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VIEWPOINT

Helpful Tips for New Users of Active Learning

Molly Howard, PharmD,[a,b] Adam M. Persky, PhD[b]

[a] University of North Carolina Health Care, Chapel Hill, North Carolina
[b] University of North Carolina at Chapel Hill Eshelman School of Pharmacy

Health care reform requires educational reform. As pharmacists expand their role in health care, we must equip student pharmacists with tools to help them be integral members of the patient care team. Educational reform emphasizes applying knowledge and skills (eg, thinking, communication, flexibility) in the classroom. To this end, the focus of pharmacy education is shifting towards maximizing the quality of student-instructor contact time. Instructors may read articles or books or attend conferences to learn how to develop these skills in students. However, these resources only partially tell the story and miss the little things necessary for success.

Broadening instructional techniques and moving towards highly structured active-learning courses can cause anxiety for instructors and students. These types of courses emphasize the active engagement in class through structured work, guided by the instructor. They build on the premise that students benefit from learning by doing and that class time helps students learn to work with the material. Class time, therefore, builds around highly structured activities, in which students solve problems, interpret information, or otherwise engage in real-life practices. To assist with this, we have created the following tips to help before embarking on active learning in the classroom.

The first time will be imperfect. Things will go wrong. Start early in developing activities. Flesh out the plan by seeking the expertise of others.[1] We use "expertise" because our experiences, gut instincts, or what we "hear" may misalign with the evidence. Using expertise with evidence increases the probability of success and helps instructors understand the "why." After the first class, write down thoughts about the session: what went well, and what could be improved. Develop a plan for improvement. Try again. Do not give up after one try.

Start low, go slow. It is risky implementing many activities in a given class session. Start with simple activities and build complexity as comfort increases. In a 50-minute session with active learning, you could include 2 activities, maybe 3[2] (eg, lecture-activity-lecture-activity-summary). Write a lesson plan to help budget time. Do not go from a 100% lecture course to a "flipped" course in one semester, bad things can happen—instructor frustration, student frustration, poor performance outcomes, to name a few.

Activities always go longer than expected. Anticipating time requirements for a learning activity is difficult, especially with the variable of student participation. In a team-based learning environment, 3 cases can be discussed in 1.5 hours; alternatively, in a 50-minute case discussion, one "realistic" case (ie, case presentation, highlighting key points, asking key questions) is feasible.

It is OK to lecture. There is a "time for telling" when information is missing. Lecture, but keep it short and focused. When pressed for time, you may default to lecture mode; be mindful, be intentional. It is more important that students learn the material than for the instructor to "cover" it.

Students may resist active participation or may not like it. Active learning requires more from students in the classroom and not all students may favor it.[2,3] Engagement requires divergence from the passive role of listening, taking notes, and occasionally speaking. This also requires more out-of-class work to prepare for participation. You can help by explaining the use of active learning and creating a positive classroom environment. Determining what students like and what is best requires balance. You will never make 100% of the students happy, but you can include them in process. Ask a small group of students to meet with you regularly during the semester to offer feedback so you can make periodic adjustments.[2]

Students don't need to know what you call something. If you start calling activities by their names, it could be detrimental to others, (eg, "Professor Smith did a jigsaw, it didn't work, so this isn't going to work in your class."). Honestly, students don't care that you are using a "jigsaw." Lay out expectations and go. This is especially true for the first day of class or if you are instructing in a team-taught course and doing something different than your colleagues. If you say you want active engagement, do it the very first day.

The more discussion you have in class, the more you need a comprehensive summary at the end.

Bring back the learning objectives. Tell students what they did to accomplish these objectives and what they are expected to know moving forward. This can help to prevent the dread-induced "Will this be on the test" type questions.

Highly structured active-learning courses (eg, the "flipped" class) start with what happens in class, not with preclass material. The key question is what you are using class time for. The next step is answering what material will get students a basic understanding of the concepts, or what will start getting them to ask questions. A rule of thumb is to assign less than one hour of preclass time preparing for every one hour in class. This is study time, not just reading time or video watching, and it does not include postclass practice or study. Twenty minutes of reading (3000-4000 words) is about 60 minutes of study (so, a 1 to 3 ratio read-to-study time).[4] If you think students need more time to prepare, maybe you need less class time. This was the original model for blended or hybrid learning: to replace low quality in-class time (talking at students) with preclass work and use the remaining class time for high quality/ highly structured active learning.

Correct first, then incorrect. Start with the correct way to solve a problem. For example, sometimes we use TV or movies to show something wrong and then use corrective feedback. Unfortunately, students are probably going to remember the incorrect information first and not the corrective feedback.[5]

Start using active learning for topics with which you are most comfortable. Active learning requires some thinking on your feet and you will be asked new questions almost every time. When you are familiar with the material, designing and managing the class sessions is easier.

Every course can benefit from highly structured active learning. The success will come with planning, reflection, a little patience, and by knowing the evidence for "why" you are making the course changes.

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