Student Attitudes and Motivations: The Role of the Affective Domain in Teaching

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Modified from a PowerPoint by Karin Kirk, SERC
• A (required) science course can be an intimidating experience
• The affective domain can significantly enhance, inhibit, or even prevent learning.
What is the Affective Domain?

- Values
- Motivation
- Attitudes
- Stereotypes
- Feelings

Affective Domain

- Synthesis
- Recollection
- Comprehension
- Evaluation
- Analysis

Cognitive Domain
I am a geoscience major!

I will show up to class and listen.
Student Attitudes

• Successful teaching for me means achieving the following outcomes with respect to student attitudes.

• How would most of your students answer the following question: “Aside from factual knowledge or skill proficiency, what was the primary change in your awareness with respect to attitudes or values that this course produced?”

* Statements from Ed Nuhfer, POD Affective Domain workshop materials http://serc.carleton.edu/NAGTWorkshops/affective/podworkshop/program.html
Three Points to Consider about the Affective Domain in Your Courses

- Understanding self-efficacy
- Improving motivation
- Using immediacy

http://serc.carleton.edu/NAGTWorkshops/affective/index.html
Self-efficacy

The belief in one's capabilities to achieve a goal or an outcome
Characteristics of students with high self-efficacy

- challenge themselves with difficult tasks
- put forth significant effort to meet commitments
- attribute failure to things that are in their control
- recover quickly from setbacks
- likely to achieve personal goals
Characteristics of students with low self-efficacy

• believe they cannot be successful.
• less likely to make a concerted, extended effort.
• avoid challenging tasks (see as threatening).
• have low aspirations, which may result in disappointing performances.

These traits make up a self-fulfilling feedback cycle.
How can students gain self-efficacy?

1. Mastery experiences
2. Vicarious experiences
3. Verbal persuasion
4. Emotional state
Student Motivation

Two categories of motivation

Achievement motivation (extrinsic)

- “Will this be on the test?“
- “All I want to do is pass this class and never be bothered with science again."
- “But I **need** a good grade in this course..."

Mastery motivation (intrinsic)

- “I want to understand geology."
- “Learning about the earth helps me see the world differently."
- “Even though I got a bad grade, I still enjoyed this course."
How can I motivate my students?

- Demonstrate your own motivation.
- Adopt a supportive style.
- Balance the challenge.
- Give frequent, early, positive feedback and be constructive in criticism.
- Use a variety of student-centered teaching activities.
- Make it real – develop activities that are based on topics relevant to your students
- Provide choices.
- Strategize with students who are struggling.
- Help students feel that they are valued members of a learning community.
Immediacy

Behavior that brings instructor and students closer in terms of perceived distance

Non-verbal immediacy
• smiling
• appropriate gesturing
• eye contact
• relaxed body language
• don’t always stand behind the podium

Verbal immediacy
• call students by name
• use humor
• encourage student input and discussion
• use terms like "we" and "us" to refer to the class

Be genuine!

Strike a balance between credible and professional and approachable and fallible

http://serc.carleton.edu/NAGTWorkshops/affective/immediacy.html
Other affective domain tidbits

- Use the power and imagery of geoscience to capture students’ imaginations.
- Provide access to interesting role models who are not “geeks” wearing lab coats.
- Show relevance of geoscience to their everyday lives.
- Be alert for affective roadblocks when teaching controversial topics.
- Be aware of how working in groups can influence affective problems, for better or worse.
Troubling Traits of Students?
Your task

• Do you recognize some of these traits and behaviors in your students?

• Gallery Walk about a few teaching “dilemmas” (short vignettes that characterize a situation involving student attitudes or motivations) and possible solutions.

• Summary
On a frigid Minnesota afternoon, I had just finished a mini-lecture in my introductory class, and I threw out a question to the whole class. Chris responded enthusiastically with a wonderful and correct contribution. At this point, Sam groaned and said in a voice audible to the entire class, "suck up!" A few other eyes rolled, and several hands that had been raised were slowly lowered. I tried to ignore this and went ahead having students discuss in small groups as though nothing had happened. After class, I approached Chris and said, "I'm sorry that student was so rude to you in class." She said, "That's okay, but it's hard to stay enthusiastic. I really like this course, but every time I talk about something I have learned in here, my friends roll their eyes and tell me to shut up. And my lab group rushes through the lab, and they always want to leave early."
Affective Domain Dilemmas

This collection of dilemmas began at the February 2007 Workshop as a way of harnessing the collective expertise of the participants to help each other figure out how best to deal with scenarios and situations that commonly arise in the classroom. A short write-up of the "dilemma method" was presented at the October 2007 POD workshop on the Affective Domain in teaching and learning, where further solutions to the dilemmas were written.

If you would like to share a dilemma from your own experience and potentially receive feedback and advice from community members, you can start a new thread in the Dilemma Discussions page.

You can also see what comments community members have contributed to dilemmas in the collection by checking out the Dilemma Discussions page.

Narrow the View

Affective Domain Vocabulary
- Student Motivation: 7 matches
- Student Attitudes: 14 matches
- Teaching Controversial Subjects: 11 matches

Affective Domain Dilemmas

Being afraid of teaching Evolution part of Dilemmas
A middle school teacher has turned down an excellent job offer at a small middle school in his home town because the principal asked him to teach science as his major teaching responsibility in ...

Affective Domain Vocabulary: Teaching Controversial Subjects: Evolution

Being convinced faculty about the importance of the affective domain part of Dilemmas
Professors may believe they are "only there to teach" and the students are "there to learn," and it is not the professor's responsibility to worry about motivating them or ...

Affective Domain Vocabulary: Student Motivation

Age of the earth and relationship to belief systems part of Dilemmas
In order to fully understand Earth processes such as plate tectonics, mountain building, erosion, evolution, and various time scales of global climate change students must have a firm grasp of ...

Affective Domain Vocabulary: Teaching Controversial Subjects

Avoiding hopelessly paralysis part of Dilemmas
In an intro class, I wanted to engage students and show them the importance of the field of geology in their lives. So I presented the evidence for an imminent peak in world oil production and ...

Affective Domain Vocabulary: Student Motivation, Teaching Controversial Subjects

Scientific uncertainty and global warming part of Dilemmas
Climate change is the major environmental issue facing all inhabitants of spaceship Earth. As Earth science educators, we must inform students about the scientific consensus on global warming and ...

Affective Domain Vocabulary: Teaching Controversial Subjects: Climate Change