Domain 3.1 – Teach students how to learn

Fostering self-regulated learning in the classroom
Ridley, D. S., McCombs, B., & Taylor K.

Introduction
“My name is Pat Brown. I have been a sixth grade teacher for eight years. Recently, I have begun to feel that my current teaching style and focus is not reflecting my true philosophy and beliefs about education. Also, my students are not reaching the level of independence that I feel is essential for them to be successful. I certainly don’t feel as if I’ve been a failure. I just feel like there is something more I could be doing.

I have been taking an education class at the university. A theory that explains my philosophy was introduced. The professor referred to it as self-regulated learning. This theory talks about students being aware of their own learning, motivation, and emotions. It explains how the goal is to have students become more reflective and self-motivated so that they will use effective strategies to maximize their learning. Many strategies were introduced and elaborated on in the class like goal setting, reflection, using positive self-talk and sharing ownership in the classroom.

When I was first exposed to all of these strategies I was more than a little overwhelmed! How could I do all this and teach too? As I further explored these strategies, however, I saw how they were synonymous with effective teaching. Further, I saw how I could incorporate these strategies into the curriculum. I felt that I had to prioritize and teach students only a few strategies at a time. I realized that if I tackled too many strategies at one time I would overwhelm myself and my students and therefore not accomplish anything! This step-wise approach was part of an even bigger realization: As the teacher, I had to be self-regulated if my students were going to be!

To model self-regulated attitudes and behaviours, I have decided to use “think aloud” self-talk during my own learning process. I will use personal interest and learning style inventories to learn more about my students and to give them the opportunity to learn about themselves. I will clearly communicate goals for the class. I will stress and model to the students, the process of learning by asking questions, admitting uncertainty, and trying new techniques and technologies.

I also have made a plan to infuse direct instruction of a couple of the self-regulatory strategies into my curriculum this year. Problem solving, reflection and goal setting will be the center of my curriculum. For example, the social studies curriculum will be infused with open-ended situations where students will, after gaining an understanding of the culture and or time period, be asked to play the role of a person living in that time or culture. In their role, students will be presented with a situation where they will have to make a choice or decision which will impact history. Students’ decisions will be accepted if they are able to articulate how they analysed the situation taking into consideration the historical circumstances, offer a variety of solutions, weigh the pros and cons of each possible solution, and give a rationale for the solution chosen.

To be successful, students will need to be clear about the problem-solving process. They will need to be able to articulate in their own words what it means to solve problems, understand the significance of the outcome, and clearly recognize the relevancy of the problem-solving process, in both their academic and personal life. This will be a slow process where first the standard definition
of problem solving process in a teacher-led situation. Math will be an excellent area in which to begin.

After the direct teaching and discussion of the problem-solving process, students will practice using it in cooperative learning groups, using the newspaper and other sources to compute housing, utilities, and food costs. Students will select a job, compute yearly, monthly, and weekly salary, and create a monthly budget for a family of four.

I had already begun to use portfolios last year. I had students choose writing pieces that were their most and least satisfying. This year, I will expand this process by focusing on problem solving and adding a reflection and goal-setting component. I will ask students to first collect examples of the problem-solving process for one quarter in math, social studies, writing and science. At the end of the quarter, I will have them choose a piece that is most satisfying and least satisfying. I will ask them to reflect on the process they used to attain the product itself. The focus will be on becoming aware of what they were doing as it relates to the outcome and their emotional response to the learning experience and the product. After using this portfolio and reflective process for one quarter, students will establish academic and personal goals based upon their portfolio for the second semester. For example, a student may state that they would like to get better at brainstorming possible solutions.

I know that for my own sanity and for student learning, I cannot make all these changes in my teaching at once. I also cannot just expect students to be ready to share control of the learning process all at once. I know this is a long-term process and will have to moderate my level of control dependent upon my comfort level, the students’ willingness to take a risk, and the maintenance of a sane learning environment. I know that I must not get discouraged and totally abandon the strategies that I have outlined. I must give myself permission to fail, just as I will allow for my students. I must share my goals and frustrations with my students and reflect aloud what is churning in my mind. This will not only give me growing room but will model real risk taking and continuous learning."

**Purpose**

The purpose of this article is to describe how teachers like Pat Brown can transform theory and research on self-regulated learning into classroom practice. While self-regulated learning is recognized as an important piece of school reform efforts, it is easier to talk about self-regulated learning than it is to foster it. Sharing concrete ways for teachers to promote self-regulated learning in the classroom is the goal of this article. We will answer the following questions:

a) What is self-regulated learning?
b) What are the costs of not encouraging students’ self-regulated learning?
c) What are the benefits of nurturing students’ self-regulated learning?
d) How do I advance self-regulated learning in my classroom?

Because of the theory surrounding self-regulated learning is complex, the task of providing teachers with a detailed guide for classroom instruction is not easy. In this article, however, we offer specific and concrete strategies for improving students’ self-direction and self-motivation.

**What is self-regulated learning?**

In our view, all learning is self-regulated (Ridley, 1991). Self-regulated learning is defined here as the ongoing process in which the learner makes sense of the learn task, creates goals and strategies, and implements actions designed to meet his or her goals for the given learning context. Some researchers in this field define self-regulated learning as the use of “proactive” learning strategies, for example soliciting additional information about the nature of forthcoming tests, completing assignments on or before due dates, or expressing an interest in the course matter (Zimmerman & Martinex-Pons, 1988).
Simply equating self-regulation with learners’ use of proactive learning strategies overlooks the fact that a decision to not use them can be as much a self-regulatory decision as the decision to use the strategies. The important thing about self-regulated learning is how to a learner’s level of reflectivity shapes how he/she makes sense of learning tasks, create goals and strategies, and implement actions. Higher levels of reflection make it possible for learners to metacognitively assess their own thoughts, feelings, and behaviors in a given learning context. Thus, one’s level of reflection can impact, in a fundamental and profound way, “how things look” to the learner.

Ridley (1991) has used the terms “reflectively intentional” and “unreflectively automatic” self-regulation to represent the high and low ends of the reflective awareness continuum. Being a reflectively intentional learner or unreflectively automatic learner, however, does not necessarily imply specific learning behaviours. Instead, level of reflective awareness influences the consistency between one’s intentions and actions.

Reflectively intentional learners typically have greater intention-to-action consistency because they are aware of their purposes for the learning event (Ridley, 1990). On the other hand, unreflectively automatic learners typically have lower intention-to-action consistency because they lack clarity of their intentions. This lack of awareness makes these learners highly vulnerable to distractors in the classroom environment.

The presence or absence of proactive learning behaviors in the classroom (e.g., seeking assistance from the teacher) are both a function of the nature of the learner’s self-regulation and learner’s motivational attitudes towards the learning task. Thus, a reflectively intentional learner may not be motivated to participate in class discussions because experience tells them that divergent perspectives are strongly ridiculed by the teacher. Learners who are both reflectively intentional and high motivated to learn the material are likely to be the students who are demonstrating proactive learning behaviors.

Finally, learners who have been taught by, and associated with, reflective teachers, parents and peers will more likely interpret, plan, and implement their learning in a reflectively intentional way. While teachers can expect greater levels of self-direction from older students, even preschool students have the capacity to “plan, do, and review” their choice of learning activities. In fact, “plan, do, and review” is the cornerstone of High Scope, a self-regulation-based curriculum used by a number of progressive early childhood educators (Weikert, 1992).

What are the costs of not encouraging students’ self-regulated learning?
The learner is ultimately in control of whether he or she learns or not. Sometimes teachers think that because we direct the classroom activities, control the timetable for learning, decide the methods of instruction, and determine the consequences for student outcomes, we, not the students, are in control of learning. This is a big mistake. Students are in control of their own learning, even though most do not realise it themselves.

Students who are not aware of their control over their learning develop a dependency on the teacher. We all know students who rely on the teachers to tell them the right way to arrive at the right answer. In classrooms that promote this type of dependency, students seldom exercise critical thinking. They seek rewards for meeting the teacher’s standards. Over their academic career, these students become cognitively and emotionally rigid. When asked to figure out novel ways to solve problems, many of these students become paralysed and unwilling to try.

Teachers also pay a price for this type of student dependency. Under these conditions, the teacher is totally responsible for creating the motivational climate for student learning. Most teachers acknowledge this motivational challenge, yet, few understand their own contribution to this
problem. This is understandable given that many teachers have not been encouraged to share control of learning with students.

Finally, we believe that overdependency, on the teacher is also related to acute and chronic student disengagement from academic learning. Many students do not understand why they have to satisfy someone else’s educational expectations. They quickly learn to go through the motions. In middle and high school, some students drop out of school - whether physically or mentally – instead of continuing the torturous process of engaging in meaningless learning activities.

What are the benefits of nurturing students’ self-regulated learning?
When teachers nurture self-regulated learning, they help students to take intentional control of a process they are already controlling without awareness. To practice intentional control, students must:

(a) Exercise their personal control and responsibility for learning (will component) and,
(b) Be able to plan, self-monitor, and self-evaluate (skill component) (McCombs & Marzano, 1990).

Few students have the will, knowledge, or skills to effectively self-direct their learning. Students have not been taught how to self-regulate nor have they been given many opportunities to self-direct their learning in the past.

What is the pay off for teachers’ efforts to foster independent learners? The bottom line is that teaching can be more fun. Instead of the pressure of total responsibility for the conditions of learning, students themselves become co-operators who share in the pleasures and the responsibilities of control. The preschooler who chooses to spend time at the manipulatives table provides the teacher with an opportunity to interact with a child who wants to know how to count. The middle school student who wants to plan learning activities around topics he or she is really interested in (e.g., automobiles, fashion design) allows the teacher to plan how to build on this interest while teaching required learning outcomes. The high school students who prefer to demonstrate their understanding of a piece of literature with a melodrama played out on videotape instead of completing a written test allows the teacher to be a facilitator, discussant, and critic instead of the dreaded tester of knowledge.

The benefits to students, short-term include higher levels of motivation to learn and therefore, deeper levels of understanding. We have seen students at all grade levels become more engaged in learning. We have also seen a reduction of discipline problems. When students have a greater understanding of the purposes for learning and when they are more in control of the methods of learning, they have less need to disrupt the “system”.

Longer term, a self-directed learner is a person who is truly oriented toward life-long learning. Past the rhetoric, these individuals come to know that they are responsible for their preparation for major life events. They know that while information, jobs, beliefs, and behaviors may become obsolete over their lifetime, they have the learning process skills to remain viable and happy. Most importantly, these individuals develop the personal conviction that they have the motivational energy to deal with any future challenge.

How do I advance self-regulated learning in my classroom?
In our work with teachers, we have seen that while it may be easy for them to understand the concept of self-regulated learning, it is not as simple to foster it. The three largest teacher-related problems we have observed are:

(a) not knowing where to start,
(b) expecting over-night changes in students’ self-regulatory attitudes and behaviors, and
(c) not being aware of how their own attitudes and behaviors influence their students’ ability and willingness to become more self-regulatory.

Teachers should expect incremental changes of their students and should give themselves permission to evolve in the same manner. Time to understand self-regulated learning and then to plan how to incorporate portions into the curriculum must be allowed. The anxiety that comes with self (or other) imposed pressure to make radical and immediate changes prevents many teachers from achieving the goal that they seek. The most successful teachers are those that start slowly and incorporate small step-like changes. For example, a teacher could start by teaching their students how to use goal setting to better utilize their seatwork or home-work time. This might be followed, several weeks later, by showing students how weekly, monthly, or semester goals can help to create a sense of order and direction in their lives. The next semester, the teacher might introduce reflectively by having students write personal entries into a journal at the end of the class period or day.

Teachers get frustrated when they sometimes see an initial increase in discipline problems when they begin using strategies to foster self-regulation (e.g., group projects). Remember, students who are used to teacher-directed classrooms literally may not know how to behave in this new setting. This does not mean these students are unable to be self-disciplined. Instead, it means they have to understand their new responsibilities and learn strategies for self-direction. We have observed that once students are prepared in this way, discipline problems decline compared to teacher-directed environments. Again, this does not happen over night. Students who have been taught in teacher-directed classrooms over the years have an expectation of continued teacher control. Many times they do not immediately understand or even appreciate shared control and responsibility.

Teachers, too, may need time and instructional support to understand the changes in their attitudes and behaviours that are necessary for fostering self-regulated learning. Many of us think we need to control the learning process and are afraid that if students have the control, they won’t learn what they are supposed to learn or that they will take advantage of the teacher. Although these fears may be warranted at the beginning or in classrooms where students and teachers have not established a trusting and respectful relationship, our experience is that these problems are the exception rather than the rule. Let’s see what it takes to make this happen. We have compiled four key recommendations to help teachers foster self-regulated learning.

**Recommendation 1: Model self-regulatory attitudes and behaviours in your teaching**

The research of Bandura (1986), Ryan & Stiller (1991), and others suggest that if students are to be reflectively intentional learners, their teachers must practice and model the same. Teachers must think and act in reflectively purposeful ways that go beyond the automatic use of familiar methods. Attitude is key. Specifically, respect for students as individuals and a personal openness to learning as an on-going process (instead of a performance contest) are the most important ingredients. In helping teachers from inner-city schools in Miami to foster “at-risk” students’ positive self-esteem and persistence in school, Mills (1991) found that the most powerful determinant of success was not arming teachers with strategies and techniques designed to change students’ poor attitudes and habits. Instead, it was training to help teachers (and parents) to develop and to model, less stressful and more respectful ways of working with these sometimes challenging children (Mills, 1991).

Concerning the modelling of self-regulated learning behaviors, Schoenfeld (1985) suggested that teachers use “think aloud procedures” as they demonstrate math problem solving. This modelling is tended not only as a way to demonstrate expert strategies, but also as a way of modelling trial and error, persistence, and positive self-talk. Schoenfeld believes that this type of modelling promotes the learner’s faith that he or she may be able to understand math after all and also facilitates the use of positive self-talk during problem solving.
Recall that teacher Pat Brown is aware of the need to practice and model what she is “preaching”. Pat plans to demonstrate risk taking, positive self-talk, and continuous improvement in her teaching methods. Pat is especially focused on modelling to her students that learning is an on-going process. She plans to model this by asking open-ended questions, admitting uncertainty, trying out new techniques and technologies, giving herself permission to fail, and sharing her goals, thoughts, and frustrations about the learning process with her students.

**Recommendation 2:**
**Incorporate the instruction of strategies for self-regulated learning into the teaching of content**

Research on students taught learning-to-learn strategies (Weinstein & Mayer, 1986) suggests that, learn-to-learn strategies, like any new knowledge, takes time and effort to acquire. In fact, when first learning these strategies, most students struggle and may even question whether or not the new learning approach is worth the effort. In time, however, most students who persist develop these new learning strategies to the point where a high level of conscious effort is no longer necessary. Similarly, teaching students specific strategies to promote more self-regulated learning (e.g., self-questioning, goal setting, time management, decision making & problem solving, collaboration skills, peer tutoring) is time consuming and requires practice, yet it is an effective means of helping students to gain control over their learning and behaviour in the classroom (Miechenbaum, 1977). Most researchers suggest that instruction of these strategies should be infused into the regular curriculum (instead of being taught in and of themselves).

Schlosser (1992) found that a teacher’s willingness to infuse these learning-to-learn skills into the curriculum had a positive motivational impact on marginal students. Specifically, she found that high-impact middle school teachers were not only warmer interpersonally, but that they also explicitly taught learning strategies. Low-impact middle school teachers distanced themselves emotionally from their students and believed that students should already know these learning-to-learn skills. These teachers avoided “babying the student” or “holding the student’s hand”. Some of these teachers went so far as to describe their role as that of an enforcer who used referrals and suspensions to motivate these students. We believe that teachers must be willing to teach the self-regulatory skills that students lack at any grade level. We also believe that with-holding these strategies from students as a means of “preparing them for the demands of secondary education”, is a serious error.

Referring back to Pat Brown, this teacher realizes the need to slowly and systematically build on her students’ understanding and use of the problem-solving process. Pat begins with standard definitions, students’ articulation of what it means to solve problems, and discussions of the relevancy of the problem solving process in students’ academic and personal lives. She follows this with multiple classroom experiences using the process and practicing it in cooperative learning groups. Finally, Pat allows individual students to demonstrate their understanding of the problem-solving process with exercises such as asking them to role play a famous person in history.

**Recommendation 3:**
**Share control of the learning process with your students**

A common method of many teachers who strive to foster students’ self-regulated learning is the use of group learning activities (e.g., small group exercises, student-led classroom exercises, peer tutoring, discussions, student role plays, cooperative learning activities). Schoenfeld (1985) points out that this use of social grouping fosters discussion and debate among students. Such articulation encourages the development of metacognitive skills for monitoring and evaluating their position as they serve the role of teacher. These skills develop as students reflect to make sure that their instructional methods (e.g., questions, clarifications) are correct and logical.
In their work on cooperative learning, Johnson and Johnson (1991) found that traditional teacher-directed classroom social structures tend to be related to a performance orientation which promotes comparative evaluation, self-esteem based on comparative achievement, and isolation among students due to competitive tension. On the other hand, student-directed cooperative learning structures appear to have a positive effect on self-esteem, self-efficacy, intrinsic motivation, empathy, and social cooperation.

In the student-directed activities suggested above, it is assumed that students are willing and able to accept the greater control and responsibility. While attitudinal surveys of students suggest that many want more classroom control and responsibility (Midgely, Eccles, & Feldlaufer, 1991, Oldfather, 1993), many students may not initially know how to effectively manage the higher levels of autonomy and authority they desire. In our view, a gradual shift toward greater classroom control and responsibility is more realistic given that most students have been socialized to be dependent on their teachers.

Teacher attitude is also important. To develop students’ willingness and ability to accept classroom control and responsibility, the teacher must respect, encourage, and support students’ roles as co-creators of the classroom learning experience (McCombs, 1993). As teachers come to believe in the potential of their students as self-regulated learners, students will also learn to believe in their own potential. When this happens, shared control is likely to flourish in the classroom.

**Recommendation 4:**
Create a classroom climate that makes students willing to take the risk of adopting new self-regulatory attitudes and behaviours

Research by Ames (1992) points out that students who perceive the classroom as having a learning, as opposed to a performance, orientation are more likely to show the following characteristics:

(a) willingness to try out new learning strategies,
(b) preference for challenging tasks instead of easy ones,
(c) being more positive about the class, and
(d) being more confident that their efforts will lead to success.

This research suggests that if teachers expect students to be open minded about becoming a more self-regulated learner, they must manage their classrooms in a non-competitive manner which focuses on individual effort and progress instead of normative performance. Specifically, teachers should avoid practices such as grading on a curve, posting grades, comparing student performances, and recognizing only the highest achieving students. Instead, teachers should stress the process of learning which means using practices such as warmly acknowledging effort and growth, encouraging risk taking, portraying mistakes as steps in the learning process, highlighting the emotional satisfaction of insight and understanding, and stressing the value of setting and pursuing goals for personal improvement.

In our example, Pat Brown has her students involved in self-assessment of their own work. Students choose writing pieces reflecting their most and least satisfying work over a period of time. They will then reflect on the factors that may have contributed to the differences in the quality of these works. This type of individual self-evaluation fosters a focus on personal progress instead of a focus on learning for the sake of competing with peers.

**Conclusion**
How realistic is it to expect that teachers can and will incorporate these recommendations into their curriculum? In school environments where test score accountability is high, curricula are dictated, classroom management is institutionalized, and classroom size is growing, convincing teachers that these recommendations make sense is likely to be a very hard sell. The research suggests that the
teachers who are mostly likely to carry out these recommendations are the ones who perceive their school as a place which fosters their own autonomy, risk taking, and on-going personal and professional development. Ryan & Stiller (1991) recently concluded that, "the capacity of teachers to promote self-regulation and internalization of value for learning in students is inextricably intertwined with teachers’ opportunities to regulate their own activities and thus to be innovative, creative, and intrinsically motivated on a day-to-day basis“ (p.23).

What can administrators and teachers do? First, administrators who value student self-direction as an outcome should heed these same four recommendations with their teachers. Second, teachers and administrators must communicate to make sure that every aspect of the school experience exudes the virtues of personal responsibility, reflectivity, shared control, risk taking, and learning for its own sake. Finally, schools must aggressively seek out the support of parents and community members who value these virtues because schools, by themselves, do not have all the ideas or the resources to enact the innovations that are likely to spring from this enriched environment.

References
Scott Ridley teaches at Arizona State University West, Phoenix, Arizona.
Barbara McCombs is a director at Mid Continent Regional Education Laboratory.