Meaningful Learning

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Learning Goals

• Distinguish between Rote Learning and Meaningful Learning
• Identify the three conditions necessary for Meaningful Learning to occur
• Describe teaching strategies to achieve Meaningful Learning

Process of Meaningful Learning

• **Subsumption**: New, incoming ideas are subsumed under more general and inclusive anchoring ideas already in memory.
• **Derivative subsumption**: Learning of new examples or cases that are illustrative of an established concept or previously learned proposition.
• **Correlative subsumption**: Elaboration, extension, or modification of the previously learned concept or proposition by the subsumption of the incoming idea.
Effective Learning

• There are two conditions for effective learning:
  1. **Retain**: Remember what is learned in the future
  2. **Transfer**: Use what is learned to guide thinking and behavior in a new situation

Meaningful vs. Rote Learning

**Meaningful Learning**

• Concept is fully understood by student
• New information is related to what students already know (prior knowledge)

**Rote Learning**

• Verbatim memorization of new information
• No connection between new and previous knowledge

Meaningful vs. Rote Learning

• Rote learning (memorization) only achieves *retention* of new information
• Meaningful learning achieves both *retention* and *transfer*, and even achieves *retention* better than rote learning.
Teaching for Meaningful vs. Rote Learning

Meaningful
• Relate information to everyday experiences
• Deliberate effort to link new knowledge with prior knowledge

Rote
• Present definitions, formulas, and new information without explaining relationship with students’ experiences
• Random presentation of new knowledge into memory with no effort to integrate new knowledge with prior knowledge

Meaningful Learning

• Three conditions for Meaningful Learning to occur:
  1. Students: Approach the learning task with the purpose of engaging in meaningful learning
     • If a learner only wants to memorize then meaningful learning cannot occur
     • Application: Teach students how to engage in meaningful learning and the benefits of meaningful learning
  2. Students: Must already have background knowledge that relates to the new material
     • Application: Ensure that students have foundational knowledge for a new topic

Meaningful Learning

• Three conditions for Meaningful Learning to occur:
  3. Educators: Lesson must be meaningful
     • Application: Lesson must be carefully prepared and presented in a way that is:
       – Clear
       – Meaningfully related to students’ lives and prior knowledge
       – Well Organized
Summary: Meaningful vs. Rote

• Very few things need to be learned by rote (Woolfolk, 2007)
• **Point of Meaningful Learning:** Make materials meaningful to the learner
• **To achieve Meaningful Learning:** Organize instruction to make meaningful connections to what learners already know

Teaching for Meaningful Learning

• Use analogies
• Tell stories to demonstrate concepts
• Ask students for their relevant experiences
• Ask students questions beyond what you have directly taught to test their understanding