

Class Notes: Effortful Learning & Questioning

Questioning as an Active Learning Method

Using questioning techniques during instruction helps make thinking visible and promotes deeper engagement. The type of question asked can significantly influence the depth of learning and the cognitive demand placed on the learner.

- Best: Promotes higher-order thinking (e.g., “Why do you think...?”, “What would happen if...?”)
- Better: Uses open-ended and purposeful questions that encourage explanation and exploration.
- OK: Uses closed-ended questions, which check for factual recall but may not deepen understanding.

Effortful Learning

Effortful learning is based on the principle that deeper cognitive engagement leads to stronger and more durable learning. When learners must work to process, retrieve, or apply information, they are more likely to retain and transfer it.

Desirable Difficulties:

- These are instructional challenges intentionally designed to slow down learning progress in the short term.
- They increase productive struggle, encourage reflection, and promote deeper mental processing.
- Common examples include retrieval practice, interleaving, varied contexts, and spaced repetition.

While these strategies may result in more errors or slower initial performance, they lead to better long-term results. Making mistakes, correcting them, and working through complexity strengthens mental connections.

If learners aren’t experiencing some degree of challenge, they may not be engaging deeply enough with the material. Smooth, fast progress can give a false sense of mastery. True learning often feels uncomfortable and cognitively taxing.

Tips for Facilitators

- Design activities that require effort—avoid over-simplification.
- Encourage learners to explain their reasoning, not just provide answers.
- Normalize struggle as a part of the learning process.
- Provide support and structure but avoid over-assisting.
- Use questioning to uncover misconceptions and stretch learner thinking.