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INTRODUCTION: AN OVERVIEW OF APPLICATIONS OF SELF-REGULATED LEARNING

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The primary role of many professionals and service providers, such as teachers, therapists, counselors, and school psychologists is to enhance the competencies, performance outcomes, and/or well-being of children and adolescents. In addition to serving as exemplary models and empowering sources of support for the individuals with whom they work, these professionals often have the greatest influence on youth who are vulnerable or at risk for suboptimal performance and other types of dysfunction. Although many at-risk youth can learn how to adapt and function more effectively over time, particularly when immersed in positive support systems, the unfortunate reality is that not all children and adolescents are able to overcome challenging circumstances and experiences. Rather, many become stuck in negative cycles of poor performance and display self-handicapping behaviors that persist throughout their development.

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At the outset of this book, it is critical to underscore that no universally accepted definition of the term *at risk* exists. Children and adolescents frequently are labeled in this fashion if they exhibit one or more maladaptive outcomes (e.g., failing grades in school, depression, disruptive behaviors); possess within-person deficits (e.g., disability status, poor self-regulation skills); and/or attempt to learn or function in challenging contexts (e.g., unstable home environments, schools with poor instructional resources). Because a goal of this book is to address an array of at-risk populations across distinct areas of functioning and contexts, the term *at risk* is used in a relatively global and broad manner.

VIEWPOINT OF THIS BOOK

This book offers the viewpoint that self-regulated learning (SRL) research and theory can serve as a useful platform for analyzing and understanding why many at-risk children and adolescents struggle to overcome challenging circumstances and fail to break out of destructive patterns of action and thought (Boekaerts, Pintrich, & Zeidner, 2000; Zimmerman & Schunk, 2011). Although several SRL paradigms are referenced in this book, many of the chapter authors emphasize social-cognitive principles (see, e.g., Chapters 1, 5, 6, 9, and 12). From this perspective, *SRL* is defined as a process through which individuals self-generate thoughts and actions that are planned, monitored, and refined as they pursue personal goals. Zimmerman (2000) described SRL in terms of a cyclical loop involving three related phases: forethought (i.e., processes that precede learning: goal setting, planning); performance (i.e., processes that occur during learning: self-control, self-monitoring); and self-reflection (i.e., processes that come after learning: self-evaluation, attributions). Many of the struggles that individuals experience often can be traced to deficits in regulatory processes embedded within one or more of these phases (Bembenutty, Cleary, & Kitsantas, 2013). That is, some individuals possess a limited knowledge or repertoire of strategies to improve specific aspects of their lives and thus frequently will plan or approach situations in a relatively simplistic and circumscribed manner (i.e., poor forethought planning). For example, a 10th-grade student may struggle to improve his or her failing test grades in chemistry because the student does not know how to adequately take class notes or to plan or manage study time, and because his or her repertoire of study strategies consists only of rehearsal strategies (e.g., rereading class notes).

Conversely, other youth may struggle to use effective coping methods when under stress, not because they lack strategic knowledge or effective planning skills but because they have not developed the necessary self-control

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or performance phase skills to effectively apply and use previously learned strategies in appropriate ways during authentic situations. For example, a preadolescent boy who has learned to successfully identify and manage feelings of anger and frustration in individual counseling sessions may continue to find himself in contentious situations with teachers and peers until he has practiced and refined his newly developed skills enough to apply them in situations that elicit high levels of anger or frustration.

Successfully overcoming challenging circumstances, however, goes beyond strategic planning and the use of effective task-specific strategies. Individuals must also be sufficiently motivated to reflect on and manage these situations. Many researchers have shown that students who exhibit self-defeating patterns of motivation beliefs, such as poor self-efficacy or outcome expectations, and self-reflective judgments, such as uncontrollable attributions following failure, are at greater risk for displaying avoidance or other forms of negative regulatory behaviors (Bandura, 1997; Schunk, 2008; Zimmerman, 2000). Furthermore, when individuals perceive that engaging in effortful regulatory behaviors is not personally meaningful or has greater costs than benefits, or if they are offered minimal autonomy to decide when and how to engage in those behaviors, it is highly likely that they will not put forth the needed effort to improve (Reeve & Jang, 2006; Wigfield, Hoa, & Klauda, 2008).

In a general sense, sophisticated self-regulated learners tend to possess the strategic and metacognitive skills (e.g., planning, monitoring, evaluation) to succeed and the motivational will to persevere through discouraging and frustrating situations. They are intentional and purposeful individuals who, because they are empowered with a strong belief in their personal competency and skills, actively seek to transform their environments, adapt their thinking or ways of approaching a task, and sustain their motivation to accomplish personally meaningful goals (Zimmerman, 2000).

Of importance, however, and consistent with a key underlying theme of this book, is that individuals can only realistically engage in efficient cycles of regulation and adaptation when they have accurate information about their skills or performance levels—whether they gather that information through their self-observations and monitoring or via feedback provided by external sources, such as a teacher or therapist. *Feedback* is broadly defined as information related to performance or task understanding. It represents data that individuals can use to modify their thinking, affect, and behavior as they seek to improve their functioning or to reach goals (Butler & Winne, 1995; Hattie & Timperley, 2007; Shute, 2008).

SRL researchers often discuss feedback in terms of a *cyclical feedback loop*, a general process through which individuals evaluate their behavior or performance relative to a predetermined level as defined by a standard, comparator,

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or goal. Although different types of feedback loops have been discussed in the literature, such as closed versus open loops and negative versus positive loops (Carver & Scheier, 1990; Miller, Galanter, & Pribram, 1960; Winne & Hadwin, 1998; Zimmerman, 2000), the basic premise is that sophisticated self-regulated learners will use both internally generated and external sources of feedback to guide their strategic behaviors as they seek to reduce the discrepancy between current behaviors or performance and a predetermined benchmark. When given in an optimal manner, feedback has the potential to enhance the quality with which individuals evaluate goal attainment, identify patterns of errors or misunderstandings, and enable conclusions about how best to restrategize when they do not realize performance goals. Akin to the computer science concept of "garbage in, garbage out," when feedback is faulty, lacking, or erroneous (i.e., an ineffective input), the quality of individuals' reflective judgments and their subsequent emotional, cognitive, and behavioral reactions (i.e., a maladaptive output) will be severely comprised and undermined. Most SRL scholars would agree with the premise that teaching children and adolescents how to self-generate their own feedback is instrumental in promoting healthy levels of independent functioning and adaptation. Furthermore, because many youth exhibit poor self-awareness and struggle to accurately track their thoughts and actions, and because feedback provided by others is often lacking or inadequate, it is essential that support services and intervention programs empower youth to improve their self-monitoring and feedback-generation skills (Hattie & Timperley, 2007).

During my years as a school psychologist in the early 2000s, I was struck by the relative infrequency with which SRL-oriented principles were embedded within the school curriculum and resource support services. Recent survey research with different types of school personnel (i.e., regular education teachers, special education teachers, school psychologists) has supported these anecdotal observations. Research has shown that educators perceive motivation and SRL processes to be key enablers of student success, but they do not systematically incorporate SRL-related principles into their professional work and interactions with students because, in part, they do not feel adequately trained and prepared to work with students exhibiting regulatory deficits (Cleary, 2009; Cleary, Gubi, & Prescott, 2010; Cleary & Zimmerman, 2006; Coalition for Psychology in Schools and Education, 2006; Grigal, Neubert, Moon, & Graham, 2003; Wehmeyer, Agran, & Hughes, 2000). When key service providers do not possess the knowledge and capacity to effectively help children and adolescents improve their regulatory and feedback-generation skills, these youth will become more likely to exhibit maladaptive outcomes, particularly as the demands for self-sufficiency and self-management naturally increase during development.

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PURPOSE AND ORGANIZATION OF THE BOOK

This book was grounded, in part, on the basic premise that although SRL skill deficits—poor planning and goal setting, ineffective selection and use of task strategies, inconsistent self-monitoring, and maladaptive reflection—are central to the academic, behavioral, and emotional challenges experienced by children and adolescents, these skills can be modified through targeted SRL intervention programs and optimally structured environments. More specifically, the book has three primary objectives:

- to delineate the self-regulatory challenges exhibited by diverse groups of children and adolescents;
- to illustrate how different contexts can facilitate or inhibit healthy forms of regulatory functioning; and
- to discuss and illustrate the key components of empirically based SRL interventions and adaptive contexts, with a particular focus on the central role of feedback loops.

To accomplish these objectives, I invited a diverse group of nationally recognized scholars with expertise in applying SRL interventions with at-risk youth and young adults. Contributors to this book come from diverse theoretical backgrounds and fields, including school psychology, educational psychology, developmental psychology, and clinical psychology. Including a kaleidoscope of theoretical perspectives and viewpoints helps this volume to provide a robust account of SRL interventions and a strong foundation from which to identify the many commonalities that exist across distinct lines of research and domains of functioning.

To ensure uniformity across chapters, all authors were asked to address the following topics relative to at-risk populations and/or SRL contexts: (a) theory, (b) interventions and applications, (c) research, and (d) future directions. Furthermore, many of the chapters provide compelling case scenarios to illustrate how SRL principles can be applied with specific populations and in diverse contexts. The names and identities of individuals used in the case scenarios have been disguised to protect confidentiality. It is my hope that this collection of chapters will underscore the unique and common elements of applying SRL principles in research and applied settings.

The chapters in this volume are organized into three parts. Part I includes five chapters that focus primarily on academic performance and behavioral problems often exhibited in school contexts. The chapter authors explicitly link SRL processes to a specific at-risk population and discuss and illustrate empirically supported interventions designed to optimize regulation. The first three chapters address the regulatory mechanisms underlying disruptive or maladaptive behaviors, such as poor attention, weak impulse control, oppositional

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or lack of compliance tendencies, and disengagement from academic work. In Chapter 1, Reddy, Newman, and Verdesco focus on school-age students diagnosed with attention-deficit/hyperactivity disorder (ADHD) and underscore the role of executive control deficits in the students' struggles to regulate or control school-based behaviors. In addition to providing a comprehensive review of the literature examining the efficacy of SRL interventions with ADHD youth, Reddy and colleagues propose a best practices model that integrates regulatory feedback loop mechanisms, evidence-based behavioral strategies, and attention to neuropsychological processes. In Chapter 2, Briesch and Briesch adhere to a behavioral perspective to examine the link between SRL and a range of disruptive behaviors observed in school contexts. They provide compelling evidence that self-management interventions are effective in reducing disruptive behaviors and in promoting engagement, and they underscore the need for practitioners and researchers to use feedback loops to help students manage or direct their own behaviors, instead of using such loops as a form of external management. In Chapter 3, Wolters and Hoops present a model of motivational engagement that places primary importance on the role of motivational beliefs and self-control tactics in understanding student behaviors and engagement in school. This chapter also serves as an effective complement to Chapters 1 and 2 because it focuses primarily on college-age populations. Chapters 4 and 5 focus on the link between SRL interventions and learning outcomes for academically at-risk students, such as those with learning disabilities (LD) and students identified as English language learners (ELLs). In Chapter 4, Butler and Schnellert identify the core regulatory deficiencies exhibited by students with LD and provide empirical support for intervention programs that systematically engage such students in cycles of strategic action. These authors emphasize that data-generating mechanisms are essential for helping students and teachers become more independent in evaluating student learning progress and for optimizing decisions about how a student can learn most effectively. In Chapter 5, Taboada Barber and Gallagher examine the link between SRL processes and ELLs. They ground their chapter in social-cognitive theory and research and provide impressive case scenarios to illustrate how teachers can improve ELLs' reading comprehension skills by integrating content-area instruction, cognitive strategy training, and motivation and SRL principles.

Part II consists of three chapters primarily concerned with youth who exhibit emotional difficulties, such as anxiety and depression, or chronic health conditions, such as asthma. Collectively, these chapters focus on how to use dynamic feedback loops to empower students to exert greater strategic control over their emotions and physical ailments. In Chapter 6, Suveg, Davis, and Jones argue that feedback loops are naturally embedded within empirically supported treatments for youth with anxiety difficulties

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and that by enhancing the capacity of youth to effectively regulate emotion one can improve the broader skill of self-regulation. These authors also establish the empirical link between anxiety and emotion-regulation deficits and illustrate how a cognitive–behavioral treatment engages students in empowering cycles of regulated action. Ehrenreich-May, Kennedy, and Remmes approach Chapter 7 with similar goals in mind but focus specifically on the link between emotion-regulation deficits and youth depression and comorbid conditions. These authors review empirical evidence for a manual-based, emotion-regulation intervention program and present a case study illustrating how practitioners can create data-based feedback loops that directly affect children and adolescents' emotion-regulation and self-regulation skills. In Chapter 8, Clark and Patel provide compelling empirical data supporting the efficacy of SRL interventions that target mental health and disease management outcomes of economically disadvantaged youth with chronic asthma conditions. Central to their chapter is an illustration of the core theoretical and logistical or procedural components of their SRL intervention programs.

Although the chapters in Part III also underscore the importance of SRL in human functioning, they focus primarily on how different types of contexts support or inhibit adaptive regulatory skills. In Chapter 9, Peters-Burton, Cleary, and Forman use a social-cognitive model of SRL as the framework for a multilevel professional development (PD) training program. They also review research showing how PD trainers can use contextualized SRL measures as formative assessment tools to guide PD activities and, ultimately, to enhance trainees' competencies and skills. In Chapter 10, Perry, Brenner, and MacPherson illustrate a participatory model PD framework that describes how researchers and practitioners can effectively collaborate to produce high-quality SRL interventions and school-based student supports. The authors provide extensive case scenarios of teacher learning teams that illustrate how researchers' use of cyclical feedback mechanisms can lead to more adaptive researcher–teacher interactions and teacher instructional behaviors.

The final two chapters address important contexts that affect student functioning in schools. In Chapter 11, Grolnick and Raftery-Helmer adopt a self-determination theoretical perspective to explore the interplay between student SRL and the key transitions students experience as they progress from primary through secondary school. The authors underscore the reciprocal nature of the relations between transition contexts and SRL, and they provide extensive information about empirically based contextual supports that enhance SRL processes and student success during these transitions. In Chapter 12, Kitsantas, Dabbagh, Hiller, and Mandell provide empirical support for linking learning technologies and academic success, and discuss how

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to structure learning technologies to directly affect students' skills in self-directing their behaviors. In viewing learning technologies as a modifiable SRL context, the authors create a road map for how future research can most efficiently explore and address this emergent issue.

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