# Classroom-Tested Strategies for Overcoming Student Resistance to Active Learning

## Connect Your Approach to What Learners Value

Gary A. Smith

Director, Office for Medical Educator Development

School of Medicine

Professor, Organization, Information, & Learning Sciences

PI, UNM STEM Gateway (US Dept. Ed Title V)

University of New Mexico

gsmith@unm.edu

**Summary:**  Student resistance to active learning, especially group work (cooperative/collaborative learning, team-based learning, etc.) is well known.  Most published suggestions for confronting student resistance emphasize the teacher's motivation for changing the learning environment, assurances of grading schemes that will punish poor team players, or both.   This "trust me it's good for you" buy-in strategy relies on students feeling compelled to go along with what the instructor has planned.

This workshop instead emphasizes classroom-tested strategies that employ a learner-centered approach rooted in expectancy-value motivation theory to focus student attention on (a) what they intrinsically value for their education, and (b) their prior concrete learning experiences.

Workshop attendees will experience selections from a provided library of active and reflective learning exercises that engage students to value team work as an investment in preparation for future careers and to develop strategies for avoiding the repeat of past experiences that generated negative perceptions of interactive learning.

**Activity Idea #1: The First Day Questions (In Class)**

(For more information, see Smith, G.A., 2008, First-day questions for the learner-centered classroom; National Teaching and Learning Forum, 17(5), 1-4)

During the first day of class include a discussion that opens with you asking:

*"Thinking of what you want to get out of your college education and this course, which of the following is most important to you?*

1. *Acquiring factual knowledge*
2. *Learning how to use knowledge in new situations*
3. *Developing skills to continue learning after college"*

Student voting usually emphasizes items 2 and 3. Therefore, learners typically place a high value on the types of thinking that faculty also have as primary goals for their students. However, this match does not necessarily mean that students understand how to achieve these goals. Next, ask:

*"All three goals are clearly important; for instance you can't use knowledge without first obtaining it. But, let's think for a moment of how best to accomplish these goals. Learning is not a spectator sport – it takes work; that includes work in the classroom and work that you do outside of the classroom. So, of these three goals, which do you think you can make headway on outside of class by your own reading and studying, and which do you think would be best achieved in class working with your classmates and me?"*

Typically, most students respond that they can make progress with factual knowledge acquisition on their own and want assistance with the other two goals. This result leads to a discussion of how to pursue goals 2 and 3. Goals 2 and 3 are not achieved by reading or listening to a lecturer – students must actively do things in order to learn. Students learn best when they take an active role:

- When they discuss what they are reading
- When they practice what they are learning
- When they apply practices and ideas.

This expectation of active learning causes students to realize that in order to reach *their* just-stated goal they have must prepare for in- class learning by making first contact with content on their own (e.g., reading, online lectures and/or exercises). Then, students and instructors together use that content during class in active-learning activities (e.g., collaborative or cooperative learning, discussion, etc.) that, when effective, challenge students to reach for always higher but reachable bars of accomplishment. This discussion can also lead to the importance of feedback for learning and the need for frequent formative assessment. The focus is on learning, not simply performing for a grade.

Students may be inexperienced with active learning or the expectations placed upon them for their learning. This activity is designed for motivating students to value the active-learning strategies used in a course and the partnership responsibilities of instructor and student. Without this introductory dialogue, the expectation of coming to class prepared, the expectation to work with peers in class, and the expectation to complete frequent writing assignments and other formative assessments of learning can seem foreign to students. It may seem to them like too much work compared to listening to lectures and regurgitating facts on exams.

However, once students recognize the link between *their* goals and the implemented learning methods they have a new appreciation for *why you and they do the things that happen in the course*, and they come to value these methods so long as the methods are used effectively and students can measure their own learning.

**Activity #2: Connecting Course Objectives to What Employers (and Students?) Want (In Class)**

Faculty commonly feel that students only seek a job after graduation and view the college curriculum as a minefield to be navigated using a path of least resistance; students don't want to learn, they want a degree.  A biology professor at the University of Michigan shares this comment written by one of his students: "Education is the only business where the consumer is satisfied with less product[1]."

You may find this view too cynical but it is supported by research into college student motivation.  A Carnegie Council on Policy Studies in Higher Education survey shows that more than half of undergraduates believe the chief benefit of college is higher earning power, and more than one third admit they would drop out if they did not think that attending college was helping their job chances.

This activity, recommended for the first day of class, encourages students to link the *common expectations* of employers who hire college graduates with the opportunities for knowledge and skill development, including teamwork and leadership, in their classes.

Initiate the discussion with this question:  "*How important is it, to you, to develop skills in your coursework that will help you land a job when you graduate?*"  Usually, students respond that this should be an important goal.

Next ask, "*Can you pick which items in the following list are the top-5 most desired characteristics among recent college graduates as reported by hiring companies?*"

1. Creativity
2. Computer skills
3. GPA, cutoff above 3.0
4. Leadership skills
5. Problem-solving skills
6. Teamwork skills
7. Verbal communication skills
8. Written communication skills
9. Analytical/Quantitative skills

Students form discussion groups and each group writes its consensus five-item list on the board.  Then, follow with the actual employer survey results (shown below).  This activity is particularly effective for getting student buy in for courses requiring significant writing and team work.

1. Leadership (80.6%)
2. Problem-solving skills (75.3%)
3. Written communication skills (74.7%)
4. Ability to work in a team (74.2%)
5. Analytical/quantitative skills (73.0%)

(Cutoff at a GPA value above 3.0 was noted by only 20% of respondents).

(National Association of Colleges and Employers, 2012)

The importance of team work and leadership (which is fostered through team work) serves as a motivation for participating in courses where learning and working together in teams is a critical part of course design and included in the learning objectives.

(Inspired by a Calif. St. Univ Learning Across the Curriculum module: "Helping Ourselves by Helping Others – Working in Groups")

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[1] D.J. Klionsky, 2004, Talking Biology: Learning Outside the Book—and the Lecture
*Cell Biology Education*, v. 3, p. 204–211

**Activity #3 Connecting Expertise to Learning Approach (In Class)**

This exercise is intended to connect students with how they learn outside of their academic experiences with how they should learn in college; learning is learning regardless of context.

Begin with this reflection prompt:

*"Think of something that you consider yourself to be very good at, other than being a student of a school subject. For instance, examples might be athletic accomplishment, artistic ability, musical instrument talent, another creative ability (such as writing poetry or fiction). Now – think about the process that you went through to develop the expertise that you have acquired."*

After giving students a few minutes to come up with their personal lists, ask them to talk at their tables to derive common, generalized lists of "Processes for Developing Expertise". Have them write these short lists on the board. Then – guide students to see the most common listed items.

Usually, these lists include items such as:
- Hard work
- Lots of practice
- Getting instruction and feedback from parents, coaches, mentors, teachers, etc.
- Learning from mistakes; trying it and getting pointers for improvement from teachers, coaches, etc.

Then lead a discussion along these lines:

*"Your brain treats all sorts of learning the same way. In fact, learning is a biological process involving the linking of neurons with synapses that permit you to retrieve and utilize information over and over again. When you learn something, your brain is physically changed. From a neuroscience standpoint, learning math or chemistry isn't really different from learning to create a sculpture or throw an accurate football pass. So, what implications for your learning in college can you derive from the lists you've written on the boards?"*

Expected ideas include:
- Hard, disciplined work
- Practice – by doing lots of sample problems and keeping up with homework
- Getting feedback from teachers and seeking assistance when progress seems unsatisfactory
- Being willing to accept mistakes as part of the learning process

Inspired by R. Smilkstein, 1989, The natural process of learning and critical thinking: *Gamut*, 38:26-38

**Activity #4: Reflecting on How to Make Group Work, Work (Online)**

This assignment is delivered as a reflective-writing prompt that students complete online at the end of the first or second week of class. The objective is for students to reflect on their perceptions of disadvantages of group work and design potential solutions to their concerns.

Prompt:

*Working in teams is a significant part of the learning environment for [class name]. You will be placed in an assigned group for the semester. You will complete in-class assignments and ongoing projects as a team. Nearly everyone has some concerns or reservations about working as a part of a group. Pick one aspect of working in small groups that is a concern for you. Explain why you have this concern.*

*Then, skim through the three provided links and seek information that is relevant to your concern. Write a few sentences that explains*

*how you can help alleviate your concern during the semester.*
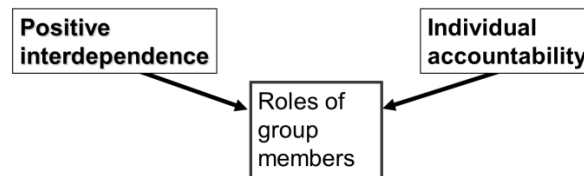
Provided references:

Top 10 Reasons Students Dislike Working in Small Groups … and Why I do it Anyway
Ann Taylor
*Biochemistry and Molecular Biology Education*, 39 (3), 219-220 (2012)

Coping with Hitchhikers and Couch Potatoes on Teams, f*rom Turning Student Groups into Effective Teams, by B. Oakley, R. Felder, R. Brent, and I. Elhajj,. J. Student Centered Learning,* 2 (1), 9-34 (2004)
Fact and Fiction: Common Fears about Group Work
Writing@CSU, Colorado State University
http://writing.colostate.edu/guides/page.cfm?pageid=849

**Activity #5: Establish the Roles and Responsibilities for Teamwork (In Class)**



Positive interdependence → Roles of group members ← Individual accountability

**Leader:** Summarizes the problem, proposes a strategy, coordinates the conversations to assure even participation by all, keeps everyone on task, and keeps track of available time.

**Recorder:** Writes down the answers on behalf of the group, frequently checks with teammates to assure accuracy of what is written.

**Monitor:** Assures that *all* team members are participating and are comfortable with the group consensus with responses; brings up alternative possibilities. All team members respect the role of the monitor to ask dominating members to provide opportunities for other voices, to ask quiet members to share their insights, and to make sure that everyone understands the recorded answers.

*Note: In four person teams, 2 people share the Monitor role. If only two people are present, the Recorder also serves as Monitor*

Important: Rotate roles so that responsibilities change with each class period.

**Activity #6: Team Work Check Up (In Class)**

This exercise is intended as a quick writing response by each team.  It should ideally be done several times a semester by having students respond to these prompts (shortened if necessary for time) as a team at the end of class.  The objective is to generate conversations within groups about what is or is not working, and potentially activates previous reflection (Activity #3) and experience (Activity #4) to seek solutions and make suggestions.

*What is the <u>strongest</u> aspect of our work as a team?*

*What is the <u>weakest</u> aspect of our work as a team?*

*What can we <u>do</u> to make our team work better for helping all of us learn?*

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**Also see:**

*Framing the Interactive Engagement Classroom*

http://www.colorado.edu/sei/fac-resources/framing.html

Instructor-written materials from a variety of disciplines for generating student buy-in to innovative classroom techniques.
The Science Education Initiative at the University of Colorado Boulder