Using Critical Reflection Exercises to Enhance Student Learning

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Flex Day Fall 2012
Practical Steps & Strategies to Engage Students in Critical Reflective Thinking

Samples of Reflective Prompts & Question Stems for Bloom’s Taxonomy

Practical Exercises
- Idea Sheet
- One-Minute Paper
- Think-Pair Share
- Mind Map
Sage on the Stage!
Do you agree with this statement?

“Some people study all their life and at their death they have learned everything except to THINK”

– Francois Domergue
Can you answer this question?

- As an instructor, how do you know that learning has occurred?
- Use **Idea Sheet** to take notes for End-of-Session Mind Map Team Activity
Think–Pair–Share
What do you think?

1. Do you want your students to do more in class than recite facts and state opinions?
2. Is it important for you that your students demonstrate an ability to think through important course concepts?
3. Why is Critical Thinking Important?
4. What are some of the attributes of Critical Thinking?
5. Does Critical Thinking Occur Naturally in Adults?
1. “Memorizing IS NOT learning”! (Rusten & Schuman, Slideshare May 2, 2012)
2. To learn is to think!
3. To think poorly is to learn poorly!
4. Being open minded is considerate, not myopic!
5. CT helps to question own belief systems!
6. To think well is to learn well!
Defining Critical Thinking

Some Attributes of a Critical Thinker:

- Asking pertinent questions
- Evaluates statements & arguments
- Admits a lack of knowledge & understanding
- Willing to examine beliefs, assumptions & opinions
- Curiosity
- Seeks new solutions
- Actively shares new knowledge
- Sees critical thinking as a life-long process of self-assessment
- Seeks proof
- Sees critical thinking as a life-long process of self-assessment
- Distinguishes between facts and opinion
- Sees critical thinking as a life-long process of self-assessment
- Reflective
- Accepts others beliefs and opinions
- Actively enjoys learning
- Open to changing ones mind
- Seeks evidence to support assumptions and beliefs
- Waits till all facts before making judgments
- Seeks clarity and exactness
- Humility
- Careful and active observer
Does Critical Thinking Occur Naturally in Adults?

- Not necessarily
- Adults may experience something that prompts reflective thinking—loss of a job, a marriage, divorce, new career—evaluate one’s life
- Events can prompt reflection and introspection
- “It is necessarily thinking in a critically reflective manner about the adult’s beliefs that does not occur naturally or in a classroom learning process.” (Johnson 2012)
Critical Thinking vs. Critical Reflection

- **Critical Thinking** is a process of students utilizing logic and reasoning when interacting with information.
  - Done through *practicing* techniques to think critically.
  - Focused thinking.

- **Critical Reflection** is a method of examining assumptions that adult students possess and then questioning those beliefs.
  - Done through Introducing, Engaging, Coaching, and Encouraging Students to think critically!
High quality thinking comes with routine practice in internalizing and applying theoretical structures (2008, p. 33)

- Students need routine practice
  - Internalizing concepts
  - Applying concepts
- Evaluating their work
Can Critical Thinking & Reflection be Taught?

- No. Adults must learn about these concepts processes first, then implement through practice.
- Adults may not be familiar with methods to examine their belief systems in a critically reflective manner unless they have been **prompted** to use these skills.
1. Clearly defined Student Learning Outcomes (SLOs) with higher level Bloom’s Taxonomy goals
2. Design the Reflection Activities to Achieve SLOs
3. Engage Students in Reflection
4. Assess Learning through Critical Reflection (Jacoby in Bart, Faculty Focus, May 11, 2011)
Original & Revised Bloom’s Taxonomy

Benjamin Bloom, 1956

Anderson & Krathwohld, 2001
What strategies do you use in your classes to evoke critical reflection?
Strategies to evoke critical reflection

- In-Class & Online Discussions
- Role Playing & Group Activities
- Individual Journaling Private Chats
- Think–Pair–Share
- Real–World Articles/Cases
- Reflective Writing Exercises
- Letters to Successors--how to survive the class
- One–Minute Paper
- Math– Conduct experiment/survey using statistics
- Personal Goal Statement
- Mind Maps
Practical Steps & Strategies to Engage Students in Critical Reflective Thinking
Typical End-of-Class Wrap-Up

- Ok. Thanks everyone! Contact me with questions. . . See you next week!
- Dead end comments!
- How about the “What, So What, Now What?” Closing?
- Encourages students to think more complexly, bigger!
- Begin with the end in mind!
- What do I want learners to DO with what they have learned today AFTER class?

- Evokes critical reflection
- Any discipline
- Example:
  - What did I learn?
  - So, what does it mean for me?
  - What does it mean to me in the context of other learning done in this class or other classes?
  - Now, what am I going to do about (or with) what I have learned or experienced?

*Work BACKWARDS to evoke answers to questions!*
CATS (Classroom Assessment Techniques) by Angelo & Cross (1993). Ongoing assessments and reflections to monitor critical thinking.

Examples:
- “What was the most important thing you learned in today’s class?”
- “What one question related to this lesson remains uppermost in your mind?”
- “How is what you learned today relevant to other classes of life outside of school?”
Cooperative Learning Assignments

- Structured groups to foster critical thinking
- Structured question stems to evoke critical reflection
- Examples:
  - Clear-cut Prompts
  - Role Playing & Group Activities – Take sides
  - Think–Pair–Share– Debate an issue
  - Team Article and Case Analyses– Don’t provide all of the answers! Let them think e.g., pros/cons
Formative vs. Summative Assessments

- **Formative**—Assess prior to and during class
  - Traditional M/C, T/F, Essays
  - Pre-tests
  - Scavenger Hunts
  - Think-Pair-Share
  - Guided Reflections—Aha! Moments
  - One-Minute Papers
  - Clickers

- **Summative**—Assess at end of class or specific instruction
  - Traditional M/C, T/F, Essays
  - Post-tests
  - Letters to Successors
  - Guided Reflection/Debrief
  - Portfolios
  - End-of-Course Surveys
Best Way to Engage Students?

- Carefully crafted assignments
- Guided Prompts
- Proper Scaffolding
- Examples:
  - Analyzing an Article
  - Analyzing a Visual Image, Movie, or Art Object
  - Blue-Sky questions, such as “What are your goals for this class this semester?”
  - “What do you plan to do with the information you learn in this class?”
Extended learning questions, such as create, evaluate, and analyze. versus lower-level questions.

Create:
  Can you create new and unusual uses for___?
  Can you design a___ to___?

Evaluate:
  Do you agree with____?
  Prioritize_____.
  How would you decide about___?

Analyze:
  Classify___ according to___.
  What solutions would you suggest for___?
  Outline/diagram_____.

(See Handout “WCPSS AG Program 2009.”)
Conceição and Lehman (2010) contend those online instructors who assign reflective practice activities may be viewed as “being there” (p. 1) or present in the online learning environment to guide and transform students’ learning experiences (Marchi & Ciceri, 2011).

Yet, all content to be learned must be intellectually constructed!
What is Reflective Learning?

- Reflective learning is based on an appreciative reflection (Marchi & Ciceri 2011)
- Adult learning is enhanced when instructors help learners develop critical thinking and critical reflection skills (Johnson 2012)
- It may not be a straight-forward, tidy student exercise—Scaffolds help!
- Can lead to broader discussions
Write Theme in Center of horizontally aligned paper with no boundaries.

Need markers, poster board, masking tape, your brain, creativity, a sense of fun!
References


Rusten & Schuman, Slideshare May 2, 2012