

Finding Out How Well Students Are Learning What We're Teaching

An Introduction to Classroom Assessment Techniques

1

Tom Angelo
*Professor of Higher Education and Director,
University Teaching Development Centre*
Victoria University of Wellington

tom.angelo@vuw.ac.nz

2

Bi-national Background Knowledge Probe

Please answer in relation to New Zealand and the USA.
Guessing is encouraged!

	NZ	USA
1. Population?	_____	_____
2. Area in sq kilometres?	_____	_____
3. Name of top national elected official?	_____	_____
4. % Indigenous?	_____	_____
5. # of medical schools?	_____	_____

3

Goal Ranking & Matching Exercise

On the lines below, please list three or four goals (or learning objectives) you hope to achieve – things you hope to learn or questions you hope to answer – by participating in this session.

Your Learning Goals for this Session?

4

Stated Learning Objectives for this Session

1. Find out what Classroom Assessment (CA) is, how it works, and how it can help your students become more effective, efficient learners
2. See examples of simple, adaptable CA techniques
3. Review practical, field-tested guidelines for success
4. Prepare to adapt and try out at least one new CAT to assess and improve your students' learning

5

Why Assess Learning? - 1

Summative purposes

- To compare learners against each other
- To compare learning against criteria
- To certify competency
- To award qualifications
- To ration resources

6

Why Assess Learning? - 2

Formative purposes

- To focus learners' attention
- To illuminate and undermine misconceptions
- To increase motivation to learn
- To provide learners with feedback
- To improve performance
- To promote self-assessment & monitoring
- To develop independent, lifelong learning

7

Classroom Assessment is . . .

- a simple, formative method faculty can use to collect feedback, early and often, on how well their students are learning what they are being taught.
- The purpose of CA is to provide teachers and students with information and insights needed to improve teaching effectiveness and learning quality.
- College instructors use feedback gleaned through CA to inform adjustments in their teaching.
- Faculty also share feedback to help students improve their learning strategies and study habits, in order to become more independent, successful learners.

8

Bi-national Background Knowledge Probe

Answers – *Always to be verified!*

	NZ	USA
1. Population?	4.1 million	295 million
2. Area in sq. kilometers?	355,000	9.2 million
3. Nation's elected leader?	Helen Clark	G.W. Bush
4. % Indigenous?	15%	1%
5. # of medical schools	4	?

9

FIVE DIMENSIONS OF HIGHER LEARNING

Approximate percentage of the instruction *you* got in your undergrad years in . . .

What percentage of their instruction *your students* need now in . . .

_____	Declarative Learning Learning facts and principles	_____
_____	Procedural Learning Learning skills and procedures	_____
_____	Conditional Learning Learning applications	_____
_____	Reflective Learning Learning to understand one's self & others	_____
_____	Metacognitive Learning Learning to direct & improve one's learning	_____

10

Background Knowledge Probe

In response to each problem below, circle the number (1-4) that best represents your current knowledge. If you circle (4), please go ahead and solve the problem on the attached sheet.

- I. Suppose that you have a bag of M&M candies (plain, no peanuts) that contains 22 light brown, 20 dark brown, 18 yellow, 14 green, 12 orange, and 11 red M&Ms. If you draw one of these M&Ms out at random, what are the probabilities that it will be:
- (a) yellow? (b) red? (c) neither yellow nor red?
- (1) I have no idea how to solve this problem
 (2) I knew how to solve problems like this, but have forgotten
 (3) I think I could solve it, given enough time
 (4) I'm sure I can solve it right now

11

Concept Test

Circle the variable in each pair that you would expect to have the greater standard deviation:

- 1a. adult humans' heights 1b. adult humans' weights
 2a. domestic dogs' weights 2b. domestic cats' weights
 3a. oral language skills of 12-year-olds 3b. math skills of 12-year-olds
 4a. hours students spend in this classroom 4b. hours students spend studying for this class

12

The Minute Paper

Please answer each question in 1 or 2 sentences:

1) What was the most useful or meaningful thing you learned during this session?

2) What question(s) remain uppermost in your mind as we end this session?

13

The RSQC2 Technique

- ***Recall***
- ***Summarize***
- ***Question***
- ***Comment***
- ***Connect***

14

The Muddiest Points

Please answer specifically and briefly.

What were the "muddiest" points in today's lecture?*

(In other words, what was least clear to you?)

* or lab or reading or discussion or . . .

15

Effective Feedback is . . .

- ***Timely***
- ***Focused***
- ***Forward-looking***
- ***Coherent***
- ***Consequential***

16

To Use Feedback Well . . .

Learners Need M.O.M.

- ***Motivation***
- ***Opportunity***
- ***Means***

17

The Order in Which We Give Feedback Matters

Consider the following five steps:

- 1st - Good News: What was done well
- 2nd - Bad News: What still needs improvement
- 3rd - Options: What can be done to improve it
- 4th - Plans: What the learner intends to do
- 5th - Commitments: What both parties agree to do, how, to what standard, and by when

18

The Pro/Con Grid

Cons/Costs of

Pros/Benefits of

Unanswered questions to follow-up

19

ANGELO'S SEVEN AXIOMS of CLASSROOM ASSESSMENT

Field-tested Guidelines for Success

1. Don't ask if you don't want to know.
2. Don't collect more data than you can easily and quickly turn into useful information.
3. Don't simply adopt methods and techniques from others, adapt them to your subject and students.

20

ANGELO'S SEVEN AXIOMS of CLASSROOM ASSESSMENT - 2

4. Before using a CAT, always ask yourself:
How might responses to this question help me and my students improve learning?
(If you can't answer that, the assessment is probably *not* worth doing.)
5. Take advantage of the "Hawthorne Effect."
Let students know why you are using CATs and how you hope it will benefit them.
You'll be more likely to find what you are looking for.

21

ANGELO'S SEVEN AXIOMS of CLASSROOM ASSESSMENT - 3

6. Remember: If an assessment is worth doing, it's worth teaching students how to do it well.
7. Make sure to close the "feedback loop" by letting students know what you've gleaned from their responses – and how you and they can use that information to improve learning.

22

Applications Card

DIRECTIONS: Please take a moment to recall the ideas, techniques, and strategies we've discussed – and those you've thought up – to this point in the session. Quickly list as many possible applications as you can. Don't censor yourself! These are merely possibilities. You can always evaluate the desirability and/or feasibility of these application ideas later.

Interesting
IDEAS/TECHNIQUES

Possible
APPLICATIONS

23

For more information

Tom.Angelo@vuw.ac.nz

Angelo, T.A. & Cross, K.P. (1993). *Classroom Assessment Techniques: A Handbook for College Teachers*, 2nd edition. San Francisco: Jossey-Bass.

24

***Thanks for your participation
and patience thus far.***

**Now it's time for your
questions, comments,
muddiest points, feedback,
and . . .**

25