

POD —IDEA Center Notes

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IDEA Item #8: "Stimulated students to intellectual effort beyond that required by most courses"

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Background

A recent review of the literature (1) indicates that college students seldom have to perform at cognitive levels higher than knowledge and comprehension in Bloom's taxonomy. Many students sit passively in ill-defined lectures, take multiple-choice exams on which they regurgitate facts, and complete assignments that seldom require making moral or ethical decisions, drawing conclusions, or working cooperatively towards a common cause across disciplines.

Students would prefer to be more challenged, however. In the 2004 report from the National Survey of Student Engagement (NSSE), students said that their college experience was more fulfilling when they participated in learning activities that required their thought and active involvement (2). Not only did students say they learned more, but also they showed improvement in their ability to think critically, relate learning to real life, and make educated decisions. In other words, *instructors who "stimulated students to intellectual effort beyond that required by most courses" helped students make significant gains in learning.*

Item #8 appears to be related to the NSSE benchmark category "Level of Academic Challenge." This category includes questions pertaining to the student's time spent preparing for class; the number of assigned texts, books, or readings; coursework emphasis on analysis of cases, in-depth studies, synthesis of ideas, information, and experiences to create new interpretations; application of theory to new, real-life situations; and student's level of effort. Because Item #8 correlates substantially with Item #1 (Displayed a personal interest in students and their learning), Item #2 (Found ways to help students answer their own questions), Item #3 (Scheduled course work—activities, tests, projects—in ways which encouraged students to stay up-to-date in their work), Item #4 (Demonstrated the importance and significance of the subject matter), Item #6 (made it clear how each topic

fit into the course), Item #7 (Explained the reasons for criticisms of students' academic performance), Item #13 (Introduced stimulating ideas about the subject), and Item #15 (Inspired students to set and achieve goals which really challenged them), it is also related to NSSE category of "Active and Collaborative Learning"; a category that stresses class presentations, discussions, and other "involving" activities. Item # 8 is also strongly correlated with IDEA learning objectives that stress cognitive knowledge, application, critical thinking, and interest in life-long learning. *Students are stimulated to greater intellectual effort when they become engaged with the content and the course and make an investment in their own learning.*

Helpful Hints

IDEA Paper # 41 (3) provides suggestions for motivating students and thus, stimulating greater intellectual effort. Her suggestions include the following:

- Pitch the tasks you set for your students just beyond their base capability, but well within their reach;
- Make the classroom a safe place to take risks;
- Give learners some choices in what or the way they learn;
- Be a good model of mastery learning.

Students will be stimulated when they are challenged but also when they see that they can successfully meet the challenges that you present. Relevant work with understandable, real-world applications provides many opportunities for students to get engaged and to respond with extra intellectual effort.

Another approach is to apply a few of Chickering and Gamson's "Seven Principles" (4), you can begin to teach in ways that stimulate students to intellectual effort beyond that required by most courses. *In particular, consider techniques and practices that will: develop reciprocity and cooperation among students, encourage active learning, and communicate high*

expectations. For example, have small groups do such things as generate or summarize ideas, assess levels of skills and understanding, rehash ideas, review problems or exams, process learning outcomes at the end of class, provide formative feedback to the teacher, compare and contrast key theories or issues, relate theory to practice through problem solving, and produce ideas about applications of theory to real life (5). Case studies, simulations, or other active strategies that engage students in collaborative problem solving deal with all of the underlined items above, particularly if the cases center on real-world issues or are connected to service learning projects, where there is a tangible connection to a recognized local need. You can create your own case studies or simulations, use published ones, or have students create their own.

You might also have students enter into contracts that describe the academic work they plan to accomplish in a particular period of time. Contracts in which students set schedules and deadlines for completion are useful because when students “self-regulate” (6), they become more committed to their work and are more willing to invest both intellectual and personal effort. The keys to a good contract are clarity, relevance, manageability, commitment, and oversight. This oversight connects with another important factor: holding clear and high expectations. In all of your interactions with your students, communicate high expectations.

Provide your students with clear objectives that come from the upper levels of Bloom's Taxonomy (7), particularly those of analysis, synthesis, and evaluation. Set high standards for work and be consistent in your assessment of both students' processes and products. Provide students with real-life opportunities to share their work, engage in collaborations, and publicize their efforts. As students become more actively engaged in **relevant learning activities**, they have opportunities to apply what they have learned. It is through this application of learning that students are able to demonstrate their ability to analyze and solve problems, synthesize information to create new solutions, and evaluate ideas and information to make educated decisions. The teacher who designs courses to provide such opportunities will stimulate students to high intellectual effort and provide maximum opportunities for intrinsic motivation.

Assessment Issues

Having your students engage in learning activities that require greater intellectual effort than memorizing and recalling poses new assessment challenges. It is important to match the assessment to the objective of the assignment and the learning activity in which

students engage. You will not want to give multiple choice tests when you are asking students to analyze case studies, for example, nor will you want to have them write short answers when you are asking that they collaborate on a service-learning project. You will also want to be sure to assess students' progress at many points during the learning process. This calls for a variety of assessment techniques. Angelo and Cross (8) categorized a large assortment of techniques into clusters organized by teaching goals. For example, when assessing students' work on activities that intend to stimulate high levels of intellectual effort, you will most likely want to use techniques in Cluster I, Higher-Order Thinking Skills. Some of these techniques are Analytic Memos, Concept Maps, and Problem Recognition Tasks. If you want to assess discipline-specific knowledge and skills, Cluster III would provide you with some appropriate assessment tools.

References and Resources

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- (2) National Survey of Student Engagement (2004). "Viewpoint." Center for Postsecondary Research, Indiana University: Bloomington. Retrieved June 20, 2005 from http://www.indiana.edu/~nsse/2004_annual_report/pdf/2004_viewpoint.pdf
- (3) Svinicki, M. (2005). IDEA Paper No. 41: [Student Goal Orientation, Motivation, and Learning](#). Manhattan, KS: The IDEA Center
- (4) Chickering, A., and Gamson, Z. (1987). Seven Principles for Good Practice in Undergraduate Education. *AAHE Bulletin*, 39(7), pp. 3-7.
- (5) Myers, C., & Jones, T. B. (1993). *Promoting active learning: Strategies for the college classroom*. San Francisco: Jossey-Bass.
- (6) Pintrich, P. R. (Ed) (1995) "Understanding self-regulated learning." *New Directions for Teaching and Learning* # 63. Fall. San Francisco: Jossey Bass.
- (7) Fowler, B. (1996). Bloom's taxonomy and critical thinking. Longview Community College: Critical Thinking Across the Curriculum Project. Retrieved June 20, 2005 from <http://www.kcmetro.cc.mo.us/longview/ctac/blooms.htm>
- (8) Angelo, T. A., & Cross, K. P. (1993). *Classroom assessment techniques: A handbook for college teachers* (2nd ed.). San Francisco: Jossey-Bass. See pages 13-23

IDEA Paper No. 34: [Focusing On Active, Meaningful Learning](#), Stalheim-Smith

IDEA Paper No. 38: [Enhancing Learning - and More! - Through Cooperative Learning](#), Millis