Goal Setting as an Explicit Element of Metacognitive Reading and Study Strategies for College Reading

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An understanding of the role of metacognition—thinking about thinking—is a fundamental aspect of the theoretical base of most textbooks for college reading and study strategies courses today (e.g.,Veenman, Van Hout-Wolters, & Afflerbach, 2006). The theme we seek to develop in this article is that elements of what make a reading and study strategy "metacognitive" on a theoretical level need to be made explicit to college students enrolled in reading and study strategies courses.

In particular, this article examines one aspect of metacognition: goal setting. We first establish its importance as a central theoretical aspect of metacognition. We then argue that goal setting must be included as an explicit element of instructional and procedural descriptions whenever metacognitive reading and study strategies are taught. We end with suggestions for making goal setting explicit in the classroom.

What is Metacognition and Its Relationship to Self-regulation?

Casazza and Silverman (1996) offer a succinct definition of metacognition as "cognitive self-awareness . . . an awareness of how information is processed" (p. 201). This awareness necessarily includes not just attention to information but also learning and thinking processes. And while awareness of information, cognition, and learning processes is part of what makes metacognition a core aspect of any effective reading and study strategy, the ability to do something with that awareness is also important. Along these lines, Holschuh and Aultman (2009) emphasize an important component of metacognition as being self-regulation, or students'

understanding and control of their own cognition. In fact, self-regulation may be the aspect of metacognition of most interest to college reading instructors seeking to support their students' textbook reading. For example, Mulcahy-Ernt and Caverly (2009) constructed a compelling argument for effective reading strategies being centered on a self-regulatory framework that fosters "the student's own planning, decision-making, reflection, and evaluation of effective reading strategies" (2009, p. 191). Likewise, Baker and Brown (1984) describe metacognitive reading strategies as including self-regulatory mechanisms, such as "*checking* the outcome of any attempt to solve the problem, *planning* one's next move, *monitoring* the effectiveness of any attempted action, and *testing, revising,* and *evaluating* one's strategies for learning" (p. 353, emphasis in original). When students are metacognitively aware of their learning process, they engage in self-regulatory processes that include goal setting, self-observation, self-judgment, and self-reaction (Bandura, 1986). Indeed, self-regulatory aspects of metacognitive awareness are so commonly included, or assumed to be included, in reading strategies that they have become the de-facto focus of reading and study strategies in general (Mulcahy-Ernt & Caverly, 2009), and students who are self regulating demonstrate what it means to be a "strategic reader" (Allgood, Risko, Alvarez, & Fairbanks, 2000, p. 202). In this article we define metacognition as knowledge about situated cognitive states or processes, with self-regulatory aspects of this knowledge playing a central role in effective reading strategy implementation.

Research shows that the strategies of planning and goal setting are of paramount importance. Winne and Hadwin (1998), place planning and goal setting at the forefront of the executive strategies for regulating thinking. Pintrich (2004) focuses not only on gaining knowledge and setting goals for the task and context, but also on "the self in relation to the task" (p. 389). Students' self-monitoring of their learning and thinking while carrying out the plan or goal was another common phase throughout these executive strategies. Baker and Brown (1984) highlight the importance of self-monitoring and being aware of the effectiveness of the strategy while working toward a specific goal. Such reflective and evaluative processes include revising and changing strategies as

necessary (Jacobs & Paris, 1987); reflecting on the self, the task, and the context (Pintrich, 2004); evaluating one's strategies for learning (Baker & Brown, 1984); and adapting changes in order to positively affect future studying tasks (Winne and Hadwin, 1998). Similarly, Zimmerman (2002) describes the use of three phases to keep students active and aware of their learning throughout the entire reading process: the forethought phase, performance phase, and reflection phase require students to set goals, monitor progress, and evaluate the completion of their goals and the use of the strategy in the future.

Goal Setting

A key component of the view of metacognition described here, and of self-regulation in particular, is goal setting (Pintrich, 2004; Weinstein, Husman, & Dierking, 2000). Goals are often broadly categorized in two ways: as mastery goals and performance goals (e.g.,Darnon, Dompnier, Gillieron, & Butera, 2010; Silverman & Casazza, 2000). Mastery goals are usually associated with process, learning, and development of competence; performance goals are usually associated with product orientations and demonstrating competence or social comparisons to one's peer group. Silverman and Casazza (2000) link mastery goals to strategy learning and metacognition in general, while performance goals are more geared toward grade attainment or other external, comparative validation. Of course, there is overlap between the two types of goals, and some researchers have questioned treating the goal categories as simple dichotomies (e.g., Brophy, 2005). However, where these distinctions are made, mastery goals are more closely aligned to the types of goals focused on in this article.

Weinstein, Husman, and Dierking (2000) observe in their chapter on self-regulation and learning strategies that "strategy-use must be goal-directed" (p. 732) and Pintrich (2004) also emphasizes goal setting as a key aspect of self-regulated learning. Flavell (cited in Dinsmore, Alexander, & Loughlin, 2008) includes goals as one of the four key areas of metacognition, and, similarly, Gredler includes "goal setting and planning" in her summarization of what is termed metacognitive activity when studying (Gredler, 2001, p. 210). Blakely and Spence (1990) emphasize that

metacognitive learning entails that "process goals, in addition to content goals, must be established and evaluated with students" (para. 28). A process goal is one in which the student focuses on an aspect of the strategy—that is, what to do next while reading a textbook—while a content goal involves what knowledge the student wants to learn.

Hadwin and Winne (1996) suggest that students with the same goal will often choose different ways to achieve their goal, highlighting the complexities involved in choosing which reading strategy to use when and with what particular type of text. Without the inclusion of goal setting as an explicit part of strategy-implementation, instruction presented to students, such complexity will only increase and can potentially hinder students' effectiveness as strategic textbook readers.

Goal Setting in the Classroom

Goal setting as an integral aspect of metacognitive reading strategies has a solid theoretical basis, as reviewed above. It is important to also consider how that theoretical basis translates to the classroom. When considering what goal setting would look like in practice, it might be helpful to think of goals on more than one scale. That is, not all goals will have the same scope: some will be broad and focused on overall assignment needs, and some will be more focused on individual parts of the reading and study strategy used to accomplish the overall assignment.

The former can be considered macro goals, where students must consider the overall assignment and what their goal is as related to that assignment, and the latter can be considered micro goals, in which students set goals for each part of the reading and study strategy they are implementing. For example, a typical reading assignment in a variety of introductory courses would be to read a chapter from the textbook before the next class meeting. Within that broad assignment, students must decide on an overarching goal concerning their reading of that chapter, including what the purpose of the assignment might be for the class as a whole and what reading and study strategy might be best suited for the assignment.

Instructors should always explicitly discuss with students the macro goal. For example, given the type of assignment, the macro goal might be to construct a basic understanding and recall of the key points and relationships in the chapter in preparation for a general discussion of the chapter topic in class the following day. Students and instructor may decide that an effective reading and study strategy in this context would be writing a summary of the chapter. Widely considered a metacognitive strategy (see Ciardiello, 1998), most descriptions of summary writing begin with considering the meaning of the whole text and moving from there to the meaning of smaller units like sections or paragraphs, and finally factoring out insignificant details in favor of main ideas before writing up the summary.

We argue that in addition to those macro goals, micro goals should be set for each step of that process, and instructors should discuss the "what" and "why" of each goal. For example, a common step in summary writing is to establish the thesis of each paragraph or small section (e.g., Friend, 2000-2001). Instructors should discuss with students what the goal of figuring out the thesis for each paragraph is, and why that is a useful goal to have for this step of the process. This discussion should be replicated for each step of the summary writing process. This allows deliberate, metacognitive actions to take place on the part of the students, and encourages self-regulation during the implementation of the strategy itself since, with each aspect of the strategy, readers are aware of what they expect to accomplish with that part of the strategy. If students do not accomplish a particular goal while actively engaged in implementing the strategy, this allows for a chance to repair their approach while still working within the strategy, as opposed to realizing a problem after the strategy.

General questions instructors can pose to students that get at these types of goal setting across a variety of reading and study strategies might include

• Taking into consideration the class and the reading assignment, what would be your overall goal—the macro goal—when you open up your textbook? How does that goal relate to the assignment? How will you know whether you have accomplished the goal?

• What kind of reading and study strategy would be a good choice to work toward that goal?

• Now that we have chosen a reading and study strategy, let's look at the steps for that strategy. What micro-goal would you form for the first step?

• How will you know whether you have accomplished that goal?

• What about the second step–what is the goal of that part of the strategy? How do you know if you have accomplished that goal?

• If you find that you haven't accomplished one of the goals for one of the steps of the strategy, what will you do to "fix" it?

• How do those goals relate to each other, and how do they relate to the overriding goal?

Such questions also provide opportunity for self-reflection about the goal-setting process. As students become more familiar with this process, the setting and meeting of goals will become more routine and strategic. Students' self-reflection allows the instructor to understand the goals students set and the process they take to achieve these goals. In addition, students' self-reflection will help pinpoint appropriate and beneficial goals for specific strategies as well as when a strategy is being used effectively. In this way, instructors can help students understand the value of setting both overall, macro goals for their textbook reading purposes, as well as smaller, more immediate micro-goals as they work their way through the metacognitive reading and study strategy they are implementing.

Conclusion

The overall theme in this article centers on the idea that elements of what make a reading and study strategy "metacognitive" on a theoretical level need to be included as part of the explicit descriptions instructors and texts employ in the classroom. Students can control their learning processes and learning outcomes through deliberate self-regulatory decisions and actions, of which goal setting is a central part.

Characteristics of good strategy users include the ability to integrate "goal-specific strategies into higher order sequences that accomplish complex cognitive goals" (Pressley, Symons, Snyder and Cariglia-Bull, 1989, p. 19). One general attribute of successful readers is their use of reading and study strategies in order to achieve a particular, specific learning goal or series of goals. Other measures of textbook reading proficiency can be linked to the ability of readers to set goals for themselves, choose an appropriate strategy, evaluate the effectiveness of that particular strategy and, as necessary, choose another (Hock & Mellard, 2005). In other words, effective students make and monitor specific goals as part of their approach to reading and studying textbooks strategically.

An approach to metacognitive strategy instruction that relies on students' implicit, unstated understanding of the need for forming specific goals is problematic because of the assumption that students somehow already know how to create goals—or even that they should create goals at all. Even more problematic is the assumption that students would deliberately and regularly set useful goals for themselves in the absence of instruction that includes goal setting as explicit aspects of the strategy. Since goal setting as an automatic, intrinsically originating action may be an unrealistic expectation for many students, it likely will not happen. And students may struggle with reading and studying textbooks because they are unsure how to set goals for themselves or are unaware that there need to be specific goals generated for their reading tasks.. In short, if the theory behind metacognitive reading strategies includes goal setting then goal-setting instruction needs to be included in the descriptions of practical applications of such strategies.

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