Using Bloom’s Taxonomy to Foster Critical Thinking

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Adult Studies Webinar
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Basics of Bloom’s Taxonomy

Named for Benjamin Bloom
First published in 1956
Revised in 2000
Focus on Cognitive learning domain
Original Version (1956)

BLOOMS TAXONOMY

EVALUATION
- Assessing theories; Comparison of ideas;
  Evaluating outcomes; Solving; Judging;
  Recommending; Rating

SYNTHESIS
- Identifying and analyzing patterns;
  Organising ideas; recognising trends

ANALYSIS
- Using and applying knowledge;
  Using problem solving methods;
  Manipulating; Designing; Experimenting

APPLICATION
- Recall of information; Discovery; Observation;
  Listing; Locating; Naming

COMPREHENSION
- Understanding; Translating;
  Summarising; Demonstrating; Discussing

KNOWLEDGE
- Using old concepts to create new ideas;
  Design and Invention; Composing; Imagining;
  Inferring; Modifying; Predicting; Combining

Uses nouns to describe cognitive process
Revised Version (2000)

Bloom’s Taxonomy (Revised)

Creating

- Can the student create a new product or point of view?
  - assemble, construct, create, design, develop, formulate, write

Evaluating

- Can the student justify a stand or decision?
  - appraise, argue, defend, judge, select, support, value, evaluate

Analyzing

- Can the student distinguish between different parts?
  - appraise, compare, contrast, criticize, differentiate, discriminate, distinguish, examine, experiment, question, test

Applying

- Can the student use information in a new way?
  - choose, demonstrate, dramatize, employ, illustrate, interpret, operate, schedule, sketch, solve, use, write

Understanding

- Can the student explain ideas or concepts?
  - classify, describe, discuss, explain, identify, locate, recognize, report, select, translate, paraphrase

Remembering

- Can the student recall or remember the information?
  - define, duplicate, list, memorize, recall, report, state

Uses verbs to describe cognitive process
Place the verbs in the correct level of Bloom’s name

name complete decide
invent explain list
discuss classify investigate
justify construct find
solve categorize recommend
design predict
Level 1: Remembering

Basic recall and remembering of facts

Sample Q: Tell me the main events in “The Cask of Amontillado” and “The Masque of the Red Death”
Level 2: Understanding

Understanding of facts and ideas
Using materials without knowing full implications

Sample Q: Compare and contrast Montresor of "The Cask of Amontillado" and Prince from "The Masque of the Red Death"
Level 3: Applying

Making use of the knowledge and information

Problem solving

Sample Q: Sketch a picture of the Prince’s apartments according to the description in “The Masque of the Red Death.” Interpret what each color and room represents.
Level 4: Analysis

Examining and breaking apart information

Making inferences and giving evidence to support a claim

Sample Q: Which story do you feel makes the best use of figurative language to create a feeling of uneasiness and suspense? Cite evidence from the text.
Level 5: Evaluating

Making a judgement regarding the information

Defending opinions and judgements

Sample Q: Where Prince’s actions in “The Masque of Red Death” noble? Why or why not?
Level 6: Creating

Producing and generating ideas independently using knowledge and information

Thinking abstractly

Sample Q: After several weeks reading selections by Poe, discussions of plot and character development, mood, tone, students will write their own scary/suspenseful short story.
Why do you need Blooms?

Objectives are important!

Benefits the instructor by helping organize and create a framework for content

Helps clarify objectives to instructor and students alike

Helps the instructor plan, instruct, effectively design and implement assessments

Ensures instruction and assessments match

Moves collegiate and graduate learners beyond mere recitation of facts
Using Bloom’s with Undergraduate and Graduate Learners

Common problems:

Instructor temptation to remain at the lower levels (going beyond takes planning and work)

Learners who have not developed critical thinking skills (skill level problem)

Learners who have not been challenged to go beyond remembering and understanding (emotional or confidence problem)

To overcome these problems, we need a strategy.
Strategy for Using Bloom’s Taxonomy

1. Make use of Blooms intentional
   ◦ Intentional when construction curriculum at all levels (program, courses, modules, activities).
   ◦ Intentional when teaching (lectures, discussions, activities, assessment)
   ◦ Intentionally use all levels of Bloom’s Taxonomy
   ◦ Tie YOUR course content to other courses in the program (schema)

2. Leverage principles of andragogy to reinforce the Bloom’s experience
## Principles of Andragogy

Malcolm Knowles’ four principles:

<table>
<thead>
<tr>
<th>Principle</th>
<th>Meaning</th>
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<tbody>
<tr>
<td>1. Adults need to be involved in the planning and evaluation of their instruction.</td>
<td>Adults learn when they want to learn. Timing is important.</td>
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<td>2. Experience (including mistakes) provides the basis for learning activities.</td>
<td>Provide plenty of opportunities for learners to participate, not just listen and perform</td>
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<tr>
<td>3. Adults are most interested in learning subjects that have immediate relevance to their job or personal life.</td>
<td>Use current cases that have nexus to their lives; use workplace situations. Let learners contribute.</td>
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<tr>
<td>4. Adult learning is problem-centered rather than content-centered</td>
<td>Let them analyze and solve problems on their own.</td>
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Make Bloom’s Intentional

1. Always consider Bloom’s when constructing questions to be used in discussion, homework and testing (Principles 1, 2, 3, 4).

2. Demand performance from learners at the desired level while demonstrating that same level of performance yourself. (Principles 1, 2, 4)

3. Give plenty of opportunities to develop skill at the desired level (Principle 3)

4. Use learning activities that are case or job focused (Principles 3, 4)

5. Use higher levels of Blooms when learners are more alert, fresh, focused and engaged (1)
Sample Question, Remembering

Basic recall and remembering of facts

Sample Q: Name the external drivers of organizational change.
Sample Question, Understanding

Understanding of facts and ideas
Using materials without knowing full implications

Sample Q: Describe the external drivers of organizational change and tell how you identify when they are present.
Sample Question, Applying

Making use of the knowledge and information

Problem solving

Sample Q: Identify the drivers of change that appear to be present in the case you just read.

OR

Use the change drivers to explain a current or past situation in your workplace.
Sample Question, Analysis

Examining and breaking apart information
Making inferences and giving evidence to support a claim

Sample Q: Contrast the effect of the organizational change on Department A with its effect on Department B.

OR

How would a leader with a Christian view of how people should be treated create a change implementation plan that differs from a humanist’s approach toward a change implementation plan?
Sample Question, Evaluating

Making a judgement regarding the information

Defending opinions and judgements

Sample Q: Critique (defend or refute) the leadership’s choice of change implementation methods based on the forces, conditions and desired outcomes in the field at the time of the decision.

OR

Is the modern view of change management compatible with a Christian worldview, especially in the areas of people’s relationship with God and people’s relationship with each other?
Sample Question, Creating

Producing and generating ideas independently using knowledge and information

Thinking abstractly

Sample Q: Design an organizational development intervention (change plan) for Bob’s House of Hubcaps.

OR

Write a leadership development plan (LDP)
Things That Help Facilitate Bloom’s

1. Use various media
   ◦ Cases from the text
   ◦ Cases brought in by learners
   ◦ Cases provided by the instructor
   ◦ BYOM...provide the case topic and let learners research the issue in class

2. Case analysis
   ◦ Quickly moves beyond remembering and understanding
   ◦ Insist that learners go beyond remembering and understanding....probe and push to get to analysis, evaluation and creating
3. Discussions and presentations
   ◦ Insist that learners go beyond identification and understand
   ◦ Done by coaching and teaching
   ◦ Reinforced and evaluated by rubric
   ◦ Insist that learners be specific and use correct terminology
   ◦ Done by coaching and teaching
   ◦ Reinforced and evaluated by rubric
Things That Facilitate Bloom’s, 3

4. Laddered questions: Questions that use several levels of Bloom’s Taxonomy simultaneously.

Question:

Effective leaders are social change agents who lead by both modeling and example, and can induce colleagues to pursue objectives held and shared by the educational leader and his/her supporters. Compare and contrast transactional, transformative, and servant leadership models. As you envision your future career in {field}, identify and describe an administrative dilemma or circumstance where you believe each of the leadership models would be most effective. Defend your choice in each case.

Now, let’s look at the same question and identify its Bloom’s elements:
Effective leaders are social change agents who lead by both modeling and example, and can induce colleagues to pursue objectives held and shared by the educational leader and his/her supporters. Compare and contrast transactional, transformative, and servant leadership models. As you envision your future career in {field}, identify and describe an administrative dilemma or circumstance where you believe each of the leadership models would be most effective. Defend your choice in each case.
Questions?