Adult Learning Modalities

Mr. Ben Crockett
Lesson Overview

• What do we know already?
• Domains
• Levels of leaning
• Knowledge types
• Assess objectives
• Group discussion
Why use Bloom’s taxonomy?

• Write and revise learning objectives
• Plan curriculum
• Identifies simple to most difficult skills
• Effectively align objectives to assessment techniques and standards

• Incorporate knowledge to be learned (knowledge dimension) and cognitive process to learn
• Facilitate questioning (oral language = important role within framework)
What?
Educational Activities

Knowledge

Skills

Attitudes

Knowledge

Skills

Attitudes
Domains of Educational Activities

Cognitive
Psycho-motor
Affective
Cognitive
Psycho-motor
Affective
Bloom’s Cognitive Domain

Levels of Learning

- Remembering
- Understanding
- Applying
- Analyzing
- Evaluating
- Creating
Remembering

Student is able to recall, restate and remember learned information.

- Describing
- Finding
- Identifying
- Listing

- Retrieving
- Naming
- Locating
- Recognizing

Can students recall information?
Understanding

Student grasps meaning of information by interpreting and translating what has been learned

- Classifying
- Comparing
- Exemplifying
- Explaining

- Inferring
- Interpreting
- Paraphrasing
- Summarizing

Can students explain ideas or concepts?
Applying

Student makes use of information in a context similar to the one in which it was learned.

- Implementing
- Carrying out
- Using
- Executing

Can students use the information in another familiar situation?
Analyzing

Student breaks learned information into its parts to best understand that information.

- Attributing
- Comparing
- Deconstructing
- Finding

- Integrating
- Organizing
- Outlining
- Structuring

Can students break information into parts to explore understandings and relationships?
Evaluating

Student makes decisions based on in-depth reflection, criticism and assessment.

- Checking
- Critiquing
- Detecting
- Experimenting
- Hypothesising
- Judging
- Monitoring
- Testing

Can students justify a decision or a course of action?
Creating

Student creates new ideas and information using what previously has been learned.

- Constructing
- Designing
- Devising
- Inventing

- Making
- Planning
- Producing

Can students generate new products, ideas or ways of viewing things?
Generating new ideas, products, or ways of viewing things.
Designing, constructing, planning, producing, inventing.

Justifying a decision or course of action.
Checking, hypothesising, critiquing, experimenting, judging

Breaking information into parts to explore understandings and relationships.
Comparing, organising, deconstructing, interrogating, finding

Using information in another familiar situation.
Implementing, carrying out, using, executing

Explaining ideas or concepts.
Interpreting, summarising, paraphrasing, classifying, explaining

Recalling information.
Recognising, listing, describing, retrieving, naming, finding
## Knowledge Dimension

<table>
<thead>
<tr>
<th>Knowledge Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factual</td>
<td>Bits of information.</td>
</tr>
<tr>
<td>Conceptual</td>
<td>More complex and organized knowledge – knowledge of classifications, categories, principles, and generalizations</td>
</tr>
<tr>
<td>Procedural</td>
<td>How to “do something” or “when to do what”.</td>
</tr>
<tr>
<td>Metacognitive</td>
<td>Knowledge about cognition in general, an “awareness of and knowledge of one’s own cognition” encompasses strategic knowledge, contextual knowledge, and self-knowledge.</td>
</tr>
</tbody>
</table>
Factual

Knowledge of terminology

Knowledge of specific details and elements
  • Events, locations, people, dates, sources of information
  • Knowledge from readings
Conceptual

Knowledge of classifications and categories
  • More abstract than factual knowledge
  • Form the connecting links between and among specific elements

Knowledge of principles and generalizations
  • Bring together large numbers of specific facts and events, describe processes and interrelationships between specific details

Knowledge of theories, models and structures
  • Paradigms, epistemologies, ways of organizing subject matter
Procedural

Knowledge of how to do something
Knowledge of subject specific skills
Knowledge of subject specific techniques and methods
Knowledge of the criteria for determining when to use appropriate procedures.
Metacognitive

Knowledge about cognition in general and one’s own cognition.

Strategic knowledge
  • General strategies for learning, thinking and problem solving
  • Monitor own knowledge level, regulate their cognition

Knowledge of cognitive tasks, including contextual and conditional knowledge.
  • When to use various cognitive processes to learn – knowledge of how you remember a room full of people’s names quickly.

Self-knowledge
  • Knowledge of own strengths and weaknesses in relation to cognition and learning
# Taxonomy Matrix

<table>
<thead>
<tr>
<th></th>
<th>Remember</th>
<th>Understand</th>
<th>Apply</th>
<th>Analyze</th>
<th>Evaluate</th>
<th>Create</th>
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<tbody>
<tr>
<td>Factual</td>
<td>Objective Assessment Activity</td>
<td></td>
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<tr>
<td>Conceptual</td>
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<td>Objective Assessment Activity</td>
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<tr>
<td>Meta-cognitive</td>
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</tbody>
</table>
Examples

Objective: Participants will be able to evaluate research articles for quality and accuracy.

• Evaluate – Level 5
• Research articles for quality and accuracy. - notice that a certain amount of knowledge must already have been attained as to what is a quality research study, the elements that make up an accurate research study. – therefore, - Conceptual knowledge
Examples

Objective: Participants will analyze the influence commercials dealing with food seen on TV/newspapers/magazines have on their own senses and understand how those influences work on them.

• Analyze – Level 4
• Metacognitive – awareness of self and how external influences may modify their behavior
## Bloom’s Taxonomy and Learning Outcome Verbs

<table>
<thead>
<tr>
<th>Remembering</th>
<th>Understanding</th>
<th>Applying</th>
<th>Analyzing</th>
<th>Evaluating</th>
<th>Creating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cite</td>
<td>Associate</td>
<td>Apply</td>
<td>Analyze</td>
<td>Appraise</td>
<td>Arrange</td>
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<td>Count</td>
<td>Classify</td>
<td>Calculate</td>
<td>Appraise</td>
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<td>Collect</td>
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<td>Compare</td>
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<td>Evaluate</td>
<td>Evaluate</td>
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<td>Explain</td>
<td>Interpret</td>
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<td>Grade</td>
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<td>Judge</td>
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<td>Manage</td>
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<td>Extrapolate</td>
<td>Operate</td>
<td>Measure</td>
<td>Measure</td>
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<td>Interpolate</td>
<td>Order</td>
<td>Rate</td>
<td>Rate</td>
<td>Plan</td>
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<td>Repeat</td>
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<td>Practise</td>
<td>Recommend</td>
<td>Recommend</td>
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<td>Predict</td>
<td>Report</td>
<td>Revise</td>
<td>Revise</td>
<td>Produce</td>
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<td>Report</td>
<td>Restructure</td>
<td>Score</td>
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<td>Propose</td>
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<td>Restructure</td>
<td>Schedule</td>
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<td>Sketch</td>
<td>Separate</td>
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<td>Standardize</td>
<td>Synthesize</td>
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<td>Solve</td>
<td>Summarize</td>
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<td>Test</td>
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<td>Translate</td>
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<td>Validate</td>
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