Measuring "Immeasurable" Student Outcomes

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Drawing on research in cognitive, personality and developmental psychology, this workshop will help participants to understand how to approach measurement of those cognitive and noncognitive outcomes (e.g., critical thinking, intellectual development, problem-solving, goal orientation, diversity awareness, ethical development, leadership) that at first seem to be "immeasurable."

Outline of Workshop

1. Introductions

2. Why is this topic so important?

   - These outcomes are not ineffable and they are very important to student learning and development so there is a need to respond to those who ask the question, "but can it be measured?"

     How should we respond to this question?

   - There is a trend toward emphasizing **s**pecific, **m**easurable and verifiable, **a**greed upon, **r**ealistic and yet rigorous, and **t**ime-bound (SMART) outcomes (e.g., Students who complete the career seminar series will be able to articulate three possible career paths for their degree program upon graduation.)

     What is the problem with this approach?

   - We *must* keep assessment meaningful to faculty, and academic support and student affairs practitioners.

     How do we best do this?

3. An alternative to the SMART approach: "TAIM" steps to approaching complex outcomes:

   Begin with a **T**heory when possible- let it frame your work

   Map outcomes to intentional instructional **A**ctivities

   Specify criteria or **I**ndicators

   Use **M**ultiple measures

Important Psychological Constructs for Student Learning Outcome Assessment

Cognitive / Intellectual Outcomes:

Application / Transfer of Knowledge
- Theory of situated learning
- David Kolb's active experimentation
- Robert Sternberg's practical intelligence

Creativity
- Robert Sternberg's creative intelligence
- Howard Gardner's creativity
- DeBono's lateral thinking

Critical Thinking / Decision Making
- Diane F. Halpern's critical thinking in relationship thought and knowledge
- Bloom's taxonomy
- Ellen Langer's mindfulness
- Scott Plous' psychology of judgment and decision making
- Tyversky & Kahneman on heuristics and biases

Intellectual Development
- William Perry's theory of intellectual development
- Baxter Magolda self-development
- Belenky's women's ways of knowing
- King and Kitchner's reflective judgment
- Schommer's epistemological beliefs

Lifelong Learning / Curiosity
- Cacioppo & Petty's need for cognition
- McCrae & Costa's openness to experience
- Silvia's psychology of interest

Problem Solving
- Robert Sternberg's successful intelligence
- Herbert A. Simon's incubation
- Bransford's steps for problem solving

Reflection
- King and Kitchener's reflective judgment
- David Kolb's observation and reflection
- Metacognition

Social / Interpersonal Outcomes:

Civic and Community Engagement / Social Responsibility

- Ellen Greenberger's model of psychosocial maturity- social adequacy
- Astin's involvement theory
- McMillian & Chavis' psychological sense of community
- L. Berkowitz's social responsibility
- Batson's altruism

Diversity Awareness

- Allport's contact theory
- Rokeach's open mind
- Braskamp's global perspective
- Miville's appreciating similarities and valuing differences
- Sedlacek's valuing diversity
- Shealy's equilintegration theory
- Bennett's developmental model of intercultural sensitivity
- Cross' black racial identity development model
- Helms' white racial identity development model
- Cass' gay and lesbian identity development model

Empathy

- McCrae & Costa's agreeableness in the big five personality factors
- Michael Cawley's virtue factor of empathy
- Carl Roger's person-centered psychology
- R.B. Cialdini's empathy in relationship to helping
- Nancy Eisenberg's sympathy and empathy

Intimacy / Interpersonal Trust

- Shaver's adult attachment theory
- Erik Erikson's psychosocial stage of intimacy
- Robert Sternberg's triangular theory of love
- Julian B. Rotter's interpersonal trust
- Ellen Greenberger's model of psychosocial maturity- interpersonal adequacy
- Chickering's freeing interpersonal relationships vector

Leadership

- Social Change model of leadership
- Fleishman's taxonomy of leadership activities
- Bass and Avolio's transformational leadership
- David McClelland's leadership motive pattern

Recognition of Individual Personal Differences in Others

- Howard Gardner's multiple intelligences
- Myers-Briggs personality types
- John Holland's theory of vocational personality types

Personal / Individual Outcomes:

Emotional Awareness and Management

- Mayer & Salovey's emotional intelligence
- Kihlstrom & Cantor's social intelligence
- Saarni's emotional competence
- Chickering's managing emotions vector

Ethical / Values Development

- Lawrence Kohlberg's stages of moral reasoning
- Carol Gilligan's theory of women's moral development
- Shalom Schwartz's universal values
- Chickering's developing integrity vector

Identity / Maturity

- Erik Erikson's psychosocial stage of identity
- Chickering's developing a purpose vector
- Ellen Greenberger's model of psychosocial maturity- individual adequacy
- Seymour Epstein's self-concept

Intrinsic Motivation / Goal Orientation

- Midgley's patterns of adaptive learning
- Pintrich's goal orientation
- Covington's intrinsic motivation
- Schank's goal-based scenarios
- Vallerand's academic motivation

Optimism / Hope

- Martin Seligman's learned optimism
- C.R. Snyder's hope
- Scheier & Carver's life orientation

Perseverance / Resilience

- Michael Cawley's virtue factor of resourcefulness
- Kumpfer's internal resilience factors
- Deci & Ryan's self-determination theory

Self-awareness

- Mark Snyder's self-monitoring
- Abraham Maslow's characteristics of self-actualized individuals
- Hazel Markus' self-schema
- Higgins' self-discrepancy theory
- Carl Roger's congruence

Self-control

- Baumeister's self-control
- Walter Mischel's delay of gratification
- Carver & Scheier's control theory

Self-efficacy

- Albert Bandura's theory of self-efficacy
- Chickering's competence vector
- Carver & Scheier's self-efficacy

Self-regulation

- McCrae & Costa's conscientiousness in the big five personality factors
- Julian Rotter's internal locus of control
- Albert Bandura's theory of agency

Transition

- Schlossberg's transition theory
- Bridge's stage theory
- Sanford's theory of challenge and support

Well-being / Happiness

- Mihaly Csikszentmihalyi's flow as the optimal experience
- Diener's subjective well-being
- Carol Ryff's dimensions of well-being
- Martin Seligman's authentic happiness

Mapping Outcomes to Intentional Teaching Activities

Map 1-3 of your outcomes to your intentional teaching activities (see worksheet).

What are you doing to intentionally teach your outcomes?

What does this tell you about where you might assess these outcomes?

What criteria are you using to know whether students are getting these outcomes?

Defining Criteria or Indicators

"Criteria describe the skills, understandings, structures, and kind of thinking we want our learners to reveal in the work that they produce to demonstrate achievement of outcomes." (Driscoll & Wood, 2007, p. 98)

"Developing criteria and standards of judgment provides a means to document and examine patterns of student achievement: the intellectual complexity, creativity, application of disciplinary logic, behaviors, and dispositions that provide evidence of integrated learning." (Maki, 2004, p. 119)

"An important key to direct assessment based on classroom work is making criteria very clear and explicit in writing. This does not drive you back to only "objective measures"; it simply means that the judgments a trained professional makes about her students' work now must be captured as clearly as possible in explicit language." (Walvoord, 2004, p. 19)

Using Multiple Measures

Have you explored….

- Measures based on a theory?
- Products or possible products of your intentional teaching activities?
- Both direct and indirect measures?
- Both quantitative and qualitative measures?
- Reflective responses of students?
- Responses of knowledgeable others?
- Institutional data?

Educational Activities Mapping Worksheet

Write outcomes and activities in the appropriate boxes and place an "X" in the boxes to represent how outcomes are linked with activities.*

Outcome Statements: What will students be able to do or know as a result of your program/services?	**Planning:** Action Items/Significant Activities/Programming How do you intentionally teach what is in your learning outcomes? What programming or activities do you provide for students?					
	Activity 1:	Activity 2:	Activity 3:	Activity 4:	Activity 5:	Activity 6:
Outcome 1:						
Outcome 2:						
Outcome 3:						
Outcome 4:						

***Mapping can specify whether or not the outcome is addressed in each program or service or can specify how much the outcome is being addressed. Some examples of this are to specify two levels (e.g., surface vs. deep; low vs. high) or three levels (e.g., introduced, developed, mastered; occasionally, usually, always).**

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