USING CLASSROOM ASSESSMENT TO UNDERSTAND STUDENT LEARNING

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Overview

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  3. Possible Impacts on the Learning Process
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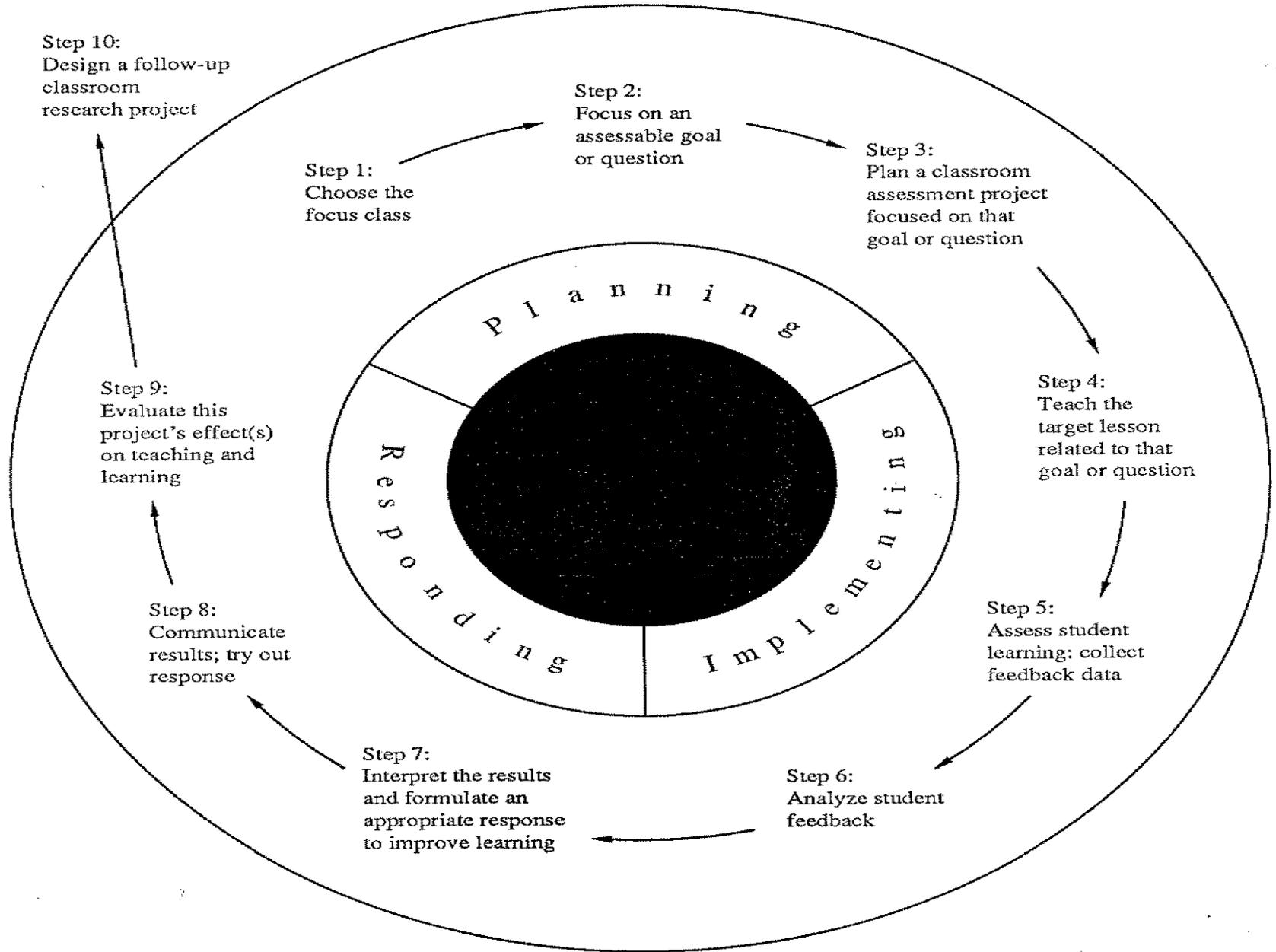 7. Teaching Goals Inventory

Definitions

☐ Classroom Assessment Techniques are:

  ◻ Simple, non-graded, anonymous, in-class activities that give both you and your students useful feedback on the teaching-learning process (http://www.ntlf.com/html/lib/bib/assess.htm)

  ◻ Formative evaluation methods that can help assess the degree to which students understand course content and the effectiveness of teaching methods. (http://www.celt.iastate.edu/teaching/cat.html)

Definitions

- Classroom Assessment Techniques are part of a broader Classroom Assessment approach which is[1]:

  - <u>Learner-centered</u>
    - (the focus is on the learning going on)

  - <u>Teacher-directed</u>
    - (respects the judgment of the instructor on what to assess, how to assess, and what use to make of the results)

  - <u>Mutually Beneficial</u>
    - (helps student to focus on their grasp of course concepts and faculty to focus on essential message they want to share)

  - <u>Formative</u>
    - (goal is to improve learning not evaluation or grading)

  - <u>Context Specific</u>
    - (responds to idiosyncratic needs of a particular teacher with a particular group of students in a specific course)

  - <u>Ongoing</u>
    - (creation of a feedback loop throughout the course)

1 Angelo & Cross (1993), Classroom Assessment Techniques, pp 4-6

Step 10:
Design a follow-up classroom research project

Step 1:
Choose the focus class

Step 2:
Focus on an assessable goal or question

Step 3:
Plan a classroom assessment project focused on that goal or question

Step 9:
Evaluate this project's effect(s) on teaching and learning

Step 4:
Teach the target lesson related to that goal or question

Step 8:
Communicate results; try out response

Step 5:
Assess student learning: collect feedback data

Step 7:
Interpret the results and formulate an appropriate response to improve learning

Step 6:
Analyze student feedback

Planning

Implementing

Responding

Angelo & Cross (1993). Figure 4.1 Map of the Classroom Assessment Project Cycle. Pg. 35

Example #1
Background Knowledge Probe

☐ Please answer the questions for each of the three individuals.

	Sigmund Freud	B. F. Skinner	Dr. Phil McGraw
Major Theory?			
Major Field of Expertise?			
Most Famous Written Work?			
Birthplace?			
Impact on Modern Society?			

Example #1
Background Knowledge Probe

□ Please answer the questions for each of the three individuals.

	Sigmund Freud	B. F. Skinner	Dr. Phil McGraw
Major Theory?	Psychoanalysis	Operant Conditioning	Cognitive /Behavioral
Major Field of Expertise?	Neurology/ Psychiatry	Psychology	Psychology
Most Famous Written Work?	Interpretation of Dreams (1905)	Beyond Freedom and Dignity (1971)	Life Strategies (1999)
Birthplace?	Freiberg, Moravia (Pribor, Czech Republic)	Susquehanna, PA	Vinita, OK
Impact on Modern Society?	High	Higher??	Do we want to know? ☺

Background Knowledge Probe

- What can we learn from this?
  - Useful at beginning of a section to determine prior knowledge
  - Identify gaps or misconceptions
  - Answers can be used to direct an extrapolation from the facts (like the impact question)
  - Serve as a preview to student of what will be focus on next section of material
  - Can be adapted (i.e. focus only on one concept/process)

Possible Impacts of CATs on the Learning Process

- For Faculty:

  - Provide quick feedback to use the next class

  - Identify the successes in students' learning

  - Highlight misconceptions or lack of understanding

  - Foster good working relationships with students

  - Provide sign to students that both teaching and learning are on-going processes that require full participation

Possible Impacts of CATs on the Learning Process

- For Students:
  - Develop self-assessment skills

  - Increase interaction with and ability to think about course content

  - Foster attitudes that value understanding and retention

  - Shows professors care about their learning

Successful Planning

- Five starting thoughts
  - Follow your professional judgment. If a technique doesn't appeal to your professional judgment, don't use it.
  - Avoid self-inflicted burdens. Make use of one or two really well planned techniques.
  - Try the techniques out yourself first before using with students.
  - Allow for more class time than you think to use the technique.
  - Close the loop by sharing with students what you learned from the technique and how you both could use it to improve learning.

Brainstorming #1

- Consider a challenge you have in understanding the learning going on in one of your courses.
    1. Which one of your courses appears to be a good spot to try a CAT?
    2. Which lesson or topic in that course would you like to investigate via a CAT? (i.e. which concepts are students struggling with?)
    3. Lets discuss a little bit before moving on.

Example #2 Pro/Con Grid

☐ Considering the current concerns in Wisconsin about Voter ID rules, create a grid and list 3 pros and 3 cons of the State of Wisconsin requiring a photo ID to vote.

	Pro	Con
1		
2		
2		

Example #2 Pro/Con Grid

☐ Considering the current concerns in Wisconsin about Voter ID rules, create a grid and list 3 pros and 3 cons of the State of Wisconsin requiring a photo ID to vote

	Pro	Con
1	May reduce incidence of fraud	May prevent qualified voters from voting due to financial need or lack of access to DMV office.
2	May make poll workers tasks easier.	Creates extra burdens for particular sectors of voters, (elderly, college students)
2	Would prevent challenges to results on the issue of valid voters	May not deal with issue of fraud when felons try to vote

Example #2 Pro/Con Grid

What can we learn from this CAT?

- [ ] Assess a deeper skill of critical thinking

- [ ] See the depth and breadth of students analyses

- [ ] Ability of students to show objectivity

- [ ] Ability to go beyond first reactions and weigh competing ideas

Example #3 One sentence Summary

- For the concept of classroom assessment techniques, please write a one sentence summary.

  - First consider Who does what to whom, when, where, how, and why?

  - Then formulate a one sentence summary. No limit on length but please maintain good structure and grammar.

One Sentence Summary

- From Angelo and Cross (1993, pg 184)
- Who? Teachers
- Does what? Assess
- To what or whom? Their students' learning
- When? Regularly during the semester
- Where? In their own classrooms
- How? Using CATs
- Why? So they can understand and improve teaching effectiveness and quality of learning

- "Teachers assess their student's learning regularly during the semester in their own classrooms, by using CATs, so that they can understand and improve teaching effectiveness and the quality of student learning."

Example #3 One sentence Summary

What do we learn from this CAT?

- Ability of students to synthesize information

- If students have gotten the picture on the important elements of the concepts

- Helps students practice "chunking" of information

- Adaptable

  - Focus could be on plots of novels, chemical reactions, political processes

Example #4: K-W-L-S (Know, Want to know, Learned, Still need to learn)

Know	Want to know	Learned	Still need to learn
How I know	**How I will find out**	**Sources**	**How I will find answers**

Directions: K-W-L-S (Know, Want to know, Learned, Still need to learn)

- Pre-reading assignment: K-W
  - Good activity to do with entire class
  - Assigned reading or students plan how they will learn

- At end of class: L-S
  - Individual or group assessment of learning
  - S gives information about student synthesis, inquiry processes
  - L and S gives information about student use of knowledge sources

Example # 5: Punctuated lecture

- Choose a lecture that can be broken into 10-15 minute segments
- Don't forewarn students before first "punctuation"
  - Reflect, then Write:
    - How well you were listening?
    - What connections were you making?
    - What did you expect to come next?
  - Repeat after next segment
  - Collect self-assessments at end of class

Example #6: Muddiest Point

- At beginning of class:
  - Ask students to indentify 3 muddiest points of a homework assignment
  - Classify responses by categories on board
  - Use for class lecture/discussion

- At end of class:
  - Exit slip: Three muddiest points of class discussion
  - Discuss responses and clarify at beginning of next class

Example #7: Student Self-Confidence Check

- Short checklist of specific skills students need to succeed in your course or that are the focus of your course.

- Students mark their level of confidence related to each skill.

- Your review then shapes the focus of future lessons or need for review of past lessons.

Example #7: Student Self-Confidence Check

Student Research Skills Using a Library Search Engine

Directions: Please indicate below your level of confidence to complete the actions related to using a library search engine to find research information for our class paper. Please be as honest as you can so I can help to provide the support the class needs to complete our assignment.

Skill	Your level of confidence			
1. Finding a relevant search engine	None	Low	Medium	High
2. Narrow the results of my search to only the most useful articles	None	Low	Medium	High
3. Seek the assistance of a reference librarian	None	Low	Medium	High

Brainstorm #2: Your Plan

- Take some time to sketch out a plan to introduce a CAT into your course.

- How could we pull students into a short task to understand what is going on?

- Outline using our handout the steps you might take to use a CAT, review the information, and feed it back into the course lesson.

Brief Review

Classroom Assessment Techniques:

- Quick means to gather info about learning and impact of teaching activities

- Many possible types with adaptability for each situation

- Can address knowledge but also attitudes, self-awareness, and reactions to instruction methods.

- Can focus on particular concerns

- Can become a regular part of course

Teaching Goals Inventory (Angelo & Cross, 1993)

- Focused tool (53 items) on understanding your goals of instruction
- Can be used in conjunction with the CATs book (pg113) to identify specific techniques that may suit your goals.

Goals of Instruction	Possible CAT to employ
1. **Higher Order Thinking Skills**	**One Sentence Summary**
2. **Basic Academic Success**	**The Muddiest Point**
3. **Discipline Specific Knowledge & Skills**	**Application Cards**
4. **Liberal Arts and Academic Values**	**Pro and Con Grid**
5. **Work and Career Preparation**	**One Sentence Summary**
6. **Personal Development**	**Reading Rating Sheets**

- Paper Version in Angelo & Cross (1993)
- Online version: http://centeach.uiowa.edu/tools.shtml

[2]Murray, S. (August, 2006). Using Classroom Assessment Techniques, 8th Annual UWL Conference on Teaching and Learning.

Resources

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

- Angelo, T. A. (ed). (1998). Classroom assessment and research: An update on uses, approaches, and research findings. New Directions for Teaching and Learning, 75. San Francisco: Jossey-Bass.

- Cross, K. P., & Steadman, M. H. (1996). Classroom research: Implementing the scholarship of teaching. San Francisco: Jossey-Bass.