Reflections of the Japanese Translation of Applications of Self-Regulated Learning across Diverse Disciplines: A Tribute to Barry J. Zimmerman

Edited by Héfer Bembenutty, Timothy J. Cleary, & Anastasia Kitsantas

“A Barry Zimmerman is one of the most distinguished psychologists in the world. His work on self-regulated learning has been pioneering. He has not only influenced psychology; he has also had a significant effect upon teaching and learning in higher education generally, sport, health, and music. This book and its applications of self-regulated learning across diverse disciplines is an appropriate recognition of his contributions. The editors and contributors of this book have set the bar very high for students, educators, and researchers interested in the discipline of self-regulated learning.”

Wilbert J. (Bill) McKeachie
In 2020, the COVID-19 pandemic is widespread globally, and we are confronting these severe health, educational, and economic problems. All teachers, educators, and educational researchers must understand the problem and cope with this adversity to ensure a better education for the next generation. Although the situation is challenging, the self-regulated learning (SRL) framework should work in various educational settings because the models and concepts of SRL can enhance the success and mastery of students’ learning.

The book, Applications of Self-Regulated Learning Across Diverse Disciplines: A Tribute to Barry J. Zimmerman, edited by Héfer Bembenutty, Anastasia Kitsantas, and Timothy J. Cleary can support educators who are facing difficulties in their teaching careers.

CONTENTS OF THE REVIEW
The book is a tribute to the prominent achievement of Professor Barry J. Zimmerman. The book provides a platform for scholars interested in applying self-regulation principles to diverse domains. It is a highly valuable and inspiring book for many Japanese educational and psychological researchers. The book consists of 15 chapters, covering a wide variety of disciplinary fields, such as education, psychology, information technology, higher education, and medicine.

In this special issue of the American Educational Research Association (AERA) Studding and Self-Regulated Learning (SSRL) Special Interest Group (SIG) Times Magazine, we select and review ten of the book chapters. Emerging and senior Japanese scholars wrote reflections on each chapter of the translation of the book. We are honored to have this opportunity to share our reflections and thoughts with educators and learners interested in self-regulated learning worldwide.

In the book, diverse fields and topics pertaining to SRL are discussed, and recent research trends and applications of these fields are described. The chapters focused on topics as distinct as mathematics education (Chapters 2 and 5), writing (Chapter 3), homework (Chapter 6), strategic learning (Chapter 7), help-seeking (Chapter 8), metacognition (Chapter 10), learning technologies (Chapter 11), chronic diseases (Chapter 14), and mentoring (Chapter 15).

RECENT RESEARCH RELATED TO SRL IN JAPAN
During the last ten years, many SRL studies in diverse fields have been conducted in Japan. These studies are focused on cooperative and peer learning (Chapter 2), writing and literacy (Chapter 3), struggles of students in the postsecondary school (Chapter 5), homework completion (Chapter 6), help-seeking in classrooms (Chapter 8), metacognition instruction (Chapter 10), and mentoring (Chapter 15). In this review, each reviewer introduces some research in Japan related to each chapter’s contents.

CHANGES, CHALLENGES, AND SRL
Like many other countries, Japan closed almost all schools in many areas because of the pandemic. From primary to secondary schools, classes were suspended from March to May 2020, and regular classroom instruction and student learning were hindered. During this period, the importance of homework and online instruction has been highlighted, and teachers and educators faced significant changes and challenges in terms of learning and instruction. Not only students but also teachers had to adapt to this change.

It seems that everyone’s self-regulation is crucial to coping with and adapting to this unprecedented pandemic situation. We are confident that self-regulation will help our well-being and ability to flourish.

Motoyuki Nakaya, PhD, is a professor of Graduate School of Education and Human Developmental Sciences, Nagoya University. His research field is mainly on educational psychology, and his interest is on academic and social motivation, peer learning, and classroom environments.

Takamichi Ito, PhD, is an associate professor at the Graduate School of Human-Environment Studies at Kyushu University, Japan. His primary research interest is on teaching and learning processes in educational psychology.

“We are confident that self-regulation will help our well-being and ability to flourish.”
Applications of Self-Regulated Learning across Diverse Disciplines: A Tribute to Barry J. Zimmerman

Preface: Hefer Bembenutty, Timothy Cleary, & Anastasia Kitsantas

Barry J. Zimmerman has been at the forefront of motivational research over the past few decades, making seminal contributions to research on the antecedents, processes, and consequences of self-regulation in human behavior. This book encapsulates many of Dr. Zimmerman's advances in understanding human agency and is a major tribute to his legacy by colleagues, students, and friends.

Moshe Zeidner
University of Haifa, Israel

-I really commend the editors for bringing together these highly esteemed international scholars to discuss the educational implications of Zimmerman's social cognitive theory of self-regulated learning. The chapter authors provide a convincing testimony that his ideas are pedagogically essential and viable. As such, this book is a must-read not only for teachers and researchers concerned with promoting self-regulated learning in others, but also for those seeking to become better self-regulated learners themselves.-

Ivar Braten
University of Oslo, Norway

Foreword: Barry J. Zimmerman

Applications of Self-Regulated Learning: Implications for Practice

Chapter 1: Barry Zimmerman's Theory of Self-Regulated Learning
Dale H. Schunk, & Ellen L. Usher

Chapter 2: Sequencing Components of Mathematics Lessons to Maximize Development of Self-Regulation: Theory, Practice, and Intervention
Stephen J. Pape, Clare V. Bell, & Iffet Elif Yetkin-Özdemir

Chapter 3: Self-Regulated Strategies Development in Writing: Development, Implementation, and Scaling Up
Karen R. Harris, Steve Graham, & Tanya Santangelo

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Timothy J. Cleary & Andju S. Labuhn

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Book Contents
Self-regulated learning is characterized as a dynamic, fluid process through which individuals seek to manage and control their thoughts, feelings, and actions as they strive to attain personal goals. Highly self-regulated learners are characterized as proactive, goal-directed individuals who exhibit high levels of motivation, strong metacognitive skills, and an expansive knowledge base and skill in using task-specific and regulatory strategies.

During the past few decades, professionals across diverse fields have increasingly come to recognize the critical role that self-regulated learning skills can have on an individual’s academic success, social-emotional functioning, and overall well-being. Self-regulated learning is a vital component of most academic endeavors and has been studied in the context of human development and learning, and across different cultures, contexts, and settings, such as K-12 schools, colleges, clinics or medical settings, athletics, and online environments.

It is virtually impossible to discuss self-regulated learning without referencing many of the seminal contributions made by Professor Barry J. Zimmerman. His theoretical and empirical work continues to be highly cited by researchers throughout the world, and has served as the foundation for many of the landmark applications and innovations in self-regulation observed across academic, athletics, health, technology, and music domains.

Applications of Self-Regulated Learning across Diverse Disciplines: A Tribute to Barry J. Zimmerman is a celebration of the teaching, theories, research, and the unique impact Professor Zimmerman has made to education and psychology in general, and self-regulated learning in particular. The translation of this book from English to Japanese represents yet another attempt among scholars and practitioners to apply Professor Zimmerman’s seminal research and models within a multicultural and sociocultural lens. From our perspective, Professor Zimmerman is a pioneer and visionary who set the standard of excellence in self-regulated learning research and theory.


He also developed a cyclic model of self-regulated learning academies describing how a teacher might help students’ learning by converting the classroom into an academy for teaching self-regulatory processes with five essential academic skills: (a) planning and using study time more effectively, (b) understanding and summarizing text material better, (c) improving methods of note taking, (d) anticipating and preparing better for examinations, and (e) writing more effectively. Applications of these theoretical models to diverse disciplines are unmistakably described in this volume.

Professor Zimmerman’s high standards of scholarship have inspired scholars to follow his paths in their research applications. The contributors to this volume have borrowed one or more aspects of Professor Zimmerman’s pivotal work and applied to their research agenda. The contributors recognize the undeniable impact that Professor Zimmerman has in their careers, and this volume is a tribute to him.

Through this volume, in which we as editors are alphabetically listed, we also honor Professor Zimmerman as our incredible mentor, teacher, role model, and as an unequalled human being.

We extend our sincere appreciation to all our Japanese colleagues who took the initiative to translate Applications of Self-Regulated Learning across Diverse Disciplines: A Tribute to Barry J. Zimmerman. We recognize that with their research and teaching, they are not only expanding Professor Zimmerman’s scholarly work, but they are also making his unique contributions and impacting schools, colleges, universities, diverse communities, and sports and research centers. We commend them for their laudable work and are excited about the prospect and dissemination of self-regulated learning in Japan.

We hope that the translation of this volume will open new discussions about the vital role self-regulation plays in academic and other forms of learning. We also hope that new applications of self-regulated learning will be generated, specifically in areas such as neuroscience, exceptionality, psychopathology, addiction and related disorders, cyber-slacking, and bullying.

Finally, we hope that readers across the world recognize the personal and professional transformational influence Professor Zimmerman has had on preeminent scholars in SRL and related fields. We believe that this volume is an important research for graduate students, educators, and researchers interested in learning about the mechanisms underlying human agency, self-direction, and strategic goal-directed behaviors.

Héfer Bembenutty, Timothy J. Cleary, & Anastasia Kitsantas
Barry J. Zimmerman is an emeritus and distinguished professor of Educational Psychology at the Graduate School and University Center of the City University of New York. He is a Thorndike Award winner (2011) from Division 15 (Educational Psychology) of the American Psychological Association. He served as president of Division 15 of the American Psychological Association (1996–1997).

Professor Zimmerman has received countless other honors and awards, including Senior Scientist Award from the American Psychological Association, Division 16 (School Psychology) and the Sylvia Scribner Award from the American Educational Research Association for exemplary research in learning and instruction.

Professor Zimmerman has received grants from the U.S. Department of Education and the Institute of Education Sciences to develop applied interventions in academic contexts to enhance the self-regulation, motivation, and academic success of highly at-risk students. He has also conducted research on families’ self-regulation of children’s asthma funded by grants from the National Institutes of Health. Professor Zimmerman received the New York City Department of Health Award for preventive care of childhood asthma and was elected chair of the Behavioral Science Assembly of the American Thoracic Association and council member of the American Lung Association.

Professor Zimmerman is a prolific scholar and author. He has published over 200 journal articles and book chapters and is a member of numerous editorial boards. Of particular note were his collaborations with Ted Rosenthal in publishing Social Learning and Cognition (Academic Press, 1978) and with Grover Whitehurst in producing the edited volume Functions of Language and Cognition (Academic Press, 1979).

Professor Zimmerman has authored, with Bonner and Kovach, Developing Self-Regulated Learners, Beyond Achievement to Self-Efficacy (American Psychological Association, 1996) and has edited five highly influential books with Dale H. Schunk on self-regulated learning, with the most recent volume, Handbook of Self-regulation of Learning and Performance (Rutledge), published in 2011.

“As I neared the completion of my dissertation, I was having difficulty writing the final chapter. Dr. Zimmerman opened the conversation by stating he had a similar problem when he began to publish. Dr. Zimmerman modeled how to rewrite the first paragraph. I was then encouraged to emulate his style of sentence structure. As I received feedback on subsequent drafts, I gained self-control of my writing skills.”

Linda Sturges

“The highlight of my doctoral personal experience was when Dr. Zimmerman actually arrived at the data collection site where I had the opportunity to observe a researcher articulate what he was doing as he collected the data. It was an uplifting and a very motivating shared experience, which served as a source of self-efficacy for me to conduct research in the future.”

Anastasia Kitsantas

“When I received my first set of revisions for an article I submitted for publication, it was quite long and detailed. I emailed Dr. Zimmerman stating that the challenge of completing the revisions was overwhelming. His support and reference to previous work I had accomplished enhanced my belief that I was capable of revising the article. After two sets of revisions, the article was accepted for publication in a peer reviewed journal.”

Darshandar Ramdass

“Zimmerman’s seminal work on self-regulation and motivation has had a profound effect on education and psychology as well as in other fields such as sports, health, and music. Learning from and collaborating on research with Zimmerman has been exciting and rewarding... From Zimmerman’s work on self-regulation, it is evident that the cultivation of self-efficacy and self-regulation through proximal and specific goals leads to the acquisition of knowledge and skills that will have a lasting effect at the personal level as well as in our educational system in homework in particular.”

Tefer Bembun

“Theo, and co-authors have written about the influence of self-regulation and Zimmerman’s model is a prescriptive model of adequate self-regulatory behavior for performing learning tasks in general. According to Zimmerman, learners should prepare themselves before actually engaging in the execution of a task.”

Adam Moylan

“We owe a debt of gratitude to Professor Barry Zimmerman for paving the way for our intervention work with his highly accessible theories and innovative insights into human behavior. We are also deeply appreciative of having been mentored by a man who has dedicated his personal and professional life to one of quality, genuineness, and integrity. He was clearly an exemplary model who has forever changed our lives.”

Furmond J. Edlin & Heidke E. Lebrun

“Our meetings were focused and quite challenging. Dr. Zimmerman was as enthusiastic as I was about getting to the next step. He set the highest standards, and I was challenged to give my very best—he read every word I wrote, fixed it, then we revised it again and again; and when Dr. Zimmerman finally said, ‘OK’—we set up a defense.”

Rajkumar Wesley

“I interacted with Dr. Zimmerman in various mentoring roles such as advisor, teacher, researcher, and dissertation chair. I associated with him in the classroom, office, ‘laboratory,’” and at professional meetings. Despite his eminent status in the field, he was always approachable and receptive. In each one of those settings his support and feedback were consistently available with the intent of modeling and developing independence and self-regulatory competence in his student.”

Marcel V. J. Veenman

"We do not fact check every claim. Readers should judge the quality of the evidence and numerical claims that appear in editorial content with the editors."
Our scientific and educational communities have experienced significant challenges with the impact of the COVID-19 pandemic. The implications for teachers and learners have potentially immeasurable consequences. The world has been plunged into the tempestuous streak of health, social, emotional, and economic undertakings. At the same time, a group of Japanese scholars sustained glimmers of hope and optimism by preserving the conviction that self-regulated learning (SRL) principles would be most helpful for students to learn as they complete specific tasks.

Under the remarkable and charismatic leadership of Motoyuki Nakaya, a professor at Nagoya University, and Takamichi Ito, an associate professor at Kyushu University, a group of Japanese scholars took on the laudable task of reviewing ten chapters of the Japanese translated book entitled Applications of Self-Regulated Learning across Diverse Disciplines: A Tribute to Barry J. Zimmerman (Bembenutty, Cleary & Kitsantas, 2013).

The edited book focuses on intervention programs designed to optimize teaching, learning, and performing under the umbrella of Barry J. Zimmerman’s self-regulatory models. The book’s contributors show that through SRL, it is possible to sustain motivation and maximize human agency and practices across diverse disciplines. In the book, educators and learners could find self-regulated strategies for developing writing and mathematics skills for struggling students. The contributors also appropriated the importance of homework regulation and that it is essential to provide them support to make up for this deficiency.

In her review, Haruna Tachibana discussed interventions that improved students' mathematics self-regulated skills. Besides, she reviewed studies with commonalities with the SRL phases, such as activating prior knowledge, understanding of the task and self-regulating thinking and action in various content areas, such as science-based education (Cleary, 2018).

Readers of the book will also find support for managing homework challenges through the learning academy model of self-regulation. In reading this book, educators will discover methods to help college students become more strategic, autonomous help-seekers, technologically savvy, and self-regulated learners in areas as diverse as physical education and sport contexts, health, and music. After translating the book, our Japanese colleagues reviewed the chapters of the book and discussed those translated chapters in relation to learning and performance in Japan. They concluded their reviews by recommending educational practices to Japanese educators and learners.

In her review, Daisuke Akamatsu showed that homework is an essential part of school life in Japan. He invited Japanese teachers and students to discover the potentials of self-regulation of homework completion. Takayotu Umemoto supported the notion that learning strategy instruction did enhance self-efficacy for strategy use. He cautioned that merely describing learning strategies did not cause learners to use them. Instead, he argued that it is necessary to devise strategies to provide multifaceted support.

Aki Hayashi argued that the support of the educational environment is crucial for developing help-seeking skills and enhancing SRL and achievement. Further, Masaki Kera discussed metacognitive skills training and research in Japan. Furthermore, Motoyuki Nakaya and Takamichi Ito supported the creation of a technology-oriented learning environment to support and promote SRL. Finally, Yasushi Matsuyama shared his views about the impact on learners’ psychological development, growth, and motivation in Japan. Additionally, she considered the importance of mentoring between faculty members and graduate students in doctoral programs.

The reviews of our Japanese friends and colleagues, together with the commentaries of the authors of the chapters, illustrate the critical influences of self-regulated learning health functioning, school achievement, motivation, and the importance of homework, mathematics and writing, technology, mentoring, and adaptive help-seeking across diverse disciplines.

The book’s translation renders another way in which editors, authors of the chapters, and the Japanese scholars who translated and reviewed the book express our gratitude to our highly esteemed Professor Barry J. Zimmerman. We are grateful to Professor Zimmerman for his foremost research on self-regulated learning health functioning, school achievement, motivation, and the importance of homework, mathematics and writing, technology, mentoring, and adaptive help-seeking across diverse disciplines.

We, the book’s co-editors, express our appreciation and gratitude to our colleagues who have contributed to this special issue of Times Magazine for their attention, commitment, and kindness. We are confident that their contributions advance how self-regulation might serve as a catalyst for transforming unskilled learners and performers into agents of self-directed learning. It has been an honor collaborating with them all.

The status of SRL research is bright, and its future would be more hopeful for all of us seeking to expand our frontiers of SRL for ourselves and those we teach and serve. The Pape, Bell, and Yetkin-Ozdemir’s macro and micro model of SRL in mathematics, Harris, Graham, and Santangelo’s SRSD instructional process levels, and Moynan’s cyclical feedback approach are just some of the exemplary intervention models represented in this book. As this issue of Times Magazine pictures, we need additional intervention models for effective practices and applications across diverse disciplines.

References are listed on Page 17.
Chapter 2, Sequencing Components of Mathematics Lessons to Maximize Development of Self-Regulation: Theory, Practice, and Intervention: Intervention Studies of Mathematics Lessons in Japan

Haruna Tachibana (Nagoya University)

INTRODUCTION TO THE CHAPTER

A growing attention has been made on instructions for supporting and developing self-regulated learning (SRL) in mathematics education. Zimmerman developed two self-regulated models. The three-phase cyclical phase model of self-regulation involves the forethought, performance, and self-reflection phases (Zimmerman, 2000). The four levels in SRL development involve observation, emulation, self-control, and self-regulation (Zimmerman, 2000).

In Chapter 2, Sequencing Components of Mathematics Lessons to Maximize Development of Self-Regulation: Theory, Practice, and Intervention: Intervention Studies of Mathematics Lessons in Japan, authors propose vignettes of SRL instructions used in two mathematics lessons. These vignettes illustrate the teacher's role in promoting SRL and the SRL situation of students during these lessons and the cyclical nature of the intervention.

An essential aspect of this chapter is exploring SRL at the micro and macro levels. At the macro, or lesson-level, intervention lessons were segmented into three phases as frames for considering a lesson's structure:

1. Setting up the task (forethought phase)
2. Supporting student’s engagement (performance phase)
3. Supporting students to examine their strategies and understanding (self-reflection phase)

At the micro-level, the authors propose that teachers engage the students in iterative cycles of forethought, performance, and self-reflection within each phase of the lesson. This chapter also emphasizes that teachers’ instructional behaviors or levels of support within each phase should take the students’ level of SRL development into consideration. Teachers need to vary and adjust the intensity of instructional support as students advance through developmental levels of SRL. The authors also suggest that teachers must be aware of the variability of students’ developmental levels.

Chapter 2 focuses on educational interventions for supporting the development of SRL and mathematical understanding. The intervention was based on the SRL phases perspective and conducted according to the SRL development level. The latter half of this chapter provides vignettes of SRL instructions used in two mathematics lessons. These vignettes illustrate the teacher's role in promoting SRL and the SRL situation of students during these lessons and the cyclical nature of the intervention.

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INTERVENTION STUDIES OF MATHEMATICS LESSONS IN JAPAN

Often, students learning together and teachers have significant effects on each student’s learning process through instructional practices. In Japan, collaboratively learning, reciprocal teaching, and others have been emphasized, and intervention studies on mathematics have also been conducted in educational psychology. Machi and Nakaya (2014), for instance, examined the effects of a reciprocal teaching intervention and the interaction between reciprocal teaching and prosocial goals on group learning of mathematics. The results indicated that structualizing discussions through reciprocal teaching and regulated learning (SRL) have significant effects on students’ academic achievement and positive cognition of group learning through group involvement and deepening understanding of the learning contents.

The results also indicated that utterances unrelated to learning were reduced, and positive cognition of group learning (involvement/understanding) increased through an intervention for children with low prosocial goals due to their interaction with children with high prosocial goals. These interactions promoted learning when children with low prosocial goals made utterances unrelated to learning.

 Intervention studies have also been conducted to deepen students’ understanding by integrating knowledge through inquiry learning. Fujimura (2012) proposed promoting Collaborative Inquiry Learning (CIL) through practical collaborative research with teachers. CIL aims to deepen students’ conceptual understanding through the processes of individual and collaborative inquiry. Approaches and tasks that activate and integrate prior knowledge of students and the expressions of their thinking processes are essential in inquiry settings. For instance, common and different aspects of different solutions are compared and discussed in inquiry learning, and reasons for the efficacy of solutions are discussed in class. Moreover, each student’s understanding is deepened by individual inquiry that follows collaborative inquiry. It is shown that the conceptual understanding of an individual is deepened by collaborative inquiry learning of different subjects, including mathematics and science (Fujimura, 2012).

These studies are not directly based on SRL theory advocated in Chapter 2. However, there are many commonalities when the above studies are conceived from the perspective of SRL phases. These include activating prior knowledge and understanding of the task, which increases in the forethought phase; actively expressing the thinking processes in classes and groups, and providing opportunities for modeling and discussion in the performance phase; and each student reflecting on collaborative learning and checking his or her understanding of conditions in the self-reflection phase. It would be useful to examine methods of modifying teachers’ support and inquiry settings from the perspective of interactions between the SRL phases and the level of SRL development.

References are listed on Page 17.
Chapter 3, Self-Regulated Strategies Development in Writing: Development, Implementation, and Scaling Up. Self-Regulation Strategies for Writing in Japan

Takashi Fukutomi (Keio University)

HIGHLIGHTS OF MAJOR SIGNIFICANT POINTS OF THE CHAPTER

Task. Assessment of self-persistence and a positive attitude toward the task. Some learners who are poor at writing have difficulty performing these complex processes. Such learners need a teaching method that makes them aware of the cognitive and metacognitive processes necessary for writing and helps them acquire learning strategies promoting their active involvement. In recent years, the Self-Regulated Strategies Development model (SRSD) has attracted attention as a teaching method.

Chapter 3, Self-Regulated Strategies Development in Writing: Development, Implementation, and Scaling Up, written by Karen R. Harris, Steven Graham, and Tanya Santangelo, provides an overview and outlook for SRSD. SRSD is an instructional model of writing that focuses on the processes of planning, translating, reviewing, and the motivation to use strategies.

In the SRSD model, learners clarify the necessary strategies through discussions with a teacher. The model consists of six steps:

1. Develop background knowledge
2. Discuss it (purpose and steps of the writing strategy)
3. Model it (writing strategies)
4. Memorize it (the strategy steps)
5. Support it (students practice using the writing strategy)
6. Independent performance (use the writing strategy independently)

Various meta-analyses have shown the effectiveness of SRSD interventions for various learners, including those with disabilities (Graham & Harris, 2003, 2018).

The following two points are considered essential in SRSD. Both learners’ metacognition and motivation are taken into consideration. It has been shown for many self-regulated learning models that self-regulated learners are functional in different learning contents and teaching materials and are adaptively motivated to participate in their learning actively (e.g., Wolters, 2003). Therefore, the SRSD model incorporates strategies such as “goal setting,” “self-monitoring,” “self-instruction,” and “self-reinforcement,” all as writing strategies. The use of these strategies will encourage the voluntary use and persistence of writing strategies on the part of learners, who are often prone to depression, supporting and helping them maintain a more motivated state.

Second, while this model presents the essential stages of strategy learning within an overarching framework, the content and method of teaching can be modified to suit individual learners’ needs. For instance, in the case of SRSD practice presented in this chapter, at the stage of supporting the use of writing strategies, the teacher grouped children with difficulties writing to collaborate on writing an essay and repeated the stages of discussion and imitation of writing strategies for a child who needed special assistance. Therefore, this model can be applied to students with various characteristics, including learners who have difficulty writing.

TRENDS AND ISSUES IN SRSD RESEARCH IN JAPAN

An empirical study of SRSD in Japan was conducted by Tanji and Yokota (2017). This study examined the effects of intervention with the SRSD model on narrative writing in six children with ASD. As a result, in the number of composition elements (elements necessary for narrative composition as “who” and “when”), a high intervention effect was found for five children (PND scores of 100%) and a slight intervention effect for the child (PND score of 56.7%). Besides, in terms of the quality of composition (e.g., ease of imagination of the story, description of the character), a high intervention effect was found for three children (PND scores of 100%) and a slight intervention effect for two children (PND scores of 66.7%).

The features of this research are as follows. First, different learning contents and teaching materials were introduced according to the actual conditions of each child. For example, during the practice of writing strategies, it was observed that students wrote sentences without conjunctions. Therefore, the original schedule was changed, and a session on conjunctions was introduced in which the children discussed a new strategy of using conjunctions and practiced their use. Such modifications tailored to the learners’ conditions indicate that SRSD can accommodate flexible adjustments.

Second, a learning effect due to peer relationships was observed. For example, one child who was depressed in a self-monitoring task was observed to start improving his compositions by watching other children improving their compositions. Additionally, when a child painted his composition and began to check the use of strategies, other children imitated this method.

The fact that such peer modeling scenes were observed everywhere shows the effects of teaching strategy in groups. The effects of such learning in groups have also been shown in writing evaluation (Inuzuka, 2005) and planning (Itô et al., 1998) activities.

However, since there have been few empirical studies of SRSD in Japan, research is insufficient on the effects of SRSD, the conditions of learners under which the model can be applied, differences in teaching contents and writing strategies depending on the genre of composition, and the maintenance and generalization of strategy use. I have mainly examined the differences in the effects of writing instruction due to individual differences.

Fukutomi (in press) examined the effects of feedback on the processes of improving composition. As a result, when feedback pointing out both the positive and negative sides of the composition at the same time was provided, prevention (strategy-oriented) learners used a more deliberate strategy. In contrast, promotion-oriented (progress-oriented) learners used a more deliberative strategy.

When researching SRSD instruction, it is necessary to identify differences in the effects of learners’ characteristics and genres of composition in Japan and to seek intervention methods tailored to their actual conditions. The accumulation of such research across cultures will contribute to the development of a more general SRSD model.
SELF-REGULATED LEARNING VIEW FOR IMPROVING STUDENTS’ ACADEMIC DIFFICULTIES

The importance of remedial education in postsecondary education is widely recognized, especially because several students have difficulty learning mathematics. These difficulties lead to various problems such as cumulative financial costs or a decline in self-efficacy, which may lead them to drop out of school. Insufficient self-regulation capabilities partly cause the difficulties that students face in remedial education courses.

As Chapter 5, Cyclic Feedback Approaches for Enhancing Academic Self-Regulation, written by Adam Moylan, identifies the nature of such problems based on Zimmerman’s cyclical feedback model (Zimmerman, 2000). Additionally, it introduced interventions supported by a compelling theory and vast empirical data.

The author analyzed the causes of students’ learning difficulties with reference to the theoretical model of self-regulated learning. The characteristics of students’ poor self-regulation can be summarized as:

1. Insufficient metacognitive awareness of their own competence related to a specific task;
2. Erroneous judgments about one’s learning efforts;
3. Maladaptive attributions to uncontrollable, external sources, and fixed personal traits; and
4. Ineffective use of errors in adaptive learning or alternative preference strategies.

Metacognitive awareness and learning strategies are essential components of self-regulated learning, and problems that most students face in remedial courses can be interpreted in terms of inadequacy in these areas. Problems in metacognitive awareness and learning strategies can also be regarded as students’ poor calibration, which is an issue that has received considerable attention in the field of education.

The most important contribution of this chapter is the introduction of details of instructional techniques and tools grounded in a solid theoretical model and empirical data related to the self-regulation model, and the verification of the effects of the interventions. Many concrete and attractive instructional techniques are shown along the following three broad dimensions: (a) an adaptive classroom culture, (b) instructional methodologies, and (c) a feedback system.

The practice administered by the author improved students’ test performance and their capabilities of calibration. This approach can transform struggling students into self-regulated learners, and thus, it can contribute to improving remedial education.

THE IMPORTANCE OF SELF-REGULATED LEARNING VIEW IN JAPANESE POSTSECONDARY EDUCATION

Remedial education is also emphasized in Japanese postsecondary education. Many educational programs that support first-year students have been developed and administered in universities and colleges, and educators pay special attention to the theory and practice of self-regulated learning.

Practice-based reports on various topics, including language learning and e-learning, are increasingly being published in relevant journals (e.g., Goda & Okuda, 2009; Ito, 2018; Makino, 2014). Additionally, symposiums about self-regulated learning in postsecondary education are regularly conducted at the Japanese Association of Educational Psychology’s annual meetings. Theories and findings on self-regulated learning could have a significant impact on remedial education in Japan.

Although it was not explicitly highlighted in this chapter, cooperation or collaboration with peers may enhance the self-regulated learning process. Findings have revealed that cooperative learning with peers promotes the use of metacognitive learning strategies or improves self-efficacy in elementary school children (e.g., Ohtani et al., 2016; Okada, 2020).

In a group-based learning situation in university classes, Ito (2017) revealed that cooperation with peers is related to various metacognitive learning strategies. Umemoto et al. (2018) found that undergraduates’ active interaction strategy, which is a component of motivational regulation strategies, predicts self-efficacy in a cooperative learning situation. These findings suggest that taking advantage of peer interaction may maximize the benefits of techniques based on the self-regulation learning approach proposed in this chapter. Zimmerman’s social cognitive view also suggests the effects of cooperation or collaboration with peers (Zimmerman, 2000). Educators who aim to support students at universities or colleges can draw two critical suggestions from the chapter. One pertains to understanding that students with academic difficulties lack self-regulation, and the other pertains to supporting them to make up for this deficiency. If we develop lessons and teach these two points, many struggling students can find solutions to their learning difficulties. It would be a guaranteed way to improve remedial and post-secondary education.

References are listed on Page 17.

Commentary on Okada’s Review of Chapter 5 Cyclic Feedback Approaches for Enhancing Academic Self-Regulation

Adam Moylan, PhD, is an educational psychologist with two decades of experience in designing and conducting educational research and evaluation. At Rockman et al., Adam is a Senior Principal Researcher who directs and manages mixed-method and multisite field studies on evaluation initiatives in K-12 classrooms and in out-of-school learning programs, often aimed at supporting underserved learners in urban, public schools.

AERA SSRL SIG TIMES MAGAZINE

Chapter 5, Cyclic Feedback Approaches for Enhancing Academic Self-Regulation in Postsecondary Mathematics Classrooms: Self-Regulated Learning in Postsecondary Education in Japan

Ryo Okada (Kagawa University)

The importance of remedial education in postsecondary education is widely recognized, especially because several students have difficulty learning mathematics. These difficulties lead to various problems such as cumulative financial costs or a decline in self-efficacy, which may lead them to drop out of school. Insufficient self-regulation capabilities partly cause the difficulties that students face in remedial education courses.

As Chapter 5, Cyclic Feedback Approaches for Enhancing Academic Self-Regulation, written by Adam Moylan, identifies the nature of such problems based on Zimmerman’s cyclical feedback model (Zimmerman, 2000). Additionally, it introduced interventions supported by a compelling theory and vast empirical data.

The author analyzed the causes of students’ learning difficulties with reference to the theoretical model of self-regulated learning. The characteristics of students’ poor self-regulation can be summarized as:

1. Insufficient metacognitive awareness of their own competence related to a specific task;
2. Erroneous judgments about one’s learning efforts;
3. Maladaptive attributions to uncontrollable, external sources, and fixed personal traits; and
4. Ineffective use of errors in adaptive learning or alternative preference strategies.

Metacognitive awareness and learning strategies are essential components of self-regulated learning, and problems that most students face in remedial courses can be interpreted in terms of inadequacy in these areas. Problems in metacognitive awareness and learning strategies can also be regarded as students’ poor calibration, which is an issue that has received considerable attention in the field of education.

The most important contribution of this chapter is the introduction of details of instructional techniques and tools grounded in a solid theoretical model and empirical data related to the self-regulation model, and the verification of the effects of the interventions. Many concrete and attractive instructional techniques are shown along the following three broad dimensions: (a) an adaptive classroom culture, (b) instructional methodologies, and (c) a feedback system.

The practice administered by the author improved students’ test performance and their capabilities of calibration. This approach can transform struggling students into self-regulated learners, and thus, it can contribute to improving remedial education.

THE IMPORTANCE OF SELF-REGULATED LEARNING VIEW IN JAPANESE POSTSECONDARY EDUCATION

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Il learners have experience doing homework assignments. Homework has been an essential part of school life. It can be burdensome; however, it can help in learning. In self-regulated learning (SRL), homework is considered an essential component of learning. That is a claim Héter Bembemutty made in his chapter entitled, The Triumph of Homework Completion through a Learning Academy of Self-Regulation. This chapter is part of Applications of Self-Regulated Learning across Diverse Disciplines: A Tribute to Barry J. Zimmerman. The chapter introduces a model which has been conceptualized in the theoretical SRL framework and how to prompt students to complete homework effectively.

OUTLINE AND SIGNIFICANCE

Bembemutty’s chapter comprises four parts. First, the author introduces the origin of homework, its purpose, and its function. Second, the author presents a theoretical model called the “learning academy model of SRL” that secures the triumph of homework completion through cycles of SRL. Third, educational practices are introduced based on the model applicable to various students enrolled in elementary school, high school, technical college, educational psychology class at university, or pre-service teaching course. Finally, the author suggests future directions for research on homework.

This chapter widely covers the theoretical and practical perspectives on the purpose and role of homework to Japanese teachers. Traditionally, Japanese school culture emphasizes the importance of homework. Accordingly, it is natural for Japanese teachers to assign homework to students. This sometimes prevents them from considering its purpose and utilizing homework in analyzing students’ motivation or understanding their learning process. Bembemutty’s chapter provides empirical views on homework, focusing on the essential components for its completion. This enables teachers to analyze what ability should be acquired through homework.

CONCLUSION

Homework is an essential part of school life in Japan and other countries. However, Japanese teachers and students may sometimes fail to discover the potential of homework as learning material. Bembemutty’s study shows that students’ self-regulation leads to success in accomplishing homework, which in turn could develop students’ self-regulation. This is because homework has practical importance for teachers and learners worldwide, and its contribution to the advancement in understanding is crucial.

References are listed on Page 17.

Commentary on Akamatsu’s Review of Chapter 6: The Triumph of Homework Completion through a Learning Academy of Self-Regulation

Hefer Bembemutty

Homework is both a means to understand the purpose, effect, and utility value of homework in our current educational systems (Yang & Tu, 2020). Despite its challenges, homework continues to be one of the most instrumental and assessment tools used by most salient educators at all levels of the education system.

Daisuke Akamatsu reviewed Chapter 6, The Triumph of Homework Completion through a Learning Academy of Self-Regulation, in the chapter, Bembemutty discussed Zimmerman’s Learning Academy Model. Zimmerman understands that classrooms can be converted into learning academies. In his learning academy, students can engage in peer learning, reaching goals, sustain self-efficacy beliefs, and be proactive agents (Zimmerman, Bonner & Kovach, 1996). Zimmerman’s Learning Academy model construes teachers as a) model of self-regulatory processes, b) competent to encourage students, c) able to teach task and strategy analysis, and d) coaches who help students engage in outcome checking and strategy refinement. The academy is a self-regulated instructional model.

The academic model involves four steps. In Step 1, students examine their self-efficacy beliefs and motivation for the task at hand while observing peers and teachers. In Step 2, students identify goals and strategies to ensure successful completion of the task. In Step 3, students implement and monitor their strategies. In Step 4, students engage in self-reflection and assessment of outcomes.

In the learning academy, students are proactive and in control of their learning by self-recording their learning process with homework logs indicating when, where, with whom, beliefs, distractions, and outcomes associated with the homework. Teachers engage in the same process while coaching the students. Chapter 6 provides evidence supporting the effectiveness of the model in elementary and high school, and college-level interventions.

HOMEWORK CYCICAL SELF-REGULATED CULTURALLY PROACTIVE MODEL

Bembemutty’s (2019, 2020) Homework Cyclical Self-Regulated Culturally Proactive Model expands Zimmerman’s learning academy model by adding parents and culture to the cyclical nature of homework completion. Bembemutty posited that involving parents and culture in the curriculum, classroom instruction, assessment, and culture of educators and learners could facilitate students’ engagement in homework as a cyclical self-regulated proactive process.

The homework self-regulated culturally proactive model is cyclical and consistent with Zimmerman’s two models. The cyclical phases of self-regulation model (Zimmerman, 2013) and Zimmerman’s learning academy model (2000) is also consistent with the constructivist approaches.

Bembemutty found preliminary support for the effectiveness of the instructional approach promoting homework self-regulation of learning. Involving parents and integrating parental values and beliefs into the educational system can result in an effective learning environment.

Daisuke Akamatsu has done a commendable job in his review of Chapter 6. An invitation is extended to educators, administrators, parents, and students to integrate the homework cyclical self-regulated culturally proactive model expands Zimmerman’s learning academy model.

References are listed on Page 17.
Chapter 7, Helping College Students Become More Strategic and Self-Regulated Learners: Learning Strategy Instruction To Enhance Self-Efficacy for Strategy Use
Takato Umemoto (Kyoto University of Foreign Studies)

Commentary on Umemoto’s Review of Chapter 7, "Helping College Students Become More Strategic and Self-Regulated Learners"
Taylor W. Ace

It was a delight and honor to read and have this chance to react to Dr. Takato Umemoto’s review of Chapter 7, "Helping College Students Become More Strategic and Self-Regulated Learners." Umemoto’s review succinctly and accurately described Weinstein’s Model of Strategic Learning, which emphasizes four major components of strategic and self-regulated learning: skill, will, self-regulation, and the academic environment. It also highlighted other key aspects of this model, including the relationship to teaching and assessing learning strategies.

Umemoto emphasized that strategic and self-regulated learning emerges from interactions among elements within these four components. Strategic learning is thus an emergent property; the whole is bigger than the sum of its parts.

Umemoto further elaborated on the importance of strategic and self-regulated learning, describing a study he conducted in which students were taught achievement, self-regulation, and the academic environment. The intervention group was more likely to use this learning strategy, transfer its use to other classes, and perform higher in a posttest compared to a control group that only received a description of the strategy.

Umemoto explained how the intervention helped students build self-efficacy beliefs for using the learning strategy, which facilitated its usage and transfer. Theoretically, Umemoto’s study helps to support ideas that suggest that elements within will (self-efficacy, in this case) and skill (strategy usage, in this case) interact to affect academic outcomes (test performance, in this case).

Moreover, Umemoto suggests that strategy instruction should target more than just declarative strategy knowledge, as the control group was only described the learning strategy. A simple handout describing a learning strategy may promote its usage, but that is probably more often the exception. Strategy instruction is likely more powerful when students are guided toward generating the learning strategy, suggesting that elements within will (self-efficacy in this case) and skill (strategy usage, in this case) interact to affect academic outcomes (test performance, in this case).

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INTRODUCTION TO THIS CHAPTER

It is accepted that seeking help is considered a behavioral or social self-regulated learning process (SRL). Help seeking is among the tools used by self-regulating learners to engage cognitively, behaviorally, and emotionally in the learning process. The articulation and interpretation of instrumental help seeking is a foundational advance in today’s concept of how we view this strategy.

The goal of instrumental help seeking is to get just the help needed to overcome difficulty, such as asking for explanations or tips, which can reduce the need for further help and dependence on others. Seeking help that directly or indirectly involves others is unique among SRL strategies. This chapter describes help seeking and the impact of people and situations on the help seeking process, particularly the costs that may reduce the willingness to seek help even when it is needed. Interventions are described demonstrating that help seeking may benefit the student in several ways.

HIGHLIGHTS

This chapter highlights four classes of competences and resources required for each stage of the help seeking process. Notably, interventions are articulated for each competency and resource. The stages of the help seeking process are positioned in response to the prediction, implementation, and self-introspection stages of the SRL model, reinforcing the conclusion that learning outcomes are higher when SRL includes adaptive help seeking.

Future research that incorporates a micro- or developmental perspective on help seeking, such as consideration of their relationship with other self-motivating beliefs at work in the forethought phase, demonstrates the dynamic of self-regulating help seeking.

REFERENCES ON THE MEANING OF THIS CHAPTER FOR JAPANESE EDUCATIONAL STUDIES

In Japan, there are many studies on academic promotion such as the relationship between mastery goals and autonomous help seeking, attitudes that define help seeking, and relationships between understanding and engaging in autonomous help seeking (e.g., Nosaki, 2003). The influence of the environment on the child’s help seeking is also examined, such as teacher achievement goals and teacher support (Seo, 2008). Studies on self-regulation have found that avoiding seeking help is maladaptive. However, studies do not show that avoidance strategies are only adaptive; avoidance strategies are only maladaptive when accompanied by avoidance goals (Murayama & Oikawa, 2005).

In the field of clinical psychology, there has been a growing body of research on help seeking skills interventions. Honda, Arai, and Ishikuma (2020) discussed the effects of behavioral intervention focused on help seeking skills. Their program included group social skills training and psychoeducation. Incidentally, there has been much attention paid to clinical help seeking not only through face-to-face interactions but also via the Internet. The Internet is less affected by physical and time constraints and allows for highly anonymous access anywhere at any time. The Internet can be used as an approach to facilitate seeking help from professional organizations at the beginning of the learning process.

Umegaki (2016) conducted an intervention study to show that the Internet may facilitate seeking help from professional organizations. Since the Internet took hold, some people ask for help from others through websites when they are troubled. Some people count on the Internet to answer their questions. Nonetheless, it is essential to develop help seeking skills (Honda, Arai, & Ishikuma, 2020), whether face-to-face or via the Internet.

I will conclude with an introduction to my research. I am examining whether children’s perceived classroom climate affects their styles of help seeking in academic or friendship/mental health domains.

Furthermore, I am interested in the impact of both teachers’ attitudes toward seeking help and verbal cues about their styles of seeking help affect children’s perceived classroom climate and their styles of help seeking. The results suggest that there is some relationship between those variables. I would also like to continue to carefully examine the influence of the environment on the child’s style of help seeking and people and things that contribute to the promotion of the child’s help seeking skills.

References are listed on Page 17.

Commentary on Hayashi’s Review of Chapter 8, Help Seeking as a Self-Regulated Learning Strategy.

Stuart A. Karabenick & Jean-Louis Berger

First, we express our appreciation to Akie Hayashi for her fine review of Chapter 8, Help Seeking as a Self-Regulated Learning Strategy. It correctly focuses on the critical change in help seeking brought about by Sharon Nelson-Le Gall’s recognition and promotion of instrumental help seeking now universally recognized as an adaptive self-regulated learning (SRL) strategy. Hayashi also notes distinctions from maladaptive help seeking that learners employ as work avoidant, as well as factors related to the avoidance of help seeking.

Noted is the impact of the Internet on facilitating help seeking, including its capacity to seek and receive help anonymously, which provides the potential for the reduction of self-threat in educational domains. Threat reduction is even more pronounced in clinical settings where people are reluctant to admit needing help to overcome embarrassing personal mental health inadequacies.

This aspect of help seeking continues to grow with the expansion of online resources, expressed in online education and telemedicine. A consequence of the increased availability of resources is even an expanding expectation that students and others should see help from available sources, such as friends, teachers, and family and other relatives, as appropriate to alleviate problems. Hayashi also notes the importance of literature on the importance of developing help seeking skills. Further recognized is the importance of classroom climate for facilitating help seeking, which is primarily situated in the achievement goal theory (AGT) literature, more specifically the benefits of mastery goals and effects of reducing help seeking of performance-avoidance goals.

The incursion of computing power and learning analytics (LA) in general and artificial intelligence (AI) in particular is having a significant impact on the help-seeking process and its role not only in education but also for lifelong learning. Consequently, the sooner learners understand the function and importance of that process, the better equipped existing and future world citizens will be to take advantage of it, whether face-to-face, and from whom or where to seek help when needed.

It is encouraging that Hayashi will continue to invest in the study of help seeking to contribute to the promotion of children’s help-seeking skills. We both encourage and applaud her goals. We also suggest that she includes research on help seeking in Japanese culture, an early example of which is work by Shwab and Sukemune (1998) that appeared in the edited book by Karabenick (1998).

References are listed on Page 17.
Metacognition plays a significant role in enabling learners to make progress in self-regulated learning. The metacognitive functions of monitoring and controlling one’s cognitive activity are indispensable to setting personal goals, effectively engaging in learning activities, and reflecting on that engagement. In Chapter 10, Training Metacognitive Skills in Students with Availability and Production Deficiencies, Marcel V. J. Veenman discusses the principles and key points to bear in mind when supporting learners in developing these metacognitive skills.

Veenman posited that there are three essential principles for the effective teaching of metacognitive skills: 1) One’s teaching should be coordinated with the learning context; 2) Informed training should be provided, and 3) It is vital to offer a long-term training.

Concerning the coordination of one’s teaching with the learning context, in metacognitive teaching, the relationship between metacognitive processes and that essential for task execution must be embedded in a clear and specific language relating to learning requirements. In other words, the learner must understand the connection between the specific features of a task and conditions prevailing at any time (i.e., which cognitive knowledge is needed and when). Regarding the provision of informed training, learners must understand the value and usefulness of employing metacognition. For instance, a learner’s task performance may temporarily drop because of an increased burden on his or her working memory during training. In this case, the learner’s motivation to use metacognitive skills may decrease and stop before the skills taught have been mentally consolidated.

It is vital to ensure the continued use of metacognitive approaches. This may be achieved by emphasizing the importance of practice in the WWW and H Rule (what, when, why, and how). Rule. This chapter ties these principles to a self-regulated learning cycle (forethought, implementation, feedback, and reflection) and introduces a behavioral plan for engaging with a task (forethought, performance, self-monitoring, and self-reflection).

Veenman also identifies two causes of an inadequate metacognitive approach to training materials in learners: availability deficiency and production deficiency. Availability deficiency refers to a lack of knowledge about metacognitive skills. Learners with availability deficiencies must be trained in the fundamental use of the WWW and H Rule. Production deficiency means that a learner possesses a certain degree of metacognitive capacity but cannot make full use of it for one reason or another.

For developing metacognitive approaches in a learner differs depending on the nature of the deficiency with which he or she is struggling.

METACOGNITIVE SKILLS TRAINING AND SELF-REGULATED LEARNING RESEARCH IN JAPAN

Kera referred to Fukaya’s (2011) study, which indicates that eliciting students to generate questions about learning content, rather than merely generating questions about learning content, may be helpful in the metacognitive instruction skills. Kera also observed that Yoshida and Murayama’s (2013) work revealed that (psychology) professionals tend to overestimate the importance and difficulty of the tasks and difficulties underlying the tasks, but they rarely explain the metacognitive nature of these activities and the benefit of using these activities to their students. Kera (2018) observed that.

Based on their own experience of engaging in metacognitive strategies, teachers believe those strategies to be similarly ‘obvious’ and ‘straightforward’ to their students (Veenman, 2019). Consequently, teachers tend to give implicit instruction rather than explicit, informed instruction. They incidentally use examples of their metacognitive strategies in their lessons, but they rarely explain the metacognitive nature of these activities and the benefit of using these activities to their students.

Based on the instructional principles depicted in Chapter 10, we designed a teacher-training program in which teachers are trained to give explicit and informed instruction of metacognition (Veenman, 2019). Moreover, teachers are inclined to set an example for their students by demonstrating their own metacognitive activities in their lessons. This teacher-training program was evaluated in an international study (Veenman & Breedveld, 2019), and it was found that primary-school teachers and 12-year-old students.

First, teachers were extensively trained in four workshops and, subsequently, they trained their students during three training classes for at least three months. Metacognitive skills were assessed in a pretest-posttest design with computerized discovery tasks (in the domain of biology) (Veenman, Bavelaar, De Wolf, & Van Haaren, 2014). Trained students significantly improved their metacognitive skills, relative to control students who received no training. Trained students appeared to transfer their newly acquired skills to another type of task and a different representation of the pretest assessment. This evaluation study was replicated with Dutch teachers and 14 and 15-year-old students from secondary education. As teachers in secondary education addressed different disciplines, they were trained to instruct metacognition within their specific discipline. Results confirmed that trained students improved and transferred their metacognitive skills, relative to control students. However, results were more profound for teachers who collaboratively designed their lessons as a team, relative to teachers who worked individually. Reports of these two studies are in preparation.

Thus, training metacognition in students may demand an enormous investment of time and effort from teachers (preferably as a cooperating team), but the outcome in students is equally substantial. Transfer of newly acquired metacognitive skills indicates that students did not simply learn a trick orhabit in a particular context. They acquired a broadly applicable skill for regulating their learning.

Marcel V. J. Veenman, PhD, is director of the Institute for Metacognition Research in the Netherlands. He is also affiliated with the University of the Netherlands. He was the founding Editor Chief of Metacognition and Learning. He also initiated the Special Interest Group on metacognition within the European Association for Research on Learning and Instruction (EARLI).
Chapter 11, Learning Technologies and Self-regulated Learning: Implications for Practice
How to Create a Technology-Oriented Learning Environment to Foster Self-regulated Learning
Takamichi Ito (Kyushu University)

OVERVIEW

Chapter 11, Learning Technologies and Self-regulated Learning: Implications for Practice, written by Anastasia Kitsantas, Nada Dabbagh, Faye C. Huie, and Susan Dass, provides an overview of learning technologies and self-regulated learning, a timely topic in the context of the current pandemic. With many universities continuing to offer classes online, fostering student self-regulation is an urgent issue. I am thankful for the opportunity to translate this chapter and learn from the authors.

The authors of Chapter 11 explicitly support the widespread adoption of online and blended learning in higher education, based on previous research and various sources of information. The accuracy with which this chapter predicted our current situation with the COVID-19 pandemic is impressive. Zimmerman (2008) argued that technology-oriented learning could be a powerful medium through which students can develop their self-regulation skills. Following Zimmerman’s idea, the authors address how to support self-regulated learning in online or blended learning environments and how learning technologies can complement and strengthen the self-regulation. Additionally, they describe a scenario to illustrate how college instructors can promote and support self-regulatory processes while using learning technology.

THE FIRST PART OF THIS CHAPTER

In the first part of this chapter, the authors review research on the use of learning technologies, based on Zimmerman’s cyclical model of self-regulated learning. His three phases model consists of forethought, performance, and self-reflection, all of which include several key subprocesses. In particular, the authors of Chapter 11 discussed (1) goal setting, planning, and self-control strategies in the forethought phase, (2) self-control strategies and self-monitoring in the performance phase, and (3) self-judgment and self-reaction in the self-reflection phase.

Research evidence shows that specific web tools embedded in course and learning management systems (CMS/LMS) can support various subprocesses of self-regulated learning (Dabbagh & Kitsantas, 2004). Based on the previous findings, the authors map self-regulatory strategies to LMS tools in an easy-to-understand table.

Teachers can use collaborative and communication tools to help students set goals, engage in effective time management and use content creation and delivery tools to help students interact meaningfully with course content. Learning and assessment tools are utilized to support self-monitoring and self-evaluating. These findings help university teachers describe how to use available learning technology in concrete ways.

THE LATTER PART OF THIS CHAPTER

The latter part of Chapter 11 describes a scenario in an upper-level undergraduate economics course and illustrates how self-regulatory processes can be embedded in a blended course. This scenario is informative, thought-provoking, and novel. LMS and 3D virtual worlds were used to support online instruction and interaction. In this virtual world, an avatar walked around the imaginary university campus, taking classes and learning independently. It is easy to imagine a classroom like this being implemented in the near future.

THE CURRENT STATE IN JAPAN

The current state of application of learning technologies in education in Japan is still in its infancy. The Coronavirus pandemic has led to the rapid proliferation of online college classes. Many university faculty members in Japan are trying to improve their students’ ability to self-regulate through trial and error. The accumulation of evidence may still be insufficient, and Japanese online education may only support learning, not self-regulated learning.

This chapter offers concrete suggestions on what learning tools and environments are effective in each of the three phases, and there is much for Japanese educators and researchers to learn. Since progress in learning technologies is remarkable, we should continue self-regulated learning research in this area, while keeping an eye on its future as it grows in importance.

References are listed on Page 17.
Chapter 14: The Use of Self-Regulation Interventions in Managing Chronic Disease: Medicine and Self-Regulated Learning in the Post-COVID-19 World

Yasuhi Matsuyama (Ichi Medical University)

Deeba F. Minhas

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he year 2020 will be remembered as the year in which COVID-19 caused a global epidemic unprecedented in modern times. This COVID-19 pandemic has reaffirmed that no matter how much medical technology and public health progress, humanity will never be free from the fight against infectious disease, and that chronic disease is a critical factor in the severity of the infectious disease. Day-to-day management of chronic diseases is as important as the development of therapeutic drugs and vaccines.

Matsuyama, et al., 2019. "Regulation Interventions in Managing Chronic Disease". TIMES MAGAZINE

Chapter 14, The Use of Self-Regulation Interventions in Managing Chronic Disease, written by Noreen Clark, begins with the sentence, "Almost one half of the U.S. population lives with a chronic condition" (p. 417). Many developed countries have an aging society, including the United States, and many older adults have chronic diseases. The hallmark of chronic disease is that it cannot be cured but can be controlled.

Clark, a faculty member at the University of Michigan, was one of the first to understand the importance of patients' self-management or self-regulated learning in the control of their chronic disease. To promote this idea, she applied self-regulated learning to teaching principles to patient self-management. She collaborated with Barry J. Zimmerman, a social cognitive psychologist and an expert in self-regulated learning. Their efforts led to the development of a self-regulation model for chronic disease, the Model for Managing Chronic Disease (MMCD). Clark's model included those characteristics of daily behaviors that an adult needs to manage his or her condition - or that of children - and the continuous and reciprocal process this requires, involving the three core aspects of self-regulation: self-observation, judgment, and control. This chapter describes the Model for Managing Chronic Disease (MMCD) contributions to chronic disease prognosis in two research projects.

First, to explore whether the MMCD construct can be utilized as a constant over time, Clark and her colleagues conducted a two-year observational study of patients of 637 asthmatic children living in Detroit, Michigan, and New York City suburbs. Second, to demonstrate the usefulness of MMCD in practice, they applied it to a self-regulating intervention program called PRIDE for older patients with chronic heart disease, named as an acronym of its characteristics: P = problem-solving approach; R = researching the daily routine; I = identifying a health management goal; D = developing a plan to reach the goal; and E = establishing expectations and rewards.

Testing of the PRIDE outcomes in randomized controlled studies showed that, compared with controls, program participants had significantly improved psychological dysfunction due to their disease. PRIDE also produced specific clinical benefits, like better physical abilities such as walking, fewer hospital stays, and lower hospitalization costs.

As a self-regulated clinician, I acknowledge the tendency of some physicians here only to manage "diseases" in patients, using uniform treatment and guidance. Looking around the world, however, the 1980s first began to see calls for patient-centered care in both Europe and the United States, with an emphasis on patient decision-making and a behavioral science approach. In contrast, the doctor-patient relationship in Japan sometimes tends to fall back into paternalism, perhaps reflecting the hierarchical nature of Japanese society. The emphasis of disease management by doctors persists in medical education.

Japan has the world's fastest aging population, and many older adults have chronic illnesses. The insistence on a doctor-centered approach to chronic illness has led to ever-increasing funding for medical treatments, straining the nation's finances. Moreover, COVID-19 has made us realize that situations can arise in which medical services become suddenly unavailable. The significance of patients acquiring the skills to self-regulate their chronic conditions is gaining new urgency. Reading the contents written early in Clark's Chapter 14 is both timely and worthwhile.

To date, doctors, pharmacists, nurses, and nutritionists have worked together to educate disease patients on how to manage their chronic diseases actively. The future will require collaboration with disciplines other than medicine—just as Clark did with educational psychologists with expertise in self-regulated learning.

Coincident with the advent of patient self-regulation, self-regulated learning has also become prominent in Japan's medical education. It is used in the sense that the ever-increasing demand for knowledge and skills cannot be met through the current medical school curriculum only. Instead, self-regulated learning is critical: medical professionals should proactively study and update their skills throughout their lives.

My research topic is close to this context, namely that the identity formation medical students undergo in becoming healthcare professionals is an essential factor in their active motivation to improve themselves, to devise learning strategies, and to reflect on themselves (Matsuyama, et al., 2019). There is an essential difference between self-regulated learning, as covered in Chapter 14, and that emphasized in medical education. Nevertheless, certain parallels are also evident. At least, we can say that self-regulated learning is now gaining recognition in Japanese medical education. I hope that the concept of self-regulated learning will take advantage of this momentum and become more prevalent in patient care.

Sadly, Noreen Clark passed away on November 23, 2013, in New York City following a sudden illness. Her significant achievements and leadership in the field of chronic disease management have left an indelible mark on the world.

Deeba F. Minhas, PhD, is a professor of public health, director of Health Management and Quality Improvement at the University of Michigan School of Public Health, Ann Arbor, Michigan.
Chapter 15, Applying the Model of Development of Self-Regulatory Competence to Mentoring: Learners' Psychological Development and Motivation in Japan

Kanako Terao (Nagoya University)

The learning process requires the acquisition of self-regulatory competencies. To master capabilities, such as goal setting, help-seeking, and curriculum standards. The chapter addresses the importance of the role of the mentor, who has the responsibility to develop learners into self-motivated and independent individuals. Zimmerman's approach to mentoring his doctoral students incorporates a process of self-regulated learning that includes regulation, and sequential levels attaining of self-regulation. Zimmerman's model consists of four sequential levels: self-monitoring, self-control, and self-regulation (Zimmerman, 2000).

RECOMMENDATIONS FOR TEACHERS, COACHES, MENTORS, AND STUDENTS

The function of mentor was examined primarily in terms of psychological growth of learners, Yamada (2012) has shown that students' pathways and identities are developed by teachers who take on the role of mentors.

The chapter describes the relationship between this model and Zimmerman's mentoring method and its application to educational settings and future research.

CHAPTER 15: KEY ELEMENTS

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Dilibenedetto and White describe and apply Zimmerman's model to mentoring doctoral students:

1. The observation level is dominated by vicarious learning through exemplary teachers. Vicarious performance is triggered by observation of successes that faculty members receive, and faculty members attempt to perform tasks that they have learned and foster self-efficacy.

2. The emulation level is characterized by doctoral students' efforts to achieve a parallel level of self-regulating thinking and behavioral tendencies and putting them into action. Specifically, the mentors attempt to reproduce the strategies in their own settings.

3. The self-control level brings a shift in the driving force of self-regulating behavior and self-efficacy from an external to an internal one. Doctoral students are trained in self-regulated learning, focusing on processes such as self-efficacy and strategy use with less input from the mentor.

4. The self-regulation level, doctoral students have attained strategies and skills to complete a task, and no longer rely on faculty members for assistance. At this point, self-regulation is evident. Here, with the outcome itself as the goal, the learner is able to internalize self-efficacy learned from the mentor and adaptively manipulate strategies and self-regulation skills.

APPLICATIONS OF THE CHAPTER ON MENTORING TO THE JAPANESE EDUCATIONAL SYSTEM

In the Japanese educational system, the impact of mentors is examined in terms of support and career development. Hashimoto (2016) investigated the kind of support high school students received from their mentors. As a result, high school students reported that they most strongly supported the mentoring on the position of the mentor. Kodama (2016) examined the effectiveness of mentoring on student teachers during teaching practices. Results suggested that when teachers' actual burdens and difficulties were perceived, sufficient mentorship provision which reduced their involvement in achieving their goal of becoming a teacher, and insufficient mentoring might decrease their interest in teaching.

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AERAS SSRL SIG TIMES MAGAZINE

Commentary on Terao’s Review of Chapter 15, Applying the Model of Development of Self-Regulatory Competence to Mentoring

Marie C. White & Maria K. Dilibenedetto

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