Metacognition:
Guiding Learners in Thinking About How They Learn

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Agenda

In this PIE Workshop, we will ...
✓ Define metacognition
✓ Demonstrate metacognitive strategies in teaching
✓ Discuss how to apply metacognitive strategies in your class
Metacognition

• Definition:

• Thinking about one’s own thinking: one’s knowledge about one’s own thinking processes or anything related to them
• Metacognition is part of cognitive process; it helps us understand other cognitive aspect such as reasoning
Metacognition

Two components of metacognition

• A. Knowledge of cognition
  • Declarative knowledge: about oneself as a learner
  • Procedural knowledge: about learning strategies
  • Conditional knowledge: when and why to apply strategies

• B. Regulation of cognition
  • Application of knowledge to accomplish goals and solve problems
  • Promotes cognitive growth
Metacognition

Three metacognitive skills

1. Planning – when and how should I study? What resources will I need?

2. Monitoring – am I being productive with my studying? How am I doing?

3. Evaluating – did I learn what I needed to for the assignment/exam? Was the first draft of the paper complete?
Metacognition at College Level

- Metacognitive skills can be learned and improved.
- Metacognitive Development for College Students:

<table>
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<tr>
<th>What are my intellectual strengths and weaknesses?</th>
<th>What questions should I ask about the material before I begin?</th>
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<tr>
<td>How can I motivate myself to learn when I need to?</td>
<td>How well have I accomplished my goals once I’m finished?</td>
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<tr>
<td>How good am I at judging how well I understand something?</td>
<td>Have I learned as much as I could have once I finish a task?</td>
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<td>How can I focus on the meaning and significance of new information?</td>
<td>Have I considered all options after I solve a problem?</td>
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<td>How can I set specific goals before I begin a task?</td>
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Demo 1: Teaching metacognition

- Explicitly model how to use metacognition in a writing assignment
- Sample
Demo 2: Teaching metacognition

- Metacognition in the Performing Arts
• I'm doing it wrong and I don't know why
• I'm doing it wrong but I know why/how
• I'm doing it right but I have to think about it
• I'm doing it right and I don't have to think about it
Verbal Strategies

- "Help me remember [x]"
- "How do we know [x]?"
Recap: Metacognition

1. Definition
2. Components
   • Knowledge of cognition
   • Regulation of cognition---
3. Metacognitive Skills (Plan, Monitor, Evaluate)
Incorporating Metacognitive Strategies

General Approaches

• Be intentional about teaching metacognitive skills.
• Be explicit when teaching metacognitive skills.
• Don’t overdo it.
Group Discussion

How could you incorporate metacognition into your instruction?