Best Practices: Self-Regulated Learning

In learning, self-regulation is a self-directed process where students transform their mental abilities into academic skills. Self-regulated learners can generate their own thoughts, feelings, and behaviors towards attaining goals. They are dedicated to their learning efforts and are aware of their strengths and weaknesses (Zimmerman, 2000). Zimmerman also notes that self-regulated learners are guided by personal goal-setting and task-related strategies to check their solution's accuracy (i.e., spelling or arithmetic strategies). Therefore, self-regulated learners monitor their own learning to meet goals and self-reflect on their growing effectiveness. Additionally, they increase their satisfaction and are motivated to continually improve their learning strategies. As a result, self-regulated learners are more likely to succeed academically and view their future as optimistic.

According to Zimmerman (2000), self-regulation is essential because a large part of education is developing lifelong learning skills. After high school or college, students will still be expected to learn new skills in their careers. Lifelong learners are more likely to advance in their careers, be promoted, and attract more enticing jobs. Everyone, young and old, must continuously refine their skills in order to thrive.

However, Cleary and Zimmerman (2000) state that while self-regulation is an essential academic and life skill, most students struggle with the self-discipline needed to succeed in their studies. Self-regulation requires more than detailed knowledge of a skill. It also involves self-awareness, self-motivation, and the behavioral skills to implement knowledge appropriately.

Self-regulation is not an innate trait that students possess, lack, or are born with. Instead, self-regulation involves the selective use of specific processes that need to be personally adapted to each learning task (Zimmerman, 2000). The fundamental components of self-regulated learning include (Schunk & Zimmerman, 1994; 1998):

- setting specific immediate goals for oneself
- adopting robust strategies for attaining these goals
- monitoring personal performance for signs of progress
- restructuring of their physical and social situation to make the situation compatible with their goals
- managing time effectively
- self-evaluating one’s learning strategies
- connecting explanations for results
- modifying future learning strategies

High Quality Self-Regulatory Processes

Schunk (1983) states that learners' motivation can be enhanced when high-quality self-regulatory processes are used. Learners who can detect subtle changes in their learning will accordingly increase their levels of self-satisfaction and their beliefs in their ability to perform a skill at a high level. Motivation to learn does not come from the task itself. Rather, motivation comes from the use of self-regulatory processes and the effects of self-regulatory processes on their self-beliefs.

Self-regulatory processes can be understood in terms of three cyclical phases: forethought, performance, and self-regulation. The forethought phase involves processes and beliefs that occur before the effort to learn begins. The performance phase concerns the processes that occur during behavioral implementation. Finally, the self-reflection phase indicates processes that occur after each learning effort. Each phase leads to the next in a continuous cycle. Self-reflections from previous efforts to learn affect subsequent forethought processes (e.g., self-dissatisfaction will lead to lower self-efficacy levels and reduced effort during subsequent learning) (Zimmerman & Bandura, 1994). The functions of each phase of the process are described in Zimmerman and Campillo's (2003) model below.

Forethought Phase
Task Analysis • Goal setting (learners who set specific and time-bound goals are more successful, i.e., memorizing a word list for a spelling test) • Strategic planning (use instructional strategies, i.e., spelling or arithmetic strategies)
Self-Motivation Beliefs • Self-efficacy (learner beliefs about their capability to learn) • Outcome expectations (the personal consequences of learning) • Intrinsic interest/value (valuing a task for its own merits) • Learning goal orientation (valuing the process of learning for its own merits)

Performance Phase

Self-Control

Using specific strategies that were selected in the forethought phase.

- Imagery
  (form an image of a concept; e.g., learning foreign language vocabulary with images)
- Self-instruction
  (talk yourself through a task or activity)
- Attention focusing
  (focus, concentration, and self-assessment)
- Task strategies
  (task rotation, time on task, learning strategies)

Self-Observation

- Self-recording
  (self-record personal events - e.g., write down time spent studying)
- Self-experimentation
  (find out the cause of personal events - e.g., studying alone vs. studying with a peer)

Self-Reflection Phase

Self-Judgment

Using specific strategies that were selected in the forethought phase.

- Self-evaluation
  (comparing self-observed performance to one's prior performance, their peer's performance, or a standard of performance)
- Causal attribution
  (beliefs about the causes of one's errors or successes, such as a score on a mathematics test)

Self-Reaction

- Self-satisfaction
  (increases in self-satisfaction enhance motivation and vice versa)
- Adaptive (flexibility) / Defensive
  (Adaptive: making adjustments to increase learning effectiveness; Defensive: protecting one's self-image by withdrawing from a course or avoiding opportunities to learn and perform by skipping an exam)

Self-Regulation Strategies

Successful students use self-regulation strategies that fall into three categories: personal, behavioral, and environmental. Personal self-regulation strategies involve how students organize and interpret information. Behavioral strategies involve actions that students take. Finally, environmental strategies involve seeking assistance and structuring the physical study environment. Strategies for each category are elaborated below (UCONN, 2012).

Personal
Organizing and Transforming Information • Outlining • Summarizing • Rearranging materials • Highlighting • Flash cards/index cards • Draw pictures, diagrams, charts • Webs/concept mapping
Goal Setting and Planning • Sequencing • Timing • Completion • Time management • Pacing
Keeping Records and Memorizing (written or verbal) • Mnemonic devices • Teaching the material to someone else • Making sample questions • Using mental imagery • Using repetition

Behavioral
Self-Evaluating (checking quality or progress) • Task analysis: What does the teacher want me to do? What do I want out of it? • Self-instructions • Enactive feedback (feedback loop decided by the learner) • Highlighting • Flashcards/index cards • Draw pictures, diagrams, charts • Webs/concept mapping
Self-Consequating (making a promise to yourself for success or failure) • Treats to motivate • Self-reinforcement • Imagination of punishment • Delay of gratification
Environmental
Seeking Information (library, internet) • Library resources • Internet resources • Reviewing flashcards • Rereading class material • Tests • Textbooks
Environmental Structuring • Selecting or arranging the physical setting • Isolating oneself while studying • Eliminating or minimizing distractions • Break up study periods, spread them over time
Seeking Social Assistance • From peers • From teachers or other adults • Mimic exemplary models

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