



Feeling the Measure: Evaluating Affective Outcomes

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Affective Domain

- Attitudes
- Motivation
- Willingness to Participate
- Valuing What is Being Learned
- Incorporating Values Into Life



Feelings: the Gateway to Learning

People learn quickly when they feel safe, relaxed, included, interested.

They resist learning when they feel unsafe, excluded, stressed, or see no purpose to learning new material.

Motivation has intrinsic factors (curiosity, appreciation, love of learning, interest) and extrinsic (grades, praise, completion of certification).



Affective Domain

The affective domain addresses the acquisition of attitudes and values. The taxonomy contains five levels:



Receiving

Responding

Valuing

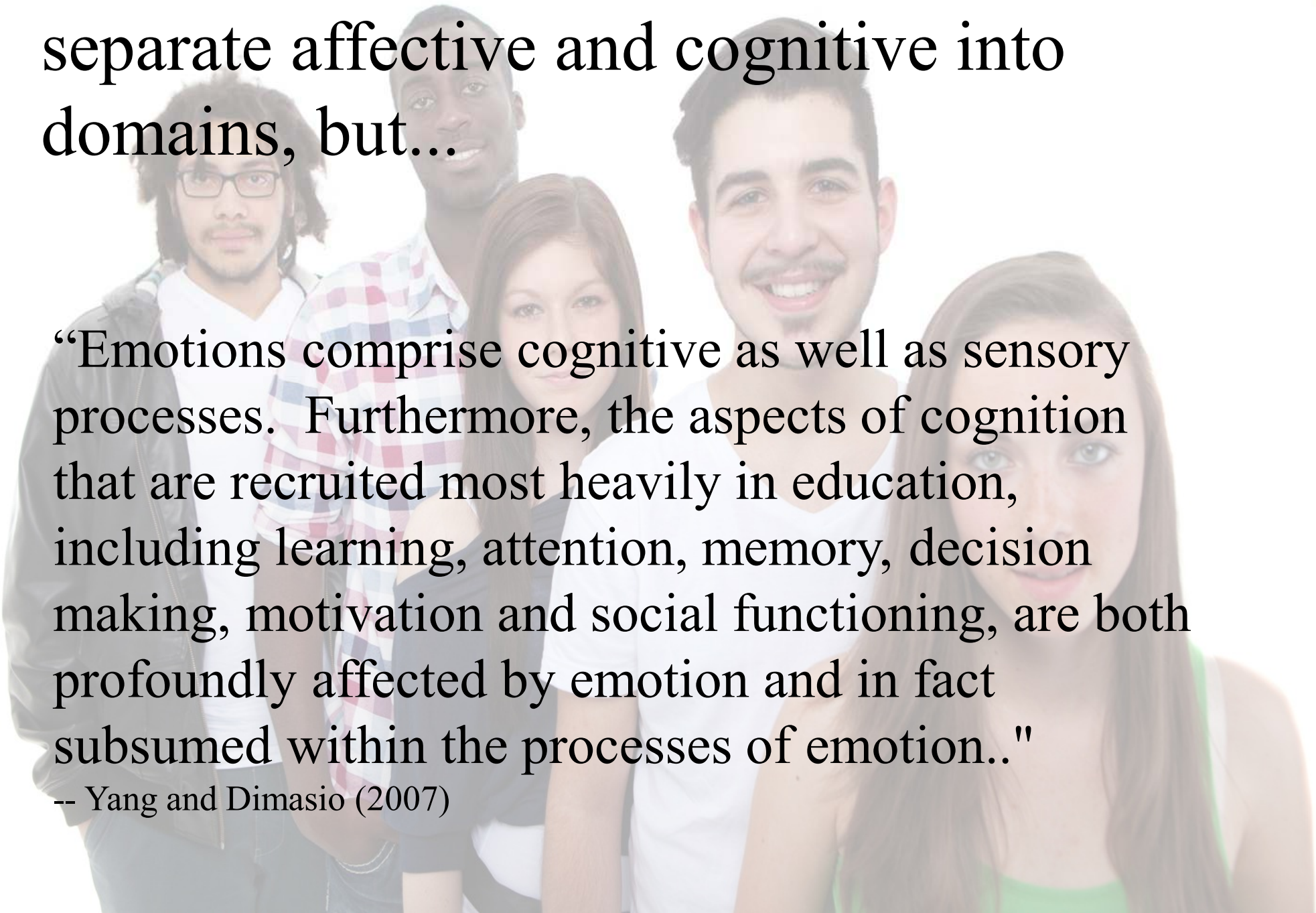
Organization

Characterization

Krathwohl, D., et al. (1956). *Taxonomy of educational objectives, handbook II: Affective domain*. New York: McKay.

Affective Domain Levels

Level	Description	Verbs	Objective
Receiving	Be aware of, or attending to, something in the environment.	Listen Notice Tolerate	Listen attentively to badminton introduction.
Responding	Show new behavior as a result of experience.	Comply Enjoy Follow	Voluntarily help set up badminton nets.
Valuing	Show definite involvement or commitment.	Carry out Express	Attend optional badminton match.
Organization	Integrate a new value into one's general value set, relative to other priorities.	Choose Consider Prefer	Purchase own badminton racket.
Characterization	Act consistently with the new value; person is known by the value.	Act on Depict Exemplify	Join intramurals to play badminton twice per week.



Bloom & Krathwohl's taxonomies separate affective and cognitive into domains, but...

“Emotions comprise cognitive as well as sensory processes. Furthermore, the aspects of cognition that are recruited most heavily in education, including learning, attention, memory, decision making, motivation and social functioning, are both profoundly affected by emotion and in fact subsumed within the processes of emotion..”

-- Yang and Dimasio (2007)

Assessment vs. Evaluation

Assessment and *evaluation* are often used interchangeably

However, for our purposes...

- **Assessment** describes measurement of where learners are at a given time
- **Evaluation** describes measurement of course/program outcomes





Why assess learner outcomes in all domains?

- Baseline data
- Summative and formative feedback
- “Drives learning”
- Allows measures of individual progress
- Encourages student reflection
- Assures public of service providers’ competence
- Licensure/credentialing requirements

Model of Competence



Miller GE. The assessment of clinical skills/performance.
Academic Medicine (Supplement) 1990; 65: S63-S7.

*Miller's pyramid for assessing clinical competence
(adapted from Norcini, 2007, p2)*

Critical Competencies

1. Personal responsibility,
2. Ability to act in principled, ethical fashion,
3. Skill in oral and written communication,
4. Interpersonal and team skills,
5. Skills in critical thinking and problem-solving,
6. Respect for people different from oneself,
7. Ability to change,
8. Ability and desire for lifelong learning.

(from Gardiner, 1994)

Intentional Learners

Becoming an intentional learner means: developing self-awareness about the reason for study, the learning process itself, and how education is used

Intentional learners are integrative thinkers who see connections in seemingly disparate information to inform their decisions.

Greater Expectations
(2002 AACU Report)

Assessment Process

Outcomes



Indicators



Evidence

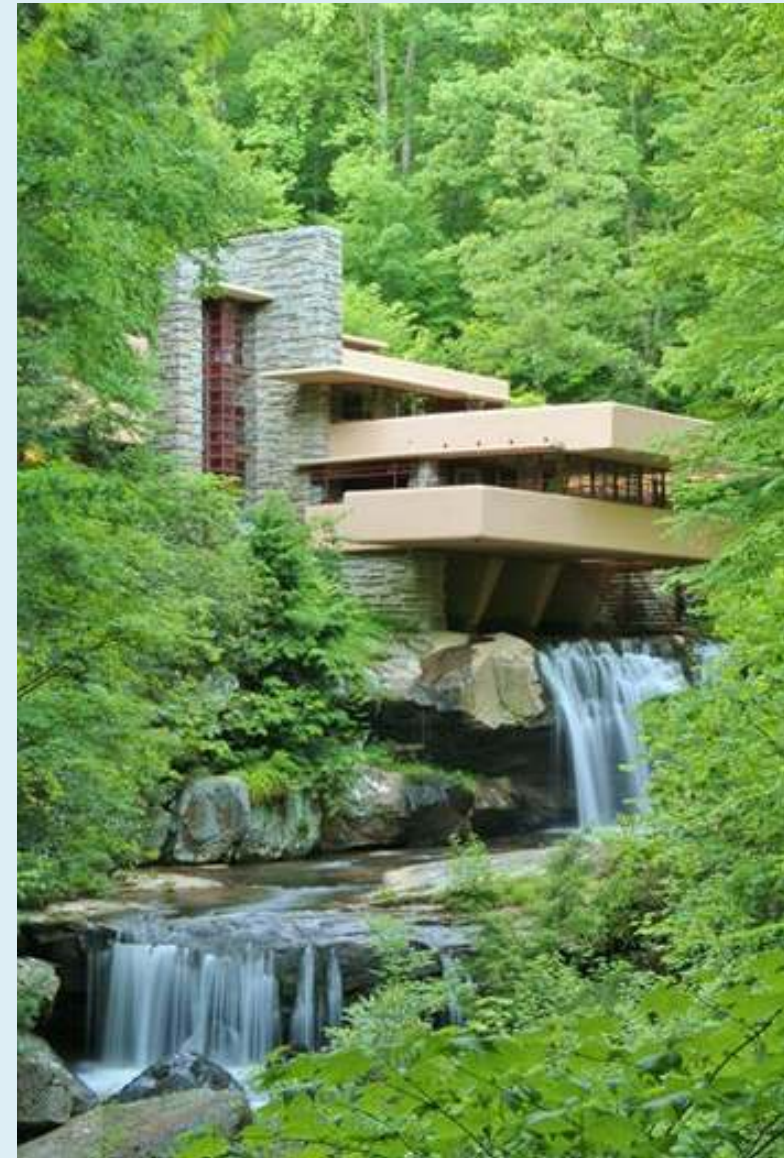


Criteria and/or Standards



Behavioral Dimensions

- Commitment
- Preparation
- Curiosity
- Attitude
- Talent
- Retention
- Effort
- Communication Skills
- Performance
- Purpose
- Determination
- Stick-to-itiveness (Grit)



Evaluate Affective Outcome Achievement: How?

Observe: Behavioural Evidence and Indicators (e.g. Outcome: “View self as professional”; note examples of professional behaviour). Video, checklist, role plays....

Measure: Before and After Attitudes/Values (questionnaire, interview)

Self-reflection: Journals, creative projects

Example: Student journals

- Students record participation, results, responses, feelings, perceptions, or reflections about outcomes of lessons.
- Excellent for assessing affective domain.
- Use as formative assessment to keep student reflections honest and open.



Journaling Prompts- Affective Domain

How have your attitudes about the significance and relevance of the course materials changed?

Describe how the content and skills you have learned in this course might be relevant to other courses you are currently taking. How about in your future education? In your career?

Why use rubrics?

- Improve reliability of grading assignments
- Convey goals and expectations of students in an unambiguous way
- Convey grading standards and relate to classroom goals
- Engage students in critical evaluation of their own performance – self-assessment
- Aid intradepartmental discussion about standards and criteria
- Form the basis for departmental and institutional assessment



Considerations when constructing a rubric

- What elements must be present to ensure high quality?
- How many levels do I want?
- What is a clear description of each achievement level?
- Rubrics are for you and the students
- Ask students for feedback on the rubrics

Getting started...

- Consider a 4 – 3 – 2 – 1 scale where a “3” means that the student has completed the project in a satisfactory manner (generally a low B or high C)
- Write the “4” description first
- Don’t try to cover too many different skills or content areas within one rubric



Affective Rubrics

- * Criteria or levels of accomplishment could be tied to Affective Domain levels: Receiving, Valuing, etc.
- * Affective Domain Evaluation Tools for educating USA EMS instructors include descriptions of specific competencies with competent/not competent scoring. Example: “Not allowing personal bias to, or feelings to, interfere with patient care; placing the needs of patients above self-interest...”

Affective Domain Evaluation Tools, appendix V in Instructions for Affective Student Evaluations (2002)

Additional Resources

1. A comparison of Cognitive and Affective

http://search.asee.org/search/fetch;jsessionid=78ulu50eooeie?url=file%3A%2F%2Flocalhost%2FE%3A%2Fsearch%2Fconference%2F24%2FAC%25202000Paper443.pdf&index=conference_papers&space=129746797203605791716676178&type=application%2Fpdf&charset=

2. The Affective Domain: Beyond simply knowing

<http://emedia.rmit.edu.au/atnassessment09/sites/emedia.rmit.edu.au.atnassessment09/files/215.pdf>

3. Ensuring Reliability and Validity –pg. 3

https://www.press.jhu.edu/journals/portal_libraries_and_the_academy/portal_pre_print/archive/articles/13.4rimland.pdf

4. Attitudes and attitude change -

http://epltt.coe.uga.edu/index.php?title=Teaching_and_Learning_in_Affective_Domain

5. Student Motivations and Attitudes: The Role of the Affective Domain in Geoscience Learning: Assessment Tools for the Affective Domain (Carleton U.)

<http://serc.carleton.edu/NAGTWorkshops/affective/index.html>

6. Affective Domain Evaluation Tools: Instructions for Affective Student Evaluations (National Guidelines for Educating EMS Instructors)

<http://www.nhtsa.gov/people/injury/ems/Instructor/Appendix%20V%20-%20Affective%20Domain%20Evaluation%20Tools.pdf>.

7. Teaching and Learning in Affective Domain (Mary Miller)

http://epltt.coe.uga.edu/?title=Teaching_and_Learning_in_Affective_Domain

8. Higher Education for Sustainability: Seeking Affective Learning Outcomes (Kerry Shephard)

<http://class.web.nthu.edu.tw/ezfiles/669/1669/img/1381/2.Highereducationforsustainability-seekingaffectivelearningoutcomes.pdf>

9. Affective Learning in General Education (Susan Gano-Phillips)

http://www5.cuhk.edu.hk/oge/oge_media/rcge/docs/journal/issue_06/01_susanganophilips.pdf

10. Using Affective Assessments -

http://www.aafcs.org/res/Essential_Tools/Using_Affective_Assessments.pdf

11. We Feel, Therefore We Learn: The Relevance of Affective and Social

Neuroscience to Education. <http://onlinelibrary.wiley.com/doi/10.1111/j.1751-228X.2007.00004.x/full>