All Questions are NOT Created Equal: Writing questions for different purposes.

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Overview

I. Foundational Assumptions and Definitions
   - Recent Learning Theory
   - Purposes
   - Cognitive Load

II. Writing Questions by Design

III. Text Analysis – Using Answer Patterns to Track Learning

IV. Item Analysis and Re-Writing
Meaningful Learning

- personal attributes
- social, professional norms
- attitudes, predispositions, habits of mind

Episodic/procedural implicit knowledge
- Propositional/abstract explicit knowledge

Knowledge

Ability outcomes
- Cognitive skills
- Skills
- Motor skills

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Recent Learning Theory

• Retrieving information is the most powerful aid to long-term retention

According to Schön, a key component in increasing one’s capacity in professional activities is developing the ability to systematically reflect on current performance and compare against desired standard with continuous improvement toward a goal.

To do this one has to be able to treat one’s own thought processes as an object of study – to engage in self-regulated learning.
## Metacognition
(Schraw, Crippen & Hartley, 2006)

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<th>Knowledge of Cognition</th>
<th>Regulation of Cognition</th>
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<td>planning</td>
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**Metacognitive Awareness Inventory**
- 52 items with 5 point Likert scale
  - [always true about me to always false about me]
Purposes for Questions

I. Direct elicitation of information

II. Placing a pause

III. Showing off what the questioner knows

IV. Helping the learner make connections
Cognitive Load

I. Level in Bloom’s Taxonomy (of the Cognitive Domain)

II. Purpose of the question

III. Phrasing of the question
   a. negatives (and double negatives)
   b. ambiguity
Writing Questions by Design

• Relation of question level and organizing ideas in the discipline.

• The Dunning-Kruger effect is real.
Text Analysis for Evidence of Learning

• Sample
Re-writing questions to better match desired student outcomes.

• Sample
SELECTED BIBLIOGRAPHY


