We're Fast Approaching Critical Mass in Students' Inability to Apply Critical Thinking

When I reviewed the list of "most important research questions for the profession" delineated by Baird (2003), I perceived an undercurrent he did not acknowledge: Almost every single question directly or indirectly addresses the dearth of critical thinking skills among today's undergraduate college students, especially those enrolled in post-secondary occupational education (PSOE). In my opinion, nearly every problem campuses face can be traced to a malfunction in students' ability to successfully process cause-and-effect relationships. From the horrific slaughter at Virginia Tech at the hands of a deranged student to the inability of a freshman to develop a curriculum plan that supports a career goal, students just can't think by using logical processes.

Citing the research of Fried and others, Gwen Dungy (2007) addresses this phenomenon, placing the blame on "brain-based" education – a collection of facts and corollary data – that is not true learning. Quoting Fried, Dungy describes "meaningful learning" as that which 'requires the brain to search for patterns and to bind those patterns with emotional experiences'" (p. 3), a function of critical thinking. Thus, true learning occurs when individuals apply personal meaning, emotions, and reflection to in conjunction with the logical process of analyzing newly acquired data.

A significant body of research has proven most students enroll in college at a level of cognitive development that does not support critical thinking. In Perry's model, undergraduates begin their studies at the dualism or, at best, early multiplicity level. These students prefer instructors to "spoon-feed" information, giving them the correct answer to each problem. Even adult students, who should be at Perry's late multiplicity level or beyond based on their life experiences, often regress in early courses. In my PSOE experience, nearly every student resists learning activities designed to encourage critical thinking and problem-solving, especially in introductory-level classes. Ironically, nearly every course has a reference to critical thinking as one of its stated goals.

When I teach basic Microsoft Word courses, for example, I require students to learn four specific methods for cutting, copying, and pasting text; three methods for undoing an operation; and four ways to access interactive help screens. Less than ten percent of my students perform these tasks with 100% efficiency on assessments, even though task mastery simply entails memorization of mouse movements and keystrokes.

As the final assessment in basic Microsoft Excel courses, I give students an exercise I found on-line at a middle-school teacher's "tips" Web page. The problem requires students to prepare a spreadsheet with simple statistical data derived from a bag of plain M&M's, including calculating the percentage of each color in the bag and comparing it to published averages on M&M-Mars' corporate Web site. I explain to students I want them to view this

as an assignment from a workplace supervisor. Even though I give explicit, step-by-step instructions with a readability index of grades 5-6, less than one percent of my students can design and format the spreadsheet without asking me a raft of simple "Yes or No" questions. In two years' teaching at the Associates Degree college level, I never had a student – even ones who had recently completed basic mathematics courses – recall how to calculate a percentage of the whole or express fractions as decimals without my having a "math tutorial break" in the middle of the assessment.

I can think of very few instances where problem-solving skills are not required in college courses, especially in PSOE. For example, students in healthcare courses must learn to make potentially life-saving decisions based on observations or information received from patients. As program graduates and healthcare providers, these individuals' inability to apply critical thinking skills could result in injury or death to patients. Many of my colleagues who teach PSOE medical courses are very vocal in expressing their concerns about this deficit among their students.

Dungy's (2007) solution for remediating the dearth of critical thinking skills described above is implementation of Fried's "meaningful learning" (p. 3) through an amalgam of theory and practice from student and academic affairs. Dungy draws a simple recommendation from the publications *Learning Reconsidered* and *Learning Reconsidered 2*: Employ the proven methods student affairs professionals use to develop their constituents' affective domains (*alá* Bloom). Dungy reiterates a central theme of those publications, "We must strive to emphasize the integration of classroom learning with student experiences, and vice versa, because we are, as many institutional mission statements claim, shaping the 'whole student' and, as Dr. Fried makes eminently clear, the whole student's learning and development do not occur in convenient segments" (p. 3).

Now I just need to figure out how to effect a total paradigm shift in PSOE. It's a good thing I still have half my life to live and many friends in PSOE student services to help me in my crusade!

Resources

Baird, L. L. (2003). New lessons from research on student outcomes. In Komives, S. R., Woodard, D. B., Jr. & Associates. *Student services: A handbook for the profession*. 4th ed. (pp. 595-617). San Francisco: Jossey-Bass.

Dungy, G. J. (2007, February). *Confronting the perception of higher education as a commodity and the student as consumer or product*. Paper presented at the meeting of the National Conference on Law and Higher Education, Clearwater Beach, FL.

Keeling, R. P., ed. (2004). *Learning reconsidered: A campus-wide focus on the student experience*. Washington, DC: National Association of Student Personnel Administrators and American College Personnel Assn.

Keeling, R. P., ed. (2006). *Learning reconsidered 2: A practical guide to implementing a campus-wide focus on the student experience*. Washington, DC: ACPA, ACUHO-I, ACUI, NACA, NACADA, NASPA, NIRSA.