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No matter at what level of sophistication students enter our classroom, the one goal we have for all of them is to leave it as changed people. The transformation we desire, even in the most basic introductory course, goes beyond the simple acquisition of knowledge. All teachers want their students to "like" what they learn. This means we eventually want to reach them where we can influence their attitudes and motivational dispositions toward the subject. Even though we may not be optimistic enough to reach this with all or most of our students, the ultimate goal of higher education must be to create self-motivated learners who are both willing to change and able to affect the direction of their change. Unfortunately, this is also the most difficult goal to accomplish at a time when learning is often seen as an instrument rather than a purpose for its own sake. How then can we influence students to a point where they appreciate the process of change itself?

This essay conceptualizes the task as an enterprise that unfolds on four different levels. It is a growth process that requires the instructor to carefully orchestrate experiences of conflict, development of competencies, reflection of progress, and ultimately definition of purpose.

Level 1: The Learning Experience Intentional learning--as opposed to tacit, automated learning--is made up of experiences that capture the learner's attention and imagination. Getting someone's attention typically involves an element of surprise. What is

more surprising than having one's long-held opinions and beliefs drawn into question? Psychologists have a name for this experience: When beliefs about who the self is and what the self does are inconsistent . . ., people experience a psychologically uncomfortable state referred to as cognitive dissonance (Reeve, 2001). Our belief systems and behaviors are ripe with the potential for cognitive dissonance. We often believe one thing, but actually behave the opposite way (e.g., we may consider ourselves environmentally friendly but rarely recycle or conserve energy; or we demand scientists to provide the answers to all of life's questions, but exclude ourselves as much too complex to fit into any scientific categories). Elsewhere (Hansen, 1998) I have given more examples of common misconceptions that, when confronted, easily lead to cognitive dissonance.

As students face their own misconceptions, the experience can be somewhat unsettling, but it may provide the instructor with opportunities for "teachable moments." These are instances in which learners' natural defenses against destabilizing insights are low so that they are willing to consider the need for change. Instructors must be careful not to overuse the approach because every person's tolerance for conflict is limited. Nobody wants to be shown wrong all the time, but when used with care, the creation of cognitive dissonance is a powerful tool to initiate meaningful learning experiences.

Level 2: Learning Process Tools As important as the initial stimulus may be, learning needs more than an unsettling or exciting experience to promote personal growth. Intentional learning requires a plan, which needs to be made transparent to students--maybe even negotiated with them.

One of the most difficult tasks of teaching is defining a good plan with appropriate learning outcomes: What should students know, what should they be able to do, and what attitudes should they hold about the course material (Ewell, 1987)? Determining the answers to these questions requires careful judgment about the focus of a course and what is manageable in the available time frame. It also requires considerable experience with the given student population and what it might take for them to achieve these outcomes.

To begin with, students need a comprehensive syllabus (Grunert, 1997) outlining the key concepts, ideas, theories, skills, and procedures of the course. In addition, many students lack some of the basic learning tools necessary to accomplish the course goals. Therefore, helping students learn how to learn has become a key component of good course design. Aside from a few elite institutions across the country, our undergraduate students need help with the basics: reading textbooks, taking class notes, writing papers, managing time. I have always found that the most successful faculty members provide some form of scaffolding (Hogan & Pressley, 1997). They give specific cues for how to do things: question guides for reading assignments, rubrics and work samples for papers and oral presentations (Andrade, 2000), formats and guided practice for note-taking, tips and class discussion on how to manage time. Depending on the class level, good teachers tend to phase out those learning aids as the course progresses.

Level 3: Learning Awareness Tools Without the development of learning process tools students are unable to reach the third level of intentional learning, learning awareness. Instructors truly interested in the growth of their students want them to become aware of the progress they are making and how they are making it. Practice, supposedly, makes perfect, but reflective practice characterizes the educated practitioner. The same process tools don't work equally well for all people. That's why accomplished learners need to get to know themselves, their own strengths and weaknesses and their own developmental history as learners. Education is the process of discovering the self, and that process requires ongoing self-assessment.

It is possible to distinguish at least four different functions self-assessment serves in college: (1) self-assessment of one's growing competence in one particular area, such as the writing of a certain genre of essays; (2) self-assessment to set goals for the improvement of particular skills or learning behaviors; (3) self-assessment of how applicable one's experiences in one field of practice can be to another, for example, how one's parenting experiences might translate into teaching skills; and (4) self-Assessment of long-term growth, involving reflection and integration of benefits derived from multiple courses over multiple semesters, and clarification of career

goals and one's general place in life (Hansen, 1998).

A host of tools and processes is available to foster these types of learning awareness. At the micro level, instructors need to build in opportunities for repeated practice of the same or similar tasks. Multiple drafts of writing are an example of this approach; so is the use of grading rubrics for self and peer-assessment. At a higher level, students may be asked to reflect on their learning progress through learning logs, journals, diaries, profiles, portfolios, or capstone activities, which require more sustained effort and add a developmental dimension to the reflective process. A good description of many of these approaches is provided in Freeman and Lewis (1998).

Level 4: Learning Purpose The fourth function of self-assessment-assessing one's long-term growth--is the ultimate condition for creating the self-motivated learner. At some point, students need to learn to determine for themselves the purpose of their learning efforts. Much of education consists of teachers deciding what's "good" for their students. But in a democratic society where lifelong learning is a requirement for civil and economic welfare, it is crucial that students be enabled to define the purposes of their learning for themselves.

This has important implications for how we design courses and curricula. They include:

- Instructors need to find better ways of explaining the rationales for their course activities to students, ways that make their students care about the reasons for doing things in class.
- Course programs--in General Education and the major--need to have curricular coherence (see Ratcliff, 1997). Programs that are nothing but shopping lists of courses are unlikely to help students discover meaning and purpose.
- College courses need to consider different developmental levels that represent systematic increments in the demands made of students' abilities. Schools like Alverno College have demonstrated that key abilities like communication, analytical thinking, problem solving, effective citizenship, or aesthetic responsiveness can be conceptualized at growing levels of

complexity across the college years (Mentkowski, 2000, p. 419ff).

- Students ought to be involved in defining the purposes of their courses and programs in accordance with their own needs and goals. In other words, students should participate in the planning of at least some of their courses to help them move out of their educational consumer role.

Conclusion

The road from cognitive dissonance to self-motivated learning is a long one. I have tried to outline crucial steps along the way. It seems inevitable that meaningful learning begins with carefully orchestrated experiences of conflict and dissonance. Productive ways of dealing with conflict involve the development of competencies and assessment tools that allow students to reflect on their progress. Self-assessment is not complete until students become sufficiently autonomous to define the purpose of their learning. Good teaching means helping students move through these levels of intellectual development. It is not merely confined to individual courses, but requires long-range planning across whole programs of study. Edmund J. Hansen (Ph..D., Indiana University) is the Director of the Center for Teaching and Learning at Northeastern Illinois University

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