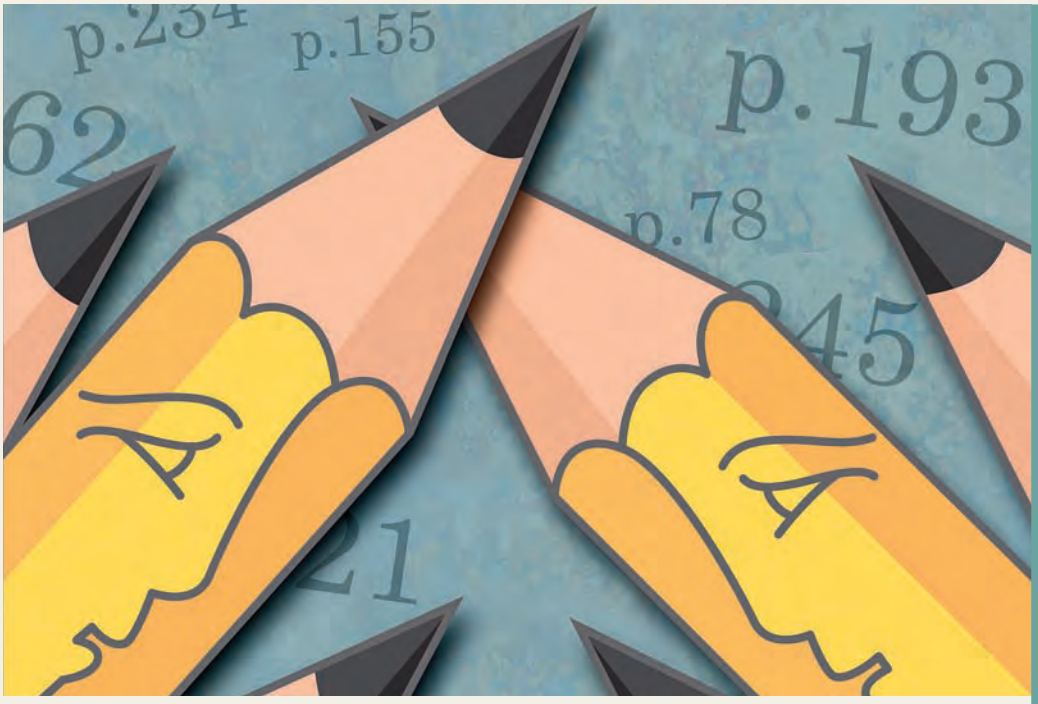

Meet Dakin Burdick

Dakin Burdick is the Director of the Center for Teaching Excellence and Assistant Professor of History at Endicott College, Massachusetts. He currently serves on the Board of Directors of the Professional and Organizational Development Network in Higher Education (POD), and has been their official historian for the last ten years. He has given more than 80 presentations on teaching and learning, and is the proud father of two wonderful kids who play French Horn and violin/fiddle respectively. All live in a 340-year-old house, whose neighbor is on permanent display in the National Museum of American History. He can be found at dakinburdick @yahoo.com.

Using Small Group Discussion Protocols

Students Who Talk in Class, Think in Class

LARGE GROUP DISCUSSION IS OVER-USED

Large group discussion — where an instructor speaks with all the students at one time — is one of the most over-used and least effective teaching methods. Only a few students can speak in a large group discussion; the rest are often bored or distracted, not learning. The prepared students and the assertive students (even if they aren't prepared) will talk, while the others listen, take notes and (if you give homework *after* the class), strategize about what material they *really* have to cover. When you tell students to write something down because it is important, you emphasize memorization rather than thought, and thereby discourage long-term learning. To make students more responsible for their learning, try using small group discussions.

"ONLY A FEW STUDENTS CAN **SPEAK IN A LARGE GROUPDISC USSION;** THE REST ARE OFTEN BORED OR DISTRACTED, NOT LEARNING."

Split the students into small groups of four to six people (two to three for a lecture hall). Give them a problem or a question to resolve, and give them about 10 minutes to work on it. In a classroom of 40 people, you

TALES FROM REAL LIFE > KEEPING STUDENTS THINKING

The class that convinced me to use small group discussion protocols was an U.S. history survey at Indiana University Purdue University at Indianapolis (IUPUI) at Columbus, now a regional campus in its own right. It was an evening class, three hours long, that met once a week. Some of the students travelled for more than an hour to reach the class after a full day of work. My teaching style had previously been to lecture, occasionally successfully, and I knew there was no way we would get through a three-hour class that way. Luckily, I worked at Indiana University's Teaching Resource Center (TRC) and had access to more than 20 years of articles and books on teaching. Drawing upon Frederick (1986), Bergquist & Phillips (1975), and the advice of the TRC Director, Joan Middendorf, I chose several small group discussion methods, including jigsaw discussions and role playing. During the semester, I invented the evidence-based debate protocol included here. I also incorporated Just-in-Time Teaching (JiTT, developed at IUPUI). The combination worked. The students remained active throughout the class, and were often surprised to discover that class was over. I always had at least one discussion protocol that we didn't get to. The students all talked, knew each other's names, trusted each other, and learned a lot. I've used small group work ever since, and it has always worked, even with classes that were initially apathetic and unresponsive.

Illustration: Steve McCracken

will have about eight people talking at any one time. That's eight times the level of discussion! They will gain confidence and discover new viewpoints. At about 10 minutes, the buzz will die down (as they finish the problem) and then get even louder (as they start talking about their social lives). At that point, bring them together again, even if not all are finished. The group work has done its work by building energy and giving them a chance to think. Now have groups report out. Make them commit to a particular stance or understanding, so you can see their thinking and have a chance to clear up misconceptions or expand upon their understanding. Angelo & Cross (1993) is wonderful for this, as it has 50 different ways to get students to report out and even includes disciplinary examples.

VARY THE DISCUSSION METHOD

When instructors use small group work, they often use only the "round robin" protocol. Students get in a circle and talk. Since the students picked their own groups, there usually is a group full of "A" students and a group at the other end. And because they picked their friends, conversation will turn to their social life about five minutes faster than it would have with random groupings. If that's all you do, expect your students to get bored. Instead, pick about four or five different discussion protocols to use in a particular semester. Here are four examples:

CONCEPT TEST

The "concept test" or "ConcepTest," pioneered by Mazur (1997), can be used even in a lecture hall to ensure that students understand one concept before moving on to the next. First, check student understanding with a multiple-choice question. If most get it right, move on. If they are divided, have them turn to a neighbor and convince each other that they have the right answer. Then poll them again. Usually they will be more correct and you can move on. Occasionally, as with any small group work, they come back with the incorrect answer, and then you should step in to clear up misconceptions and give more examples.

"USING A COMBINATION OF LECTURE, SMALL GROUP WORK, AND LARGE GROUP DISCUSSION GIVES THE **BEST CHANCE OF MAKING LONG-TERM CHANGES** IN STUDENT BEHAVIOR."

JIGSAW

In a "jigsaw" protocol, each student studies a different aspect of the topic. In class, each student informs his group about the studied aspect, and together they build a more complete understanding. Each student adds a piece to the completed puzzle.

TALKING-STICK

In the "talking-stick" protocol, only one person can speak at a time. A token (usually a pen in my class) is passed and each person speaks for a minute regarding the topic under discussion. This protocol is great for ensuring that all voices are heard, not just the assertive folks. It also puts the unprepared students on the spot, and embarrasses them in front of their peers. That can encourage them to prepare more fully next time, but embarassment also can be avoided by just letting them know you will be using this protocol and they should be ready to participate. Interestingly, this protocol proved very helpful for a student with Tourrette syndrome, who could not stop himself from blurting out—except when using the talking stick. If the linear nature of discussion that results from the talking-stick does not work for your content, try giving students three tokens each (playing cards, pennies, etc.) for the "expense account" protocol. Each time they speak, students put one of their chips in the middle of the table, and no one can retrieve them until *everyone* has used all their chips.

EVIDENCE-BASED DEBATE

This protocol adds a slight twist to the typical debate. The class is divided into an equal number of small groups. Those groups then count off, with the odd-numbered groups on the side arguing for the motion and the even-numbered groups arguing against the motion. The instructor tells the rules of the debate, which are:

- Each group gets to make one statement, and must support that statement with a page number in the text where the supporting evidence can be found.

BEST PRACTICES > PUTTING THE PUZZLE TOGETHER

Besides the regular "jigsaw," there's also a "double jigsaw," which can cover even more content. It takes time to prepare, so I generally use it just once or twice a semester. In the first lesson of my U.S. history survey, which covers pre-Columbian history from the dawn of time to 1492, I sometimes use it to give students a deeper understanding of a very broad topic. I divide students into small groups and then hand out a different two to three-page reading to each student in that group. In one group, the students each read about a different archaeological find: Clovis Point, Spirit Cave Man, Kennewick Man, Cactus Hill, and Monte Verde. After reading the assigments, they teach the others in their group what they learned. Other groups receive readings based around pre-Columbian agriculture, wildlife, architecture, languages, and other topics. After the initial jigsaw, I tell the students that they are now the classroom authorities on their particular topic. I have them count off and create new groups composed of one "authority" from each field. These second jigsaw groups then teach each other what they have learned. In an online setting, this can be done with longer readings and a single huge jigsaw on the discussion forum. Either way, the students will have a better appreciation for the depth of the subject.

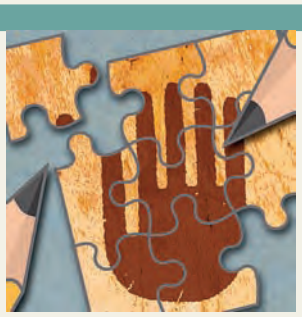

Illustration: Steve McCracken

- Groups will take their turns in numeric order (i.e. first #1, then #2, etc.) so that the "pro" and "con" teams take turns adding to the argument.
- In addition to their single statement, each group can also try to reject the opposing team's statements. They do this by checking the other team's evidence and arguing that it should not have been allowed. If the instructor agrees, he or she erases the disputed statement, hence weakening the argument of the other team.

At the end of the debate, the instructor can ask for a show of hands for the winning side. The instructor can then give his/her own opinion, talking about which points were excellent and which should have been rejected by the opposing team. There then can be a short discussion (either large-group or small-group) about the points of contention and an attempt to reach a class consensus as to the results of the debate.

LECTURE & LARGE GROUP DISCUSSIONS HAVE THEIR USES

Small group discussion work is a tool, not a solution. Lectures remain the best way to distribute cutting-edge information that is not available in books or articles, or to summarize difficult points for students. Large group discussion is most useful after a small group discussion. Use it to demonstrate your expertise, to clear up misconceptions, to expand a topic, or to introduce a new subject into the conversation. Using a combination of lecture, small group work, and large group discussion gives the best chance of making long-term changes in student behavior.

ISSUES TO CONSIDER

COACHING SMALL GROUP DISCUSSIONS

Make sure they prepare, keep them busy, and make their thinking visible.

HOW DO I GET STUDENTS TO PREPARE FOR CLASS?

Grade them. How many people do you know willingly work for free? Well, grades are the coin of the realm in academia, so assign points with that in mind. As Ramsden (1992) said, "From our student's point of view, the assessment always defines the actual curriculum." Reward them for doing the sort of preparation you want them to do. Don't just dump a bunch of points on the midterm and final, because you will be sending the message that only the tests are important. Students will skip on their class preparation and cram just before the tests. Use frequent assessment, but keep your weekly grading load low by grading each student's work in about a minute and giving only group feedback (for the most part). Save your detailed individual feedback for the most important student work.

HOW DO I KEEP THEM FROM TEXTING IN CLASS?

Keep them busy. Small group is great for that. If they have laptops, either have them close the laptops or use them in the group work. For example, you could have them conduct online research in class as part of the discussion. And be sure you understand how to use the latest technology, even if you do not use it yourself.

HOW DO I KEEP THEM ON TOPIC?

Wander through the room. If they are on-topic, let them work, but if they are off-topic, bring them back. Assign them randomly to groups every day by having them count off, by first initial of last name, by birthday, etc. They will stay on topic longer, and the class will become a stronger community as everyone gets to know and trust everyone else.

HOW DO I CLEAR UP MISCONCEPTIONS?

First you have to hear what they think. Use Just-in-Time Teaching and grade their preparation for class before class, and then customize the class accordingly. In class, be sure that different people report out every time. Respect their opinions and value their responses, but make sure you let them know when they are wrong. Give three pieces of positive feedback for every negative one.

WHAT IF THEY STILL WON'T TALK?

Let them know that you care about your success. Tell them that. Call them by name. Make a personal connection. Phrase each question three different ways, but all at the same level of Bloom's Taxonomy. And count to ten in your head anytime you ask a question. Give them time to think of an answer.

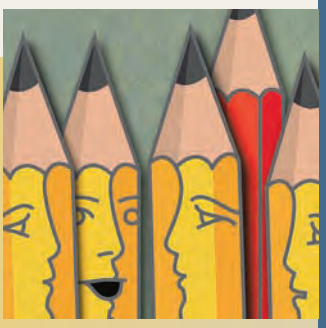

Illustration: Steve McCracken

REFERENCES & RESOURCES

Angelo, T. A, & Cross, K. P. (1993).*Classroom Assessment Techniques.* Hoboken, New Jersey: Jossey-Bass.

Aronson, E., Stephan, C., Sikes, J. & Snapp, M. (1978). *The Jigsaw Classroom.* Thousand Oaks, California: Sage.

Bergquist, W. H., & Phillips, S.R. (1975). *A Handbook for Faculty Development,* Vol. 1. Washington, D.C.: Council for the Advancement of Small Colleges.

Brookfield, S., & Preskill, S. (2005). *Discussion as a Way of Teaching.* Hoboken, New Jersey: Jossey Bass.

Burdick, D. (2011). Small Group Discussion Protocols (20 Examples). http://www.teachingprofessor.com/wp-content/uploads/Burdick-2011_Discussion_protocols_v4.pdf

Concept Tests and Course Materials from CU Boulder. http://www.colorado.edu/physics/EducationIssues/cts/index.htm

ConcepTests [for Chemistry]. http://www.jce.divched.org/JCEDLib/QBank/collection/ConcepTests/

ConcepTests [for Geoscience]. http://serc.carleton.edu/introgeo/interactive/conctest.html

Frederick, P. (1986). The Lively Lecture. *College Teaching.* 34(2), 43-50.

Johnson, D., & Johnson, R. (1979), Conflict in the classroom: Controversy and learning, *Review of Educational Research,* 49, 51-61.

Maloof, J. (2004). Using the Jigsaw Method of Cooperative Learning to Teach from Primary Sources. *Inventio: Creative Thinking about Learning and Teaching.* 6(1).

Mazur, E. (1997). *Peer Instruction: A User's Manual.* New Jersey: Prentice Hall.

Mead, J., & Scharmann, L. (Oct., 1994). Enhancing Critical Thinking through Structured Academic Controversy. *The American Biology Teacher,* 56:7, 416-419.

Olness, V. (1997). Essay Questions, Group Oral Exams for Teacher Preparation. in Tobias, S., & Raphael, J. *The Hidden Curriculum — Faculty-made Tests in Science.* New York: Plenum Press, 64-66.

"Within These Walls..." Museum of American History. http://americanhistory.si.edu/exhibitions/exhibition.cfm?key=38&exkey=67