike Bosco – What will the layout and furniture be like?
3. Introductions. Who's in the room?
4. Video: Reminder of Active Learning Spaces
5. Explanation of a few Active Learning Techniques, Research-supported "tweaks"
 - Analyze Short Videos of Instructors Using Techniques
 - Experience the Technique as Learner
 - Discuss the Technique
6. Share strategies
7. Lunch (12 noon)

Technology and Furniture

Introductions: Community Building

- ▶ For powerful collaborative learning, students need to feel a sense of community. This begins with names.
- ▶ My beginning of the semester name games:
 - ▶ Introduce your partner [Find-someone-who BINGO](#) Name Quiz
 - ▶ [Toss-a-Name](#) [Alliteration Memory – Name and Adjective](#)
- ▶ **Ask your partner:**
 - ▶ Name
 - ▶ Department
 - ▶ Something about their winter break
 - ▶ One active learning strategy that has worked well for them
 - ▶ Try not to take notes. Report out to the whole group.

Also, during each small group activity, students should go around and say their name and answer an intro question. “What super power would you choose?” or “What was something fun that you did over break?” Or, “what’s worrying you about registration?” This can sometimes cut down on off topic chatter, because they have gotten that necessary part of social conversation out of the way. During whole class discussion, I also always use names. “What do you think about Mary’s idea?”

A word about (Think) Pair Share. This is to give students an opportunity to think before sharing. For extra accountability, you can have them report on their partner’s idea – this can be less risky for them as well. I use think pair share when I get crickets during a whole class discussion but I don’t want to spend too much time on a question.

Let's Imagine the Space

- ▶ Notice the "break out areas," which we have tried to simulate here.
- ▶ Start at 3:13 – 3:44, speed slow
- ▶ <https://www.youtube.com/watch?v=bj9KLu2vqB4&feature=youtu.be>

What building features might be relevant to your practice? How?

Our simulation: multiple large computer displays, lots of poster paper for white boards.

Active Learning

- ▶ Broad: from simply using “turn and talk” or clickers in a lecture to ambitious team-based learning
- ▶ Today:
 - ▶ Best Practices for Small Group Work
 - ▶ Jigsaw (& my modifications for Curry)
 - ▶ Gallery Walk (& my modifications for Curry)
 - ▶ Whole Class Discussion

Small Group Work – My Curry Experience

- ▶ Physically Make the Groups.
 - ▶ Do not start until the desks are flush, people are facing each other.
 - ▶ No one is on the fringe.
 - ▶ 3-6 is a nice size.
 - ▶ Push extra desks out off the way so you can circulate
 - ▶ You may have to physically move the furniture yourself and direct individual students by exactly where to put a desk.
- ▶ You set the groups.
 - ▶ Students can still work with their friends. If they sit near their friends, **name** 4 people sitting close to one another and tell them they are a group.
 - ▶ If you don't, people will be on the fringe of groups, not fully participating, especially if they don't have friends in the class.
- ▶ Clear outcome (singular)
- ▶ Individual Accountability

Clear outcome (singular). There should be only one task at a time. Instead of a packet of problems, as I used to do, I just give them one juicy problem. This may differ from others' experience. The outcome is clear. "Solve the problem." "Answer the question on the board." "You will have to teach your peers." "Complete this teaching plan worksheet."

Individual accountability. Usually, I have each group split up and then they have to teach their peers. Or, I might call on one person to present, so they all have to be prepared. If it is someone who I think will still not prepare well. I will say, "I'm going to call on one of you randomly, Bella. Hint-hint," so that the others prepare Bella. I don't do a grade attached to this, but I suppose you could.

Small Group Work – Research Supported Best Practices that Work at Curry

- ▶ Norms – groups should establish how they will work together.
 - ▶ When to move on to another problem
 - ▶ Think time first?
 - ▶ Round robin sharing?
- ▶ Groupworthy task, so all minds are needed*
 - ▶ Multiple solutions, methods, perspectives
 - ▶ Low threshold / high ceiling
- ▶ Clear orientation to task – both content and directions**
- ▶ Check for understanding of directions (2 repeat backs)
- ▶ Circulate to facilitate, assess, get ideas for whole class discussion***
- ▶ Assigning competence*
- ▶ Assign and rotate roles* (facilitator, reporter, recorder...)

*Boaler, **Jackson, ***Stein

Assigning competence – this has to be authentic. It's about directing a group to a student's idea. This student typically holds low academic status (isn't thought to be smart) in the class. They have an idea that you want the group to pursue. You use the student's name, "I want to you talk about Henry's idea." You should only do this if it is authentic. For instance, saying, "Good job on #2, Henry. Did you guys see Henry did #2?" if #2 is something that they all should be able to do, can actually backfire.

Video of facilitating group work

▶ $\frac{1}{3}$ of $\frac{3}{5}$ of a whole is $\frac{1}{5}$ or $\frac{3}{15}$ of a whole

▶ This small group was not interacting with each other before the instructor came over. What did the instructor do?

▶ Video 1:
https://elementarymathproject.com/emp_lesson/multiplication-of-fractions-i/

Rosalind draws:



Mary and Kayla draw:



Simulate Use of Breakout Spaces in Active Learning Classrooms

► In your groups, look at the assigned graph on the website.

1. Figure out what is going on – these are strange graphs.
2. Scroll down to press the play button. 
3. Write 3 sentences about something you can learn or surmise from the graph. Your sentences should be of the form: _____ because, as you can see here _____

That is, each sentence should include a connection to some part of the graph. **Everyone in your group should be able to see each sentence in the graph.**

3. Write 1 question you have.

Group #	Graph
1	Age at first marriage, women https://bit.ly/2QVnjtk
2	Alcohol consumption https://bit.ly/2APIN5l
3	Cell phones https://bit.ly/2DeKH1m
4	Contraception use https://bit.ly/2TU3TqB

<https://www.gapminder.org/data/>

If I was teaching a content course, I would probably decode the graph with the students a bit – but for professors, I need to keep it cognitively demanding enough for you to have something to discuss.

Get 2 people to repeat the directions. “Jess, what are you going to do in your group?”

Gallery Walk and Jigsaws

- ▶ **Jigsaw:** Each group becomes an expert in something different. Each student in the group will then have to teach the other students in their mixed topic group. Mixed topic groups are made up of 1 student from each expert group.
 - ▶ I always make sure students are also planning an assessment activity for members of their mixed topic group.
 - ▶ **Gallery Walk:** In small groups, students have created posters or some other visual presenting their thinking. Students then visit other posters. You can have visitors leave notes.
 - ▶ I will often have what I call "curated gallery walk." Half of the group travels and the other half stays to explain their poster. Then they switch.
- 2 layers of accountability

Gallery Walk/Jigsaw Hybrid

1. Make sure everyone in your group can explain your “findings” and their connection to the graph.
2. Plan an assessment activity.
 - ▶ For example, plan to have visitors repeat your findings back to you and show on the graph the evidence for the findings
3. Decide who will stay first to explain and who will travel.

Reflect & Apply: Small Group Work, Gallery Walk, Jigsaw

- ▶ In your groups, discuss one or more of the following questions:
 1. What made the strategies productive?
 2. How could you use the strategies in your classes?
 3. How could you use the break out spaces in your classes?

Whole Class Discussion

- ▶ Flexible furniture allows you to easily move from small group to whole class formats
- ▶ Best practices for rich discussion:
 - ▶ Students have had time to think and put their thoughts into words first
Think-pair-share Stop & Jot/ Minute Paper Small Group Work
 - ▶ Use names and encourage students to use names to situate students as people with good ideas
 - ▶ Hand raising ensures that more students participate – not just the fast speakers.
 - ▶ To broaden and deepen participation, use “talk moves” (Chapin)

Talk Moves

- ▶ Wait Time
 - ▶ Why? Time feels differently when you are learning new things. What feels like forever to us goes quickly for students
 - ▶ To make it feel less awkward, try:
 - ▶ "I'm waiting for 7 hands."
 - ▶ "I'm waiting for a hand from each group."
 - ▶ Try it: Ask a question. Stare at your group for 20 seconds.
- ▶ Repeat/Rephrase/Transcribe on the Board
 - ▶ Why? Spoken words disappear.
 - ▶ Check to see others are listening/can hear
 - ▶ Orient students to others' thinking
 - ▶ Hearing their own words spoken back helps students clarify their thinking and become more precise.
 - ▶ Try it:
 - ▶ Ask a "student" in your group to share one graph finding.
 - ▶ Ask another student to rephrase or repeat in their own words.

A note about wait time: My husband and I went to UMass, and you could take classes at the other 5 colleges. He took a class at Mount Holyoke and he told me, "Those girls don't talk. I'm the only one raising my hand. I feel bad for the professor." I told him that it can be a form of politeness for women to wait a bit so that if someone else really wants to talk, they get called on. It's also not uncommon for girls to wait because they don't want to be seen as attention hogs. My husband tried not raising his hand. He waited until he was beyond his comfort zone. And his female classmates started to raise their hands. He was astounded. "What must they think of me?" He said later. I share this story because it's important to recognize that just because you have 3, 4, or 5 hands does not mean you shouldn't wait a little longer. In fact, you might only be hearing from a subset of the population – maybe it's boys, or maybe it's high achievers, or maybe it's students from a particular racial or ethnic background. You can still wait – and let them know you're waiting if it helps.

Talk Moves

- ▶ Say More/ Add On
 - ▶ Why? You don't really know what a student is saying
 - ▶ To get a conversation deeper.
- ▶ Agree/Disagree or Thumbs Up/Down/Sideways
 - ▶ Insist everyone show their thumbs (Broaden Participation)
 - ▶ Follow up with "Why?"

A question that occurred in the session: Do you get push back from students with all of this repeating?

Mostly, no. I make it very clear why I am asking them to repeat – spoken words disappear, people get more precise and rethinking themselves when they hear their words in others' mouths, I need to make sure people can hear and are paying attention to each other's thinking, this is a practice that supports second language learners and students with ADD and anyone else who just happened to space out for a second. In regards to repeating directions, I'm pretty honest – I find that people work better when I use this technique because they aren't confused about what to do. As a brand new teacher, this was my first point of feedback, clarity on directions, so this helps me to make sure that my directions are clear (there will be times when they aren't) and that I haven't missed anything, and that there is no confusion.

There was one class that gave me push back at Curry, my first semester, a course of mostly freshmen. I kept making them repeat and rephrase because they were not attending to each other's thinking. They kept changing the idea and reporting out their own idea or saying something that didn't make sense at all. In retrospect, I was using repeating when I should have either made them go back into small groups to discuss a claim that was posted on the board, or else did an impromptu jigsaw, new groups with 1 member from each group. They needed more thinking time, with 1 very clear

outcome: What does this claim mean? Given an example. Is it true? If not, give a counter example. If true, explain how you know. I have found it helpful to have them make tables with these 4 directions, 1 per line, so that they can take notes. They do need help taking notes.

Kinder Cold Calls

Broaden Participation, Assessment, Ensure Students Listen

- ▶ Popsiclesticks
- ▶ Soft, open-ended questions, "Kennedy, what do you think about Julia's idea?"
 - ▶ Make it clear that "I didn't really understand" is a valid and useful response
- ▶ Call on a group instead of an individual, but name the individual you would like to answer. "Katie's group, what do you think about Julia's idea?"
 - ▶ Groupmates can then rescue her
- ▶ Warm call: prep the speaker before hand so they have a chance to practice
 - ▶ Via email if you notice something interesting in their homework
 - ▶ While in small groups if you like something one of their groupmates said
- ▶ Rotate the reporter role

Video of Whole Class Discussion

- ▶ Comparing $\frac{13}{20}$ and $\frac{14}{19}$ by thinking about the **number** of pieces and the **size** of the pieces
- ▶ What does the instructor do:
 - ▶ To get students to participate?
 - ▶ To get students to comment on each other's thinking instead of just sharing out their own thinking?
 - ▶ https://elementarymathproject.com/emp_lesson/fraction-comparisons/

Whole Class Discussion Talk Moves Bingo

- ▶ Check off the box each time I use a talk move or other strategy
- ▶ Whole Class Discussion: The challenges to active learning that we identified in the RSVP survey are listed below. What are some strategies, from today's session or from your own experience, that can help address these challenges?

Challenge	Strategy
Students don't engage in the activity	
Students are passive	
Uneven participation	
Students don't come to class prepared	
Students don't know what it means to give quality feedback / justify their thinking / work in a team	
Cell phones	

Challenge	Strategy
Students don't engage in the activity	<ol style="list-style-type: none"> 1. If a collaborative activity, they have to feel like they are among friends. Start small group work with an intro question each day. Name and favorite super power. 2. They may not actually understand what they are supposed to do. Check for understanding of direction with 2 repeat backs. 3. The amount of what they are supposed to do may be overwhelming to them. Try to have just 1 very clear outcome.
Students are passive	<ol style="list-style-type: none"> 1. See #1 above. The social does matter. 2. Wait time. Some really do need more time to think. 3. Turn and talk. Some need time to process. 4. Cold Call. See Kinder Cold Calls slide – Soft questions, Warming Calling
Uneven participation	<ol style="list-style-type: none"> 1. Use hands. Wait time. 2. Warm Calls. Assigning competence. Show that you are interested in their ideas.
Students don't come to class prepared	<ol style="list-style-type: none"> 1. Social accountability and reminders. My students weren't doing the reading, so during the previous class before it was assigned, I had each person in their group select a different reading, all on the same topic. In class and via Blackboard announcement, I reminded them – don't let your group down. They are counting on you. Bring highlighted papers. They all had reading comprehension questions to answer for HW, so they were helping their peers by summarizing the reading, and in groups they had to identify the main theme. 2. Emily Nowicki does reading quizzes online that are due before class to make sure they do the reading. If you use multiple choice, you can have Blackboard grade them for you. 3. Take time out of class to do the preparation. I don't do this, but some say it works.
Students don't know what it means to give quality feedback / justify their thinking / work in a team	<p>Modeling? And then have them evaluate the feedback itself? Be explicit when something works well, and name it?</p>
Cell phones	<p>I just tell them to put them away, over and over again, discretely, but I went to a conference where one professor said that she used them as clickers for one question in the beginning of class, and the fact that they had scratched that itch of looking at their phone seemed to mean that they weren't tempted throughout the rest of class. Remember, too, that looking at a phone can be a kind of defensive mechanism. If students feel like they are not included in a group, this is a way for them to save face or feel less anxious. Find ways to include them in the group. Maybe directly ask them a question as you visit small groups.</p>

We did not get a chance to talk about this, but here are some of my thoughts. Let's continue the discussion.

Of course, it's hard to get perfect, and these are not silver bullets. We're all on a quest to just be better.

Closing

- ▶ Thank you!!
- ▶ In groups:
 - ▶ What's 1 thing, from this session or otherwise, you want to try this semester?
 - ▶ What's 1 thing that has worked well in your classes?
- ▶ On paper, your lunch ticket:
 - ▶ Name
 - ▶ What's 1 takeaway you have from today?
 - ▶ What's 1 thing you need to think more on?