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Encourage Self Regulated Learning in the Classroom

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Encouraging Self-Regulated Learning in the Classroom: A Review of the Literature

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Abstract

Self-regulated learning (SLR) is recognized as an important predictor of student academic motivation and achievement. This process requires students to independently plan, monitor, and assess their learning. However, few students naturally do this well. This paper provides a review of the literature including: the definition of SRL; an explanation of the relationship between SRL and motivation in the classroom; specific SRL strategies for student use; approaches for encouraging student SRL; and a discussion of some of the challenges educators might encounter while teaching students to be self-regulated, life-long learners.

Self-regulation is essential to the learning process (Jarvela & Jarvenoja, 2011; Zimmerman, 2008). It can help students create better learning habits and strengthen their study skills (Wolters, 2011), apply learning strategies to enhance academic outcomes (Harris, Friedlander, Sadler, Frizzelle, & Graham, 2005), monitor their performance (Harris et al., 2005), and evaluate their academic progress (De Bruin, Thiede & Camp, 2011). Teachers thus should be familiar with the factors that influence a learner's ability to self-regulate and the strategies they can use to identify and promote self-regulated learning (SRL) in their classrooms. In addition to self-regulation, motivation can have a pivotal impact on students' academic outcomes (Zimmerman, 2008). Without motivation, SRL is much more difficult to achieve. This paper will discuss SRL and how it relates to motivation. Additionally, this review will present methods and strategies that teachers can use to promote SRL to help their students become life-long learners in and out of the classroom.

Defining Self-Regulation

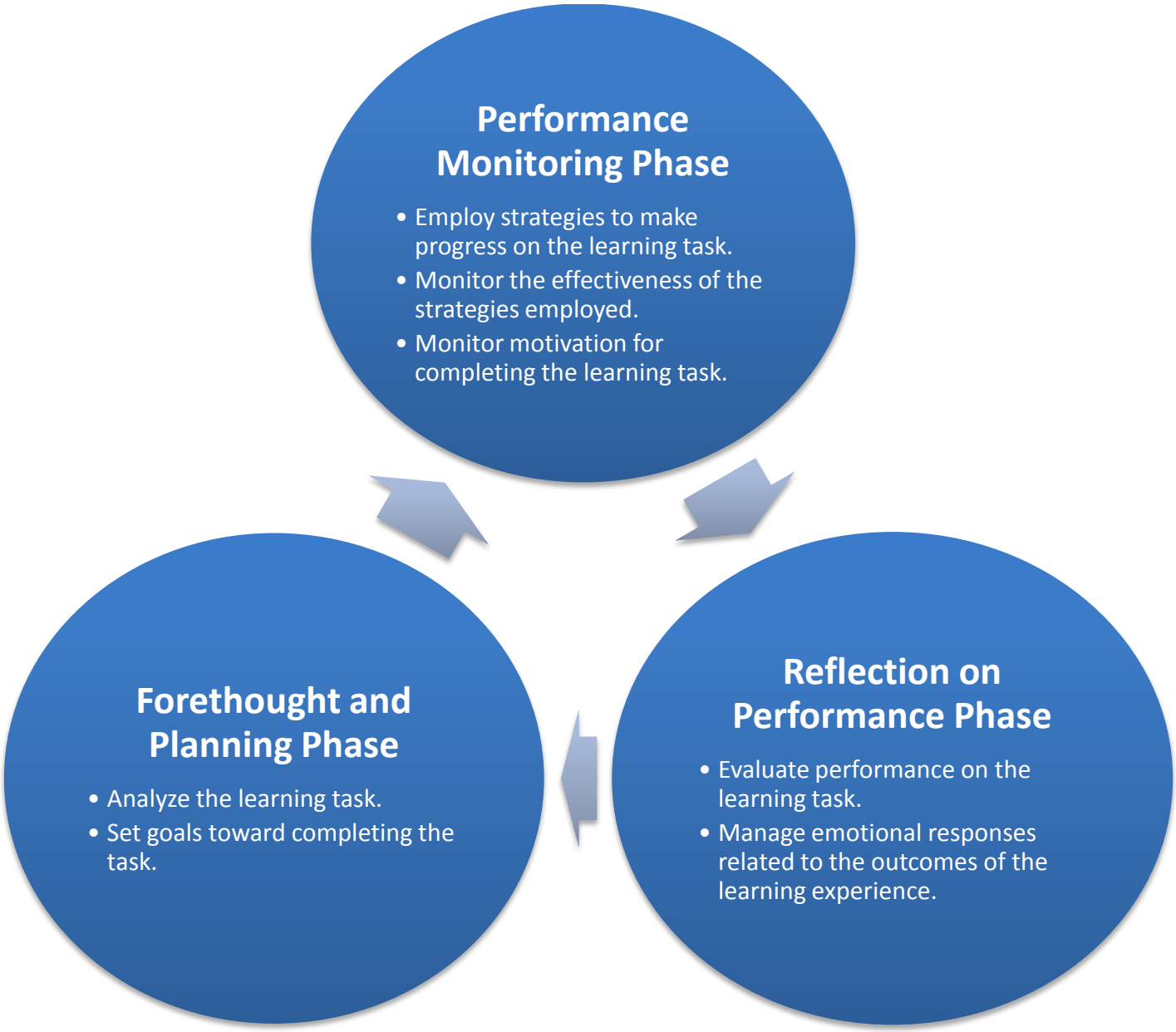
Self-regulated learning is a process that assists students in managing their thoughts, behaviors, and emotions in order to successfully navigate their learning experiences. This process occurs when a student's purposeful actions and processes are directed towards the acquisition of information or skills. Generally, models of SRL are separated into phases. One popular cyclical model (see Figure 1) discusses three distinct phases: Forethought and planning, performance monitoring, and reflections on performance (Pintrich & Zusho, 2002; Zimmerman, 2000). During the *forethought and planning* phase, students analyze the learning task and set specific goals toward

completing that task. When students learn unfamiliar topics, however, they may not know the best ways to approach the task or what goals might be the most appropriate. Teachers and/or more experienced peers often can instruct students on effective approaches in cases like these.

Next, in the *performance monitoring* phase, students employ strategies to make progress on the learning task and monitor the effectiveness of those strategies as well as their motivation for continuing progress toward the goals of the task. Unfortunately, when strategies are new, students sometimes revert to using more familiar—and perhaps ineffective—strategies. For example, students may lapse into using the familiar strategy of flash cards to study new vocabulary words because it might seem easier than the new, effective strategy presented by the teacher. Whereas taking the time necessary to practice and learn the new strategy could lead to meaningful learning, students' use of their fall-back strategy will likely leave them with a considerably less effective means to their learning. Close teacher monitoring and specific feedback can help students learn to use new strategies with fluency, especially if students face frustration.

In the final *reflection on performance* phase, students evaluate their performance on the learning task with respect to the effectiveness of the strategies that they chose. During this stage, students also must manage their emotions about the outcomes of the learning experience. These self-reflections then influence students future planning and goals, initiating the cycle to begin again.

Figure 1. Phases of Self-Regulated Learning



Self-regulated learners' proactive qualities and self-motivating abilities help to distinguish them from their peers. Research shows that self-regulated students are more engaged in their learning. These learners commonly seat themselves toward the

front of the classroom (Labuhn, Zimmerman, & Hasselhorn, 2010), voluntarily offer answers to questions (Elstad & Turmo, 2010), and seek out additional resources when needed to master content (Clarebout, Horz, & Schnotz, 2010). Most importantly, self-regulated learners also manipulate their learning environments to meet their needs (Kolovelonis, Goudas, & Dermitzaki, 2011). For example, researchers have found that self-regulated learners are more likely to seek out advice (Clarebout et al., 2010) and information (De Bruin et al., 2011) and pursue positive learning climates (Labuhn et al., 2010), than their peers who display less self-regulation in the classroom. Due to their resourcefulness and engagement, it is not then surprising that findings from recent studies suggest that self-regulated learners also perform better on academic tests and measures of student performance and achievement (Schunk & Zimmerman, 2007; Zimmerman, 2008). In a study of high school students, Labuhn et al. (2010) found that learners who were taught SRL skills through monitoring and imitation were more likely to elicit higher levels of academic self-efficacy (i.e., confidence) and perform higher on measures of academic achievement compared to students who did not receive SRL instruction. It seems as though SRL can make the difference between academic success and failure for many students (Graham & Harris, 2000; Kistner, Rakoczy, & Otto, 2010).

Self-Regulated Learning and Motivation

Self-regulated learning is controlled by an interconnected framework of factors that determine its development and sustainability (Bandura, 1993; Boekaerts, 1999; Pintrich, 2000; Zimmerman, 2008) and motivation is a critical factor in this framework (Kurman, 2001; Ommundsen, Haugen & Lund, 2005; Wang & Holcombe, 2010). For

example, during the forethought and planning phase, when students consider why an activity should be completed and how much effort to put toward that activity, their interests and values are factored into the decision (Simons, Dewitte, & Lens, 2000; Wolters & Pintrich, 1998; Wolters, Yu, & Pintrich, 1996). If students do not see value in learning tasks, then they are less likely to spend much time setting goals and planning strategies to accomplish those tasks. Additionally, students' efficacy beliefs—their confidence in their ability to successfully complete tasks—also play a role, especially during the forethought and planning and performance monitoring phases (Zimmerman, 2000). Research has found self-efficacy and the use of self-regulation strategies to have reflexive positive impacts on one another. Higher self-efficacy beliefs increase the use of self-regulation strategies (Pajares, 2008) and the use of self-regulation strategies can lead to increases in self-efficacy beliefs and academic achievement (Bouffard-Bouchard, Parent, & Larivee, 1991; Schunk, 1984; Schunk & Hanson, 1985; Zimmerman & Martinez-Pons, 1990).

During the performance monitoring phase, students continuously assess the meaningfulness of the learning task. Intrinsic motivation and volition guide the level of effort and persistence used in completing the assignment and use of other self-regulation strategies. Finally, students' causal attributions—the factors students attribute to their success or failure for a specific task—play a key role in the reflection on performance phase, as students make decisions of whether or not they will engage in an activity and utilize self-regulation strategies for similar activities in the future. In general, self-regulation and motivation work hand in hand to explain student learning

and success in the classroom. When students are motivated to learn, they are more likely to invest the necessary time and energy needed to learn and apply appropriate SRL skills, and when students are able to successfully employ self-regulation strategies, they are often more motivated to complete learning tasks (Zimmerman, 2000).

Self-Regulated Learning Strategies for Students

To promote SRL in classrooms, teachers must teach students the self-regulated processes that facilitate learning. These processes often include: goal setting (Winne & Hadwin, 1998; Wolters, 1998), planning (Zimmerman, 2004; Zimmerman & Risemberg, 1997), self-motivation (Corno, 1993; Wolters, 2003; Zimmerman, 2004), attention control (Harnishferger, 1995; Kuhl, 1985; Winne, 1995), flexible use of learning strategies (van de Broek, Lorch, Linderholm, & Gustafson, 2001; Winne, 1995), self-monitoring (Butler & Winne, 1995; Carver & Scheier, 1990), appropriate help-seeking (Butler, 1998; Ryan, Pintrich, & Midgley, 2001), and self-evaluation (Schraw & Moshman, 1995).

Goal Setting

Goals can be thought of as the standards that regulate an individual's actions (Schunk, 2001). In the classroom, goals may be as simple as earning a good grade on an exam, or as detailed as gaining a broad understanding of a topic. Short-term attainable goals often are used to reach long-term aspirations. For example, if a student sets a long-term goal to do well on an exam, then he or she also may set attainable goals such as studying for a set amount of time and using specific study strategies to help ensure success on the exam. Research also suggests that encouraging students to

set short-term goals for their learning can be an effective way to help students track their progress (Zimmerman, 2004).

Planning

Similar to goal setting, planning can help students self-regulate their learning prior to engaging in learning tasks. In fact, research indicates that planning and goal setting are complementary processes, as planning can help learners establish well thought out goals and strategies to be successful (Schunk, 2001). Planning occurs in three stages: setting a goal for a learning task, establishing strategies for achieving the goal, and determining how much time and resources will be needed to achieve the goal (Schunk, 2001). Teaching students to approach academic tasks with a plan is a viable method for promoting self-regulation and learning (Pressley & Woloshyn, 1995; Scheid, 1993).

Self-Motivation

Self-motivation occurs when a learner independently uses one or more strategies to keep themselves on-track toward a learning goal. It is important to the process of self-regulation because it requires learners to assume control over their learning (Corno, 1993). Furthermore, self-motivation occurs in the absence of external rewards or incentives and can therefore be a strong indicator that a learner is becoming more autonomous (Zimmerman, 2004). By establishing their own learning goals and finding motivation from within to make progress toward those goals, students are more likely to persist through difficult learning tasks and often find the learning process more gratifying (Wolters, 2003).

Attention Control

In order to self-regulate, learners must be able to control their attention (Winne, 1995). Attention control is a cognitive process that requires significant self-monitoring (Harnishferger, 1995). Often this process entails clearing the mind of distracting thoughts, as well as seeking suitable environments that are conducive to learning (e.g., quiet areas without substantial noise) (Winne, 1995). Research indicates that students' academic outcomes increase with focused time spent on-task (Kuhl, 1985). Thus, teaching students to attend to learning tasks should be a priority. Teachers can help their students control their attention by removing stimuli that may cause distractions, and providing students with frequent breaks to help them build up their attention spans.

Flexible Use of Strategies

Successful learners are able to implement multiple learning strategies across tasks and adjust those strategies as needed to facilitate their progress towards their desired goals (Paris & Paris, 2001). However, it is important to note that most students, especially those in the primary grades, typically do not have a large repertoire of learning strategies at their disposal (van de Broek et al., 2001). It takes time for students to learn and become comfortable with different learning strategies. By modeling how to use new strategies and providing appropriate amounts of scaffolding as students practice, teachers can help learners become independent strategy users.

Self-Monitoring

To become strategic learners, students must assume ownership for their learning and achievement outcomes (Kistner et al., 2010). Self-regulated learners take on this responsibility by monitoring their progress towards learning goals. The process of self-monitoring encompasses all of the aforementioned strategies. In order for a learner to self-monitor their progress, they must set their own learning goals, plan ahead, independently motivate themselves to meet their goals, focus their attention on the task at hand, and use learning strategies to facilitate their understanding of material (Zimmerman, 2004). Teachers can encourage self-monitoring by having students keep a record of the number of times they worked on particular learning tasks, the strategies they used, and the amount of time they spent working. This practice allows students to visualize their progress and make changes as needed.

Help-Seeking

Contrary to popular belief, self-regulated learners do not try to accomplish every task on their own, but rather frequently seek help from others when necessary (Butler, 1998). What sets self-regulated learners apart from their peers is that these students not only seek advice from others, but they do so with the goal of making themselves more autonomous (Ryan et al., 2001). Teachers can promote positive help seeking behaviors by providing students with on-going progress feedback that they can easily understand and allowing students opportunities to resubmit assignments after making appropriate changes.

Self-Evaluation

Students are more likely to become self-regulated learners when they are able to evaluate their own learning, independent of teacher-issued summative assessments (Winne & Hadwin, 1998). This practice enables students to evaluate their learning strategies and make adjustments for similar tasks in their future (Schraw & Moshman, 1995). Teachers can promote self-evaluation in the classroom by helping students monitor their learning goals and strategy use, and then make changes to those goals and strategies based upon learning outcomes (Zimmerman, 2004).

In summary, self-regulated learners are able to set short- and long-term goals for their learning, plan ahead to accomplish their goals, self-motivate themselves, and focus their attention on their goals and progress. They also are able to employ multiple learning strategies and adjust those strategies as needed, self-monitor their progress, seek help from others as needed, and self-evaluate their learning goals and progress based upon their learning outcomes. Teachers at the primary and secondary levels can use the aforementioned strategies to promote self-regulation in their classrooms. However, teachers should understand that learners develop at various paces, and strategies that work best for one learner may not always work with the next.

Encouraging Student Self-Regulated Learning

Creating SRL environments for the complex and diverse range of backgrounds, skill sets, and personalities that many students encompass poses challenges to even the most experienced teachers. Fortunately, a great deal of literature showcases a variety of effective instructional strategies for encouraging self-regulation in the classroom

(Andreassen & Braten, 2011; Boekaerts & Corno, 2005; Cleary & Zimmerman, 2004; De Corte, Mason, Depaepe, & Verschaffel, 2011; Dignath & Buettner, 2008; Graham, Harris & Mason, 2004; Souvignier & Mokhlesgerami, 2006; Stoeger & Ziegler, 2011; Tonks & Taboada, 2011). Some of these strategies include direct instruction and modeling, guided and independent practice, social support and feedback, and reflective practice.

Direct Instruction and Modeling

Direct instruction involves explicitly explaining different strategies to students, as well as how those strategies are used and what skills are involved in using those strategies (Zimmerman, 2008). The focus of this kind of instruction is modeling and demonstration. When teachers model and explain their own thought processes necessary for completing activities and assignments, students are more apt to understand and begin to use those same processes on their own (Boekaerts & Corno, 2005). Though direct instruction may not be necessary for encouraging SRL in all students, it may be essential for most students—especially younger learners—as many fail to independently use SRL strategies effectively (Zimmerman, 2000). Research has shown that this type of instruction can be the best initial strategy for encouraging students to be more self-regulative (Levy, 1996).

Guided and Independent Practice

Guided practice is another way teachers can help improve SRL and motivation (Lee et al., 2010). During guided practices, the responsibility of implementing the learning strategy shifts from teacher to student. For example, a student might practice implementing a specific writing strategy while the teacher carefully observes and offers

help when necessary. In a study of reading achievement, Vidal-Abarca, Mana, and Gil (2010) examined whether guided practice of SRL strategies could improve fifth grade students' test scores. Findings revealed that guided practice of SRL strategies increased reading skill test scores, improved motivation to read, and increased task engagement. Student-teacher conferencing is one way teachers can help guide students in setting goals and monitoring their strategy use and progress, as conferences tend to promote student thinking and learning (Montalvo & Torres, 2008).

Independent practice should naturally follow guided practice. During this process, students are given opportunities to practice the strategy on their own, which can ultimately reinforce autonomy (Schunk & Zimmerman, 2007). For example, Stoeger and Ziegler (2008) examined whether teaching fourth grade students SRL strategies would motivate them to read independently outside of the classroom, and whether independent reading practice would improve reading comprehension scores. The data indicated that once students were given SRL strategies to use, they were more likely to practice reading independently. Additionally, results showed independent reading practice to be a valuable predictor of students' reading comprehension scores across an eight week period. Although direct and explicit strategy instruction can be powerful on its own, students are less likely to incorporate the SRL strategy into their academic routines without guided and independent practice (Lee, McInerney, & Liem, 2010). Ideally, strategy instruction incorporates a combination of direct instruction and modeling, as well as guided and independent practice. It is essential for students to

have frequent opportunities to practice self-regulation to maintain skills over time (Montalvo & Torres, 2008).

Social Support and Feedback

Social support from teachers and peers can serve an important role as students are learning to be more self-regulative. Findings from a study with fifth grade students showed that task engagement and the use of SRL strategies was more prevalent in students that regularly received support from their teacher and peers (Patrick, Ryan, & Kaplan, 2007). Often, social support comes in the form of feedback. Research indicates that effective feedback includes information about what students did well (Labuhn et al., 2010), what they need to improve, and steps they can take to improve their work (Black & William, 1998; Hattie & Timperley, 2007; Sadler, 1998). This type of feedback is often referred to as progress feedback (Duijnhouwer, Prins, & Stokking, 2010). Not only can progress feedback assist students in improving their academic achievement (Brookhart, 2011), it also can promote student motivation (Wigfield, Klauda, & Cambria, 2010) and self-regulation. Labuhn et al., (2010) examined the effects of teacher feedback on the use of SRL strategies to improve mathematics achievement of fifth grade students. Results indicated that students who received feedback from their teachers were more likely to accurately use SRL strategies to improve their mathematics scores.

Reflective Practice

Reflective practice, or adapting and revising pedagogical styles to accommodate students (Gibson, Hauf, & Long, 2011), might be the most important and effective tool a teacher can use. This practice enables teachers to investigate the possible reasons explaining the effectiveness of a given instructional strategy used in the classroom. Through thoughtful reflection, experimentation, and evaluation, teachers can better create meaningful learning experiences for their students (Gibson et al., 2011).

Challenges to Promoting Self-Regulated Learning in the Classroom

Though most teachers would agree that teaching students to be more self-regulative in the classroom would be ideal, the practice does not come without challenge. Developing lessons that prepare students to engage in SRL practices and provide real support and opportunities for implementation is no small feat (Paris & Winograd, 2003). Many will find that the major obstacle in helping students become self-regulative is the time required to teach students how to use specific strategies (Boekaerts & Cascallar, 2006). Although teachers in K-12 settings often are pressed to accomplish many tasks in limited time spans, it is important to remember that SRL strategies can help students learn new information and effectively prepare for those very tasks (Paris & Winograd, 1990). Fundamental changes at the school level may need to occur for teachers to be able to allocate the time and resources necessary for preparing students to be self-regulated learners. Most importantly, classroom curriculum and accompanying assessment systems must be organized in ways that support and value autonomous inquiry and strategic problem-solving (Patrick et al, 2007).

Understanding that factors outside of the teacher's control can have a major impact on the development of a student's ability to self-regulate also can prove to be a challenge. For example, how students choose to approach and monitor their learning is usually consistent with their preferred or desired social identity (Cleary & Chen, 2009), which can have little to do with a teacher's instruction. Whereas students who believe getting good grades is inappropriate for their social group may disregard effective SRL

strategies such as doing homework efficiently (Ommundsen et al., 2005), students with identities consistent with intellectual curiosity may be more apt to engage in SRL learning (Wang & Holcombe, 2010). Ultimately, students' social identities can influence their academic behaviors and educational goals (Montalvo & Torres, 2008).

Conclusions

Motivation, engagement, and self-regulation are the primary determinants of students' learning outcomes, and whether or not they will persist through challenging tasks (Harris, Graham, Mason, & Sadler, 2002). By teaching students to be more self-regulative, teachers may experience greater success in promoting academic achievement, motivation, and life-long learning. Spending a marginal amount of time each day demonstrating how specific self-regulation strategies can improve students' learning can go a long way to helping them prepare for challenging learning tasks and assessments (Graham & Harris, 2005). Ultimately, if our goal is to create successful life-long learners, then we must first ensure that we teach them the strategies necessary for that journey.

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