In the Classroom 129
5 Essentials of Active Learning Classroom Design

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Stan Skrabut: Well, thanks ever so much for taking time to listen to this podcast. It certainly means a lot. I know you could be doing other things. Perhaps you are, and you're still hanging out with me. I really do appreciate it. A long time ago, a concept was put in front of me regarding learning that I have taken to heart. Basically, the closer we can get to reality, the stronger the learning will be. The further away, the weaker, the learning will take place.

If you want to train somebody, say in the workforce, doing it where they do their work will have a stronger learning than if you do it, say, in a classroom. Classrooms are probably the furthest thing from reality for almost any discipline. We need to alter our classrooms so they more closely resemble the environment our students will face in the workforce. A lot of our workforce now is dealing with information, information management, info knowledge, knowledge-based type activity, doing things on computers, doing things in groups, things like that, but as far as the classroom setting, some disciplines do this really well.

This occurs primarily in the sciences. They have labs, they have simulators, they have physics simulators, you have if you're dealing with electricity, electronic simulators. Computer labs, if you're doing networking or building computers, they have those. Nursing. I've seen some wonderful environments for nursing. It's like walking into a hospital and seeing beds and mannequins and all kinds of equipment. In the place that I'm working, we have dance studios, we have radio broadcasting studios where students have an opportunity to actually get their hands dirty and be active with their learning, but we also have classrooms and these do not mimic the real world at all.

How do I know? Ask the campus leadership to move their meetings from a conference room to a classroom. If you do that, there would be a revolt. If you are familiar with a typical conference room, individuals are sitting across from each other so they can have discussions, so they can work through ideas, but in a classroom, everybody is looking at the person in front of them. It's typically rank and file. There's been a push towards active learning which is dictated by more cooperative learning strategies, and yet our classrooms are predominantly set up for lecture.

They are set up for the instructor to be in the front and to be primarily the one talking. If we want to improve instruction, we need to change our classroom. Students are going to do what the classroom environment dictates, and so will the instructor. This week, we're going to take a little exploration on active learning classroom design, and what we should be striving for. First of all, what are we hoping to achieve?

Ideally, we're trying to create a classroom that is student-centered, and it has a high level of communication, collaboration, and critical thinking going on.

A lot of creativity, and rank and file classrooms do not achieve this goal. Research has also shown that the instructor behavior changes based on the environment. If there is a front of the classroom, that is where the instructor will go. Once they get there, all eyes are on the instructor. Guess what they do. They lecture. Now lecture has a place, but it is only one tool in an arsenal of learning strategies. Nice thing about active learning classrooms, they can help maximize the benefits of blended and flipped classroom teaching strategies.

That's what we want to do, is we want to maximize as much learning as we possibly can do so students really grasp the content, and lectures can only take you so far. Pretty much for college-level courses, we should be getting past lecture to the point where they're working with the content. There's always a need for foundational stuff. I totally get that, but we need to get them with their hands dirty and working with the concepts, and filling in the gaps when we need to. A few colleges, universities are working with active learning classrooms.

Not all their rooms are changed, but if you are starting to go that way, why haven't classrooms changed quicker? I've been taking a look at this problem for probably three decades. This is not just isolated to higher education. On my time in the Air Force, we had classrooms. I wish I had known more of what I know now, and I could have helped move things along just a little faster. Some of the primary reasons why the classrooms haven't changed is one, individuals who make the buying decisions do not understand the science behind the learning and tend to go with the status quo.

We have facility managers and they- like, "Well, it works. We've had classrooms like this. This is our current model and it's good enough. We're not going to change it." Two, the leadership has not determined that this is a priority or worth the investment. Again, they went to school, they sat in similar classrooms, and it was good enough for them, so it should be good enough for the current students. Number three, cost is always a factor. The changes that need to be made may cost more. They don't have to, though. We're going to talk a little bit about that.

With shrinking dollars, the cheaper substandard option will typically take precedence. If you were to go out and think about designing an active learning classroom, there's a lot of things to consider, but I've narrowed them down to these what I consider five essentials. They don't necessarily have to be expensive- some of them are, some of them are. If you really want to take it to that next level, it could be expensive, but there's ways that you can do it that are not expensive. Here is some of the things to consider. Furniture on wheels.

I think this is absolutely one of the things that is a must, that having chairs with wheels. At a minimum, that should be there. It's important to have the right furniture. It sets the standard. You should be able to reconfigure your classroom at a moment's notice. Students should be able to spin their chairs around, have a new partner, or be able to move their chair, cluster with another group of students to form a team or

a new group. You may want to also consider this with tables, although I have another table solution coming up next, but if you are going to have furniture that's movable and flexible, let's put wheels on everything.

What they found out is if your chairs don't have wheels on them, then students are very reluctant to move the chairs because they're under the assumption, the chairs are not supposed to move. We really shouldn't move. When you think about these chairs and also potentially having tables, you may want to consider- and this starts to getting into the little where it's more expensive is having chairs with desks that are modular, that will partner up with other desks to create a work surface. There are companies that design this type of furniture, really good furniture.

I've seen it in a number of different universities. We've had an opportunity to go explore different institutions, really nice stuff, but you don't necessarily need that. I would say at a minimum, you should have chairs with wheels on them so that you can find a new partner in a second. Another option or another what I would consider as essential is having large workspaces. Nine-person round tables are very useful work surfaces in a classroom. With nine-person round tables, you can actually get more students in a classroom than with a rank and file table system.

When you set up activities, you have to be creative. You need to think about activities where you can put students in teams of three so they can work with those that are just really close to them, as well as activities where the whole table is involved. Nine-person rounds are a really nice solution for a classroom, as long as you also have movable chairs. Another essential is remove the front of the room. When you start to have students work in groups, this means that some of the students will have their backs to the so-called front of the room.

It's important to get rid of the front of the room and the instructor will then need to roam around the room and become a coach or a guide, rather than be up front where the focus is on the instructor. When you create this learning space, there needs to be ample room that the instructor can have easy access to all the students throughout the learning space. That is certainly a consideration. Even if you had more modular design and students were moving things, it'd be important to control for that so the instructor can get around easily.

You don't want to pack it too tight. Creativity and interaction is essential. The spaces should have ample place where students can document their ideas and their conversation. This can be very simple. It could be with portable whiteboards. You can go to a hardware store, get some writing material, like a whiteboard material, and just chop it up into small boards that you can have laying around everywhere where students can write on those boards, or you can have whiteboards surrounding the room where students will then cluster to the whiteboard and work out solutions to problems that you're putting in front of them.

You can also just make every single surface in the classroom writeable. That way, wherever they are, they have an opportunity to write. Glass surfaces work very nicely for this. Portable whiteboards, but you can also get special desktops or paint for desktops and walls, that can make it writeable. A really cheap solution is just go to

the hardware store, cut up 30 of these little boards, maybe 18 by 12 inches where students can work out solutions, and everybody gets a whiteboard.

That is for a math or a science course or even a writing course. That could be a useful strategy. I think technology is also essential in one of these active learning classrooms, that at a minimum, there should be Wi-Fi throughout the room, that students should be able to connect their devices to the Wi-Fi and be able to do research on the fly. Now naturally, they're also going to want power, I haven't seen a student or a device get through the day without power. Having charging stations, also outlets that are ample, ideally in the floor, so students can get to them, or a solution that can be attached to the table.

If that's the case, then the tables probably are not that mobile, but something to consider. Also, if you're thinking about technology, because there is no front to the room, you would want projection on all sides of the room or as many sides as possible, so students do not have to turn around in order to see what is being projected. That they can just look at what's in their view and be able to see what the instructor or somebody else is projecting.

At the very next level or a higher level, that maybe you have technologies available for every group to cluster around where they can create digital artifacts and be able to show their team at the table that they're working on. Ideally, you would also want to have students and instructors alike be able to project what's on their screen, regardless of the device that they have. To control presentations, you certainly want a slide changer remote control, so you can change the slides.

Then finally, in terms of technology, as we have learned dealing with COVID, the room needs to have a conferencing solution so that others can be invited into the classroom. With a good conferencing solution, you certainly have an audio solution. That's part of it too. Instructors. Well, that's the essentials. One, mobile furnitures, ample workspace, remove the front of the workroom, have devices that are available to allow for creativity and interaction. They don't have to be expensive, it could be just the portable whiteboard.

Then ample technology where students at a minimum can connect to the internet, but ideally can share what they're working on. When you develop these type of rooms, what's also critical is the instructors must change how they teach. When an instructor teaches out of an active learning classroom, they need to shift from a lecture dominant form of instruction to one that's collaborative and communicative. Different active learning strategies that you may want to consider are like the jigsaw.

I think pair and share is always useful in the classroom. Certainly group work, concept maps, case-based learning, team-based learning, project-based learning. All kinds of different strategies that you can use, but you have to reduce the amount of lecture that's going on in order for this type of room to work at its fullest. As I mentioned, this does not have to be expensive. Switching out the rank and file tables for rounds, that's a pretty cheap solution. Getting wheels on the chairs, maybe a little more money, especially if you didn't have them before, but something that has a reasonable cost.

Then going with portable whiteboards. That will amp up the capabilities for an active learning classroom almost immediately. You can also spend a lot of money and weave in a lot of technology. However, if the instruction does not match the goal of the active learning, it will be a poor experience for everyone. Creating a room, it's important to also change the teaching and learning strategies that are in the room in order to make it work, but it's worth it. Getting to this idea of reality, you certainly want to get closer to this idea of how people work and perform their jobs.

There's always the battle, we're not there to train students how to be workers. Well, I think we are in a way, or employers certainly want that capability. There's a lot of soft skills that go into that, and being able to work as teams and work in a collaborative environment and be able to learn to work with the technology anywhere, these are all certainly important skills to pick up.

Also for lifelong learning. it is not always an instructor in the front of the classroom that helps them learn. Learning, as I've mentioned many, many times, is about dialogue. It's about working with others and combining knowledge in order to get to a higher level. Those are my thoughts on active learning classroom design. Pretty quick, but before I let you go, here's a quick plug for my book.