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The Motivational Dimensions of Self-Regulated Learning

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Abstract

Self-regulation is critical for learning. It is often conceptualized as a cyclical process where the learner sets goals, monitors progress and then evaluates performance as a means to inform future learning efforts. Important, but less understood, is how motivational dimensions related to the learner influence the self-regulation process. While it is well documented that student beliefs about their competence (self-efficacy) correspond to academic achievement, less is known about how their explanations for their own learning (causal attributions) influence those beliefs. To research these constructs, it is important to study students who typically have maladaptive attributions for learning so that it can be determined what types of interventions can promote more adaptive attributions and whether doing so has a corresponding effect on student's subsequent efforts to use learning strategies and ultimately their perceived competence. It is also important to study student self-regulation within long-term project-based learning activities as well as during discrete learning tasks.

Keywords: Self-Regulation; Self-Efficacy; Causal Attributions; Learning Disability

Understanding the Motivational Dimensions of Self-Regulated Learning

Self-regulation is a process that individuals employ to monitor and control behavior, including academic learning [1]. Within a Social Cognitive Theory framework, Zimmerman conceptualizes self-regulation as the integration of motivational, behavioral and metacognitive processes that operate within inter-related triadic phases—forethought, performance control, and self-reflection. This self-regulation model is cyclical in nature and dependent on feedback during repeated efforts to learn.

According to Schunk and Usher [2], self-regulation is not a simple phenomenon, but rather a complex one with multiple dimensions (i.e., motive, method, time, behavior, physical environment, social environment). Each dimension consists of key processes. For example, the behavioral dimension consists of key processes that relate to the outcome or competence levels sought by learners and includes self-observation, self-judgment, and self-reaction. The motivational dimension consists of key processes that relate to why one engages in self-regulated learning and includes self-beliefs, such as self-efficacy and causal attributions [3].

Motivational Dimensions of Self-Regulation

Self-efficacy refers to one's beliefs about how well one is able to execute a specific behavior given a learning context [4,5]. Self-efficacy is regarded as the most essential process for motivating a person's behavior [6,7], and it is strongly related to academic achievement [8-11]. When faced with a challenging learning situation, students with well-developed self-efficacy tend to utilize cognitive and meta-cognitive strategies, and in cases where their understanding does not increase, they apply alternate strategies [3]. However, students who are less self-efficacious are likely to abandon challenging activities that they perceive as beyond their ability.

Causal attributions can be defined as one's judgments about the cause of success or failure in achievement situations [12]. In other words, attributions are the explanations individuals have for why they performed the way that they did. High achievers are more likely to attribute causality for success to internal causes such as ability or effort, while low achievers are more likely to attribute causality for success to internal causes such as luck, task difficulty, or receiving help [13]. These differences are exacerbated by developmental changes in attributions that occur as students age and more frequently compare their

performance to peers. This is problematic for struggling students who are aware of their academic difficulties and that they are not performing as well as peers [14].

Future Directions for Self-Regulation Research

In order to develop a deeper understanding of the relationship between causal attributions for effort and self-efficacy within the cyclical self-regulation process, researchers must be able to manipulate these factors. Typical learners naturally develop effective learning strategies and motivational beliefs that help themselves self-regulate academic demands, but atypical learners are unlikely to without intervention [15]. Students with learning disabilities especially struggle with self-regulation of learning and are an ideal sample for research on motivational dimensions of self-regulation precisely because of the maladaptive motivational and performance responses that they characteristically display.

Baird, Scott, Dearing and Hamill [16] found that adolescents with learning disabilities were more likely than their peers to (a) possess low academic self-efficacy, (b) believe that intelligence was fixed and nonmalleable, (c) prefer performance over learning goals, and (d) interpret the exertion of effort as meaning they possessed limited levels of ability. This finding is consistent with early research indicating that adolescents with learning disabilities have cognitive self-regulatory patterns that are particularly maladaptive to mastering academic tasks, including making inappropriate attributions for success and failure in academic contexts [17,18]. Specifically, students with learning disabilities more often attribute successes to external causes (e.g., luck) and failures to internal causes (e.g., lack of ability) compared to typically developing peers [19,20]. Further, adolescents with learning disabilities typically have a history of academic failure that results in the faulty belief that they have little control over their academic achievement [21].

However, research has shown that these attributions are malleable with instruction that teaches students to recognize maladaptive attributions and develop more adaptive explanations for their performance. Specifically, attribution training combined with strategy instruction has been shown to increase achievement gains of students with learning disabilities and that those gains were maintained over time [22]. In addition, feedback that helps students to make connections between effort and success enhances motivation, self-efficacy, and skills, and feedback that helps students make connections between insufficient effort and failure promotes effort attributions and persistence [23].

Emerging research suggests that student attributions may play a role in self-regulation during long-term learning tasks as well. Findings from Berkeley, Larsen, Colburn, and Yin [24] showed that a relationship existed between attributions that students with learning disabilities made for their performance and their reported self-efficacy for learning, with two exceptions: (a) when a student poorly calibrated perception of ability relative to actual performance, and (b) when a student perceived the cost (effort to utilize learning strategies) to outweigh the benefit (learning outcome).

In a follow up study, Berkeley, Mischel, and Whitehead [25] taught students with learning disabilities how to create challenging but attainable goals and provided attribution retraining to help students recognize the role of effort (or lack thereof) in their subsequent successes (or failures). Within the context of a long-term project-based learning task, students then set goals at the beginning of each work session and evaluated their progress at the end of the session. Students overwhelmingly attributed the goal setting strategy as an explanation for their successful progress during the project. In addition, students had the most complete and highest quality products when they reported realistic self-efficacy ratings that were (a) neither overly positive nor overly negative, and (b) well calibrated with actual student performance across work sessions. While these collective findings are informative, additional research is needed to better understand the role of these constructs within the cyclical process of self-regulated learning [25-28].

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