From Research to Practice: Understanding Self-Regulation

Autumn M. Dodge

Series Editors:
Punya Mishra & Matthew J. Koehler
Michigan State University, USA

Introduction by Punya Mishra & Matthew J. Koehler

It gives us great pleasure to introduce the first article for a regular series of columns that introduces readers to contemporary educational research and its implications for practice. The first of these columns is about the important topic of self-regulation. This column was written by Autumn M. Dodge, a doctoral student at the College of Education, Michigan State University working under our supervision

Understanding Self-Regulation Getting Started

In 1970, a scientist named Walter Mischel conducted a famous study. He took children between 4 – 6 years of age, one at a time, to a quiet room, sat them at a table, and placed a marshmallow (a sweet treat) in front of them. The children were told that they could eat the treat right away, but if they waited 15 minutes they would get two! The researcher then left the room and secretly observed the children. As would be expected, some children could not control themselves, and ate the marshmallow before the time expired. About a third of the kids, however, managed to regulate their behavior by distracting themselves in different ways, and avoided eating the treat. They got the extra candy.

Mischel did not stop there. He followed up with the children in his original study decades later to see how they did later in life. This is where things get really interesting. He found that children who successfully controlled their impulses when they were around 5 years old were more successful academically years later. His results represent an amazing finding – indicating that the ability to control one's impulses has a strong influence on future success. Psychologists call this ability to replace our initial response with a more appropriate response "self-regulation."

Self-regulation has received a great deal of research attention recently, as researchers try to better understand how self-regulation impacts students' success. Which students have stronger or weaker self-regulation?

When and how does it develop? Why do some children have better self-regulation than others? Does student self-regulation affect learning? Other scholars have explored the practical applications of this work. For instance, what does this research mean for educators? Can teachers help students improve their self-regulation? These are all important questions and we will explore some of them below. First we'll look at what the research says and then we'll discuss implications for educators.

What does the Research Say?

When does self-regulation develop?

The building blocks of self-regulation start at birth. In the first few months of life, babies develop the ability to react. For example, Radha, a 2 ½ month old, might smile at her mother's familiar face but not at the face of a stranger. She also recognizes patterns in the things happening around her. At 5 months, Radha is able to control and direct her movements based on her current surroundings. When Radha is 1 year old, she can move and behave intentionally with specific goals in mind. She is able to stop doing something when her dad asks her to and is developing a sense of what kinds of behaviors are expected in certain situations. Even on her own she's beginning to act in the ways that are socially expected. As Radha grows older she can self-regulate her behavior in more complicated situations. As you can see, the progress of self-regulation from birth onward is important for children's social skills.

Why do some children have more self-regulation than others?

Self-regulation develops in complicated ways that can impact different children in different ways Research reports suggest that children from "at-risk" backgrounds are more likely to have low self-regulatory abilities. Children considered at-risk could be from racial minority groups, low-income households, those that have slower than normal cognitive development, and/or those born to adolescent mothers. Each risk factor is complex and can contribute to lower self-regulation in multiple ways. For example, varying cultural views of what is "appropriate behavior" result in some children in reacting in school with an inappropriate response that might be acceptable in their own home. Research also suggests children from low-income households may have fewer resources like books or games that focus on social or emotional skills that help children explore multiple reactions in different situations and sort out what is the best choice. Parents in low-income households may be working multiple jobs, maybe night shifts, and may have less time to interact with and model appropriate behavior for their children.

Does student self regulation affect learning?

Most teachers expect children to listen to and follow directions, interact kindly and cooperatively with their peers, and work on assigned tasks. To complete school tasks, students need to set goals, pay attention, and use strategies. Imagine two students in

a classroom. Jamal has strong self-regulation. Sara has weak self-regulation. Jamal's parents both work but are home evenings and weekends. They spend time with Jamal on his homework and Jamal has learned to self-regulate his behavior while working on a task. For example, to complete a task, he gives it full attention. He suppresses thoughts and desires about playing video games or playing outside. He understands having a plan makes work go more smoothly. His parents demonstrate how to use strategies to work through tasks step-by-step. Jamal learns to self-regulate his actions so he does one thing at a time even if he wants to rush to the end. Jamal knows successful task completion requires conscious regulation of his goals, effort, and final product before the task is complete. Sara has less success working on classroom tasks. Her parents are always tired and irritable from sporadic work schedules. She doesn't bring schoolwork home because her parents don't have time to help. Her difficulty self-regulating her behavior in reaction to teacher directions extends to her ability to work through a task. She does poorly on in-class work and continues to struggle in school. Over time these differences can lead to significant differences in their academic success.

How Can Teachers Help Students Develop Self-Regulation?

So teachers may well ask, "What can I do to help my students with low self-regulation abilities?" Clearly, students come to school with different levels of self-regulation, and, students' self-regulation is the result of multiple factors many of which are beyond a teacher's control. *There are explicit skills and strategies, however, that teachers can present, model, and encourage that can help students develop stronger self-regulation skills.*

Presenting—Presenting helps children become aware that they can control their behavior and that we all control our behavior and behave differently in response to different situations. Several key elements can guide presentation:

1. *Explicit instruction*. Children cannot be expected to figure out for themselves how to regulate their own behavior. Instead, behavior control must be introduced explicitly and explained multiple times in multiple ways and in multiple contexts.

2. *Individual control and purposeful thought*. Children should be introduced to the notion of being in control of their actions, their thoughts, and how they interact with their surroundings. Explicit language can be used to explain that the thoughts they have in their head are their own and that they can control and change their thoughts and use their thoughts to control their behavior.

3. *Current situation*. Teachers must explicitly explain that we behave differently in different situations. Children can be encouraged to use their thought control to ponder what a situation calls for and then make behavior choices that match the situation.

4. *Support and transfer of new skills*. Teachers can support children's learning and application of this information by providing strong and frequent support as children experiment and develop their skills. As children learn more, teachers can offer less support with lower frequency. Gradually, children enact behavior control on their own and transfer this skill to other areas of their life.

Modeling—Teacher modeling can support explicit instruction presented to students. "Think-alouds" are a good way to model the thought processes behind self-regulation. For example:

Teacher: "*Okay, I've been told to get my book bag and line up quietly at the door. Hmmm, I'm having a really good time talking with my friends and I don't like standing in line because I always get shoved around. So my initial reaction is that I don't want to follow this direction. I want to stay at my table and talk with my friends. But then I think...hmmm...what am I expected to do in this situation? I know that I'm supposed to do what the teacher says, and most of the students always line up at the door. The students that don't line up get in trouble, so that's the wrong thing to do. So, I have to let go of what my initial response and respond in the way that's appropriate for school.*"

In this think-aloud, the teacher has modeled important parts of self-regulation: her thoughts before her response, how she determined standards for her behavior, instructions she gave herself to guide her decisions and how she monitored the appropriateness of her chosen behavior, evaluation of her choice based on consequences, and evaluation of her choice based on her own standards. This can lead to a step-by-step behavior checklist teachers can give their students so that they can better monitor their thoughts and actions.

Students can be encouraged to do "think-alouds" or practice behavior control through acting out skits. The teacher can have a bowl with slips of paper, each with situations and possible reactions written on them. Students, in small groups, choose one. Then they spend a few minutes deciding on behaviors appropriate for the situation. Skits can demonstrate how students think through problems and strategize ways of regulating their behavior.

Encouraging- Teachers can encourage student self-regulation through language, questions, and responses that facilitate students' conscious thought about their behaviors. For example, the following teacher questions could be applied in multiple situations:

"Are we all thinking about our behavior and making good choices?"

"Let's step back for a moment. What kind of situation are we in? What is the best behavior for this situation?"

"I see you've chosen - behavior. Do you think this is appropriate? What are the consequences of this behavior?"

"Do you think that behavior is appropriate? Have you seen others choose different behaviors in this situation? Which do you think is better?"

Through strategies such as these teachers can better help their students become self-regulated learners and help set them on a path to academic success.

Further reading

Dembo, M. H. (2010). Helping students become more self-regulated learners. Retrieved from http://www.slideshare.net/vadenbd/helping-students-become-more-selfregulated-learners

Davis, S. G., & Gray, E. S. (2007). Going beyond test-taking strategies: Building self-regulated students and teachers. *Journal of Curriculum and Instruction, 1*(1), 31-47.

Also available at: www.joci.ecu.edu/index.php/JoCI/article/download/4/6

Bigenho, C. W. (2010). Helping students develop self-regulated learning strategies. Retrieved from http://bigenhoc.wordpress.com/2010/02/24/helping-students-develop-self-regulated-learning-habits/

Kong, E. (2011). 1-16. The role of self-regulated learning in enhancing learning performance. *The International Journal of Research and Review, 6*(1), 1-16.

Also available at: http://libir1.ied.edu.hk/pubdata/ir/link/pub/A1_V6.1_TIJRR.pdf

Autumn M. Dodge is an advanced doctoral student in educational psychology in the College of Education at Michigan State University.
http://michiganstate.academia.edu/AutumnMDodge

Punya Mishra and Matthew J. Koehler are professors of educational psychology and educational technology at Michigan State University.
(http://punyamishra.com/)
(http://mkoehler.educ.msu.edu/)

Back

Video Course on CCE

ETMA decided to bring out an Authentic Video Course on CCE to fill in the void of uniformity and quality assurance in training generated by various agencies that have come up with materials on CCE. In tune with the Teachers' Manual on CCE by CBSE for which Prof. Marmar Mukhopadhyay was consulted, Prof. Mukhopadhyay led a team of interdisciplinary experts of educational scientists, instructional designers, producers, and media specialists to produce this Video Course.

The videos are authentic since innovators and experts speak directly with the implementers in it. However, the video course goes beyond the Manual with more enriching ideas and practices. The video course will comprise of videos on

- **CCE: Perspectives, Challenges & Response;**
- **CCE: Idea of a Child;**
- **CCE: Framework;**
- **CCE: Tools and Techniques of Measurement;**
- **CCE: Data Gathering, Analysis, Reporting & Feedback;**
- **CCE: Parent Teacher Partnership.**

With the mission of pioneering research-based innovations for quality in education, ETMA also proposes to launch an online course on CCE, making use of the Video Modules.