Chapter 9
Social Cognitive Theory
Overview

• The Triadic Reciprocal Causation Model
• Self-Control, Self-Regulation, and Self-Efficacy
• Helping Students Become Self-Regulated Learners
• Research on Social Cognitive Theory
• Using Technology to Promote Self-Regulated Learning
Triadic Reciprocal Causation Model

- Learning results from the interactions among:
  - Personal Characteristics
    - Mental and emotional factors such as goals, anxiety, metacognition, and self-efficacy
  - Behavioral Patterns
    - Include self-observation, self-evaluation, making changes in behavior to overcome or reduce perceptions, and creating productive study environments
  - Environmental Factors
    - An individual’s social and physical environment
Self Control, Self-Regulation, and Self-Efficacy

• Self-Control
  • Ability to control one’s actions in the absence of external reinforcement or punishment

• Self-Regulation
  • The consistent and appropriate application of self-control skills to new situations

• Self-Efficacy
  • How capable or prepared we believe we are for handling particular kinds of tasks
Self-Control, Self-Regulation, and Self-Efficacy

• The Role of Self-Efficacy in Self-Regulation
  • Self-efficacy beliefs affect many aspects of self-regulation
    – Optimistic or pessimistic thoughts
    – Approach or avoid tasks
    – High or low motivation
    – Persevere for long or short periods when tasks are difficult
    – Use of more effective or less effective learning skills
    – Motivated or demoralized by failure
  • Self-efficacy more influential that expected rewards, punishments, or actual skill level
Self-Control, Self-Regulation, and Self-Efficacy

• The Role of Self-Efficacy in Self-Regulation
• Factors That Affect Self-Efficacy
  – Performance Accomplishments
  – Verbal Persuasion
  – Emotional Arousal
  – Vicarious Experience
Self-Control, Self-Regulation, and Self-Efficacy

• The Role of Self-Efficacy in Self-Regulation
  • Types of Behaviors Affected by Self-Efficacy
    – Selection Processes
    – Cognitive Processes
    – Motivational Processes
    – Affective Processes
Self-Control, Self-Regulation, and Self-Efficacy

- The Components of a Self-Regulatory System
- Forethought Phase
  - Task analysis
    - set a long-term goal and then a series of near-term achievable sub-goals
    - formulate a plan to achieve those goals
  - Self-motivational beliefs
    - self-efficacy beliefs
    - outcome expectations
    - intrinsic interest
    - goal orientation
    - epistemological beliefs
Self-Control, Self-Regulation, and Self-Efficacy

• The Components of a Self-Regulatory System
• Performance Phase
  – Self-control
    ✓ focus on task, ignore distractions
    ✓ think about the steps involved in completing a task
  – Self-observation
    ✓ use journals and logs to maintain awareness of performance
    ✓ try different approaches to learning
The Components of a Self-Regulatory System

- The Components of a Self-Regulatory System
  - Self-Reflection Phase
    - Self-judgment
      ✓ evaluate own performance using one of four standards
      ✓ attribute outcomes to effort, ability, task difficulty, luck
    - Self-reaction
      ✓ reinforce self
      ✓ make improvements in self-regulation skills
Helping Students Become Self-Regulated Learners

• What is Self-Regulated Learning?
  • Thoughts, feelings, or actions purposely generated and controlled by student to maximize learning of knowledge and skills for a given task and set of conditions
  • Self-regulated learners also referred to as self-directed, autonomous, or strategic learners
Helping Students Become Self-Regulated Learners

• How Well Prepared Are Students to Be Self-Regulated Learners?
  • Many, perhaps most, do not self-regulate systematically or consistently
  • Rote rehearsal, simple organizational schemes, and various cueing devices account for tactics most use
  • Most students will require several years of systematic instruction to become proficient self-regulated learners
Helping Students Become Self-Regulated Learners

• The Nature of Learning Tactics and Strategies
  • Learning Strategy
    – A general plan that a learner formulates for achieving a somewhat distant academic goal
  • Learning Tactic
    – A specific technique that a learner uses to accomplish an immediate learning objective
Helping Students Become Self-Regulated Learners

• Types of Tactics
  • Memory-Directed Tactics
    – Techniques that help produce accurate storage and retrieval of information
  • Comprehension-Directed Tactics
    – Techniques that aid in understanding the meaning of ideas and their interrelationships
Helping Students Become Self-Regulated Learners

• Memory-Directed Tactics
  • Rehearsal
    – Rote rehearsal
    – Cumulative rehearsal
  • Mnemonic Devices
    – Rhyme
    – Acronym
    – Acrostic
    – Method of Loci
    – Keyword
Helping Students Become Self-Regulated Learners

• Why Mnemonic Devices are Effective
  • They make information easier to encode and retrieve because they...
    – provide a context in which items can be organized
    – allow familiar and more meaningful items to be associated with new items
    – provide retrieval cues
    – force the learner to be an active participant
Helping Students Become Self-Regulated Learners

• Why You Should Teach Students How to Use Mnemonic Devices
  • They reduce the amount of time spent looking up facts
  • Effective problem solving requires ready access to an organized and meaningful knowledge base
  • Students learn that the ability to store and recall large amounts of information is an acquired capability that anyone can acquire
Helping Students Become Self-Regulated Learners

• Comprehension-Directed Tactics
  • Self-Questioning and Peer-Questioning
    – Question stems help students ask appropriate questions about ideas and their interrelationships.
  • Notetaking
    – Benefits retention and comprehension when students take notes and review notes
• Concept Mapping
  – A technique for identifying, visually organizing, and representing the relationships among a set of ideas
Self-Questioning Stems

- What is a new example of ...?
- How would you use ... to ...?
- What would happen if ...?
- What are the strengths and weaknesses of ...?
- What do we already know about ...?
- How does ... tie in with what we learned before?
- Explain why...
- Explain how...
- How does ... affect ...?
- What is the meaning of ...?
- Why is ... important?
- What is the difference between ... and ...?
- How are ... and ... similar?
- What is the best ..., and why?
- What are some possible solutions to the problem of ...?
- Compare ... and ... with regard to ...?
- How does ... cause ...?
- What do you think causes ...?
Helping Students Become Self-Regulated Learners

• Conclusions Regarding Learning Tactics
  • Students will not learn about tactics and become skilled at using them on their own---they need to be systematically taught.
  • Tactics should not be taught in isolation, but as part of a broad learning strategy.
Video: Metacognition: Helping Students Become Strategic Learners
Helping Students Become Self-Regulated Learners

• Supporting Students’ Strategy Use
  • Remind students to formulate new strategies whenever the task situation changes (for example, type of information, teaching method, exams, and motivation level)
  • Give students feedback about the nature of the strategies they create and how well they work
  • Tell students that they are capable of becoming self-regulated learners
  • Give students all the task information they need to become strategic learners
# Modeling and Self-Regulated Learning

<table>
<thead>
<tr>
<th>Level</th>
<th>Main Requirement of the Learner</th>
<th>Source of Motivation</th>
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<tbody>
<tr>
<td>Observation</td>
<td>Attend to actions and verbalizations of the model and discriminate relevant from irrelevant behaviors</td>
<td>Vicarious: note rewards received by the model and anticipate receiving similar rewards for exhibiting similar behavior</td>
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<tr>
<td>Emulation</td>
<td>Exhibit the general form of the modeled behavior</td>
<td>Direct: feedback from the model and/or others</td>
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<tr>
<td>Self-control</td>
<td>Learn to exhibit the modeled behavior automatically through self-directed practice (focus on the underlying rule or process that produces the behavior and compare the behavior with personal standards)</td>
<td>Self-satisfaction from matching the standards and behavior of the model</td>
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<tr>
<td>Self-regulation</td>
<td>Learn to adapt the behavior to changes in internal and external conditions (such as the reactions of others)</td>
<td>Self-efficacy beliefs; degree of intrinsic interest in the skill</td>
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Research on Social Cognitive Theory

- Relationships Among Self-Efficacy, Epistemological Beliefs, Self-Regulation Processes, and Achievement
  - Higher levels of self-efficacy related to strategy use, lower anxiety for math and science (for boys), lower anxiety for writing (for girls), and higher levels of achievement
  - Sophistication of epistemological beliefs predicts grade-point average
Research on Social Cognitive Theory

- Effects of Modeling on Self-Efficacy, Self-Regulation, and Achievement
  - Students’ mathematical problem solving skills improve when watching a peer model, particularly one of similar ability
  - Students’ writing skills improve when they observe a model using a self-regulated strategy
  - Observing a model produces better quality writing than just practicing writing
Research on Social Cognitive Theory

• Effects of Instruction on Self-Regulated Learning Skills
  • Reciprocal teaching is an effective way to teach students how to model self-regulated reading comprehension skills to each other
  • The think before reading, while reading, after reading (TWA) program also improves reading comprehension
  • Benchmark School illustrates integration of self-regulated strategy instruction into school curriculum
Using Technology to Promote Self-Regulated Learning

- Modeling
- Providing Cognitive and Metacognitive Feedback
- Providing Scaffolded Instruction
- The Effect of Self-Regulated Learning Skills on Computer-Based Instruction
- The Effect of Self-Efficacy on Computer-Based Instruction