SIG SSRL NEWSLETTER

SPECIAL INTEREST GROUP

Studying and Self-Regulated Learning

AERA 1916 AMERICAN EDUCATIONAL RESEARCH ASSOCIATION

Frankenstein Effects: A Reflection for the New Era of Self-Regulated Learning Science -- Message from the SIG Senior Chair

Dr. Héfer Bembenutty, *Queens College*

Dr. Héfer Bembenutty
Queens College

As has happened every year during the last two decades, Dr. Wilbert J. (Bill) McKeachie gave me to read this year his almost 50 journals which he subscribes after he has read them. One of those journals is *Science*, which publishes the newest advances in hard science research. The feature themes of the January 2018 (Vol. 359, Issue 6372) attracted my attention, *A Modern Monster: The Lasting Legacy of Frankenstein*. As it is well known, Frankenstein is a fictional novel in which Victor Frankenstein created a creature in an unorthodox scientific experiment, which resulted in a monster who damaged the family and friends of the man who created it.

In the scientific arena, Frankenstein is synonymous with scientific work going wrong and as scientists' irresponsibility to what they created or investigated. On this point, Jon Cohen (2018) provides a glossary of Frankenstein. For instance, *Frankencell* refers to "J. Craig Venter's attempt to create an artificial cell containing the smallest possible number of essential genes." *Frankensites* refers to "Universities websites that have conflicting material posted by professors and their departments."

In the *Science* editorial, Henk van den Belt invites scientists to exercise responsibilities for what they have created. Explicitly, he draws attention to take responsibilities for the vicissitudes of the technological creations, such as biotech, synthetic biology, and artificial intelligence. Van den Belt argues that the severe problem is that after the successful creation of Frankenstein, Frankenstein was left alone without its necessary care and to fend for itself.

Van den Belt's position resonates with me about our responsibility to the development of *self-regulated learning*. We are called to continue to be responsible for what we created. With concerns about the multiplication of numerous terms associated with similar constructs, Dinsmore, Alexander, and Loughlin (2008) examined the theoretical and empirical boundaries between metacognition, self-regulation, and self-regulated learning. They wanted to find out the perceptions or misperceptions associated with these constructs. They found significant similarities as well as substantial differences in the measures of those three constructs.

Alexander and her associates' concerns for the purity and clarity of the constructs in our disciplines intend to avoid what I have termed *FrankenSRL*, which refers to an attempt to create a loose construct lacking meaningful applications to better society, schools, and the public sphere while disregarding the adverse effects of those actions. Self-regulated learning cannot stay in its ivory tower; instead, it needs to continue impacting the lives of school children, influencing the decisions of policymakers and school administrators, and being accessible to parents, coaches, and community leaders in ways that they could understand and implement it in their respective capacities.

Concerning self-regulated learning, much progress has been making during the last decades. That progress is delineated in *Using Formative Assessment to Enhance Learning, Achievement, and Academic Self-Regulation* (Andrade & Heritage, 2017); *Developing self-regulating learners* (Butler, Perry, & Schnellert, 2017); *Self-Regulation in Learning: The Role of Language and Formative Assessment* (Bailey & Heritage, 2018); *Handbook of Self-Regulation of Learning and Performance* (Schunk & Greene, 2017); *Self-Regulation in Education* (Greene, 2018); *The Self-Regulated Learning Guide: Teaching Students to Think in the Language of Strategies* (Cleary, 2018); *Self-Regulation and the Common Core: Application to ELA Standards* (White & DiBenedetto, 2015); and *Developing Self-regulation of Learning and Teaching Skills Among Teacher Candidates* (Bembenutty, White, & Vélez, 2015).

Frankenstein Effects:... Message from the SIG Senior Chair

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As we move on to do more on bringing self-regulation of learning from research to practice and assuming responsibility for what we created and developed in our discipline, we could consider the following points. First, we could take a new look at how our research embraces the cultural diversity of all learners. It is essential that we embed diversity into our self-regulated learning research. It is not enough to know that children following self-regulated learning approaches acquire high levels of reading and writing proficiencies; cultural characteristics (e.g., race, gender, religion, identity, and ethnicity) are also crucial in self-regulated learning. Further, our research needs to embrace inter-and intra-group socialization processes that impacts learning. In self-regulated learning, culture and diversity matter (Bembenutty & Karabenick, 2013; Kumar & Lauermann, 2017; Zusho & Clayton, 2011).

Second, we could promote a *self-regulated culturally proactive pedagogy* in which both teachers and students set goals, select strategies, assess motivation, engage in an efficient performance, and self-reflect while committed to promoting equity, diversity, and inclusion in our curriculum and instruction. A *proactive pedagogy* adds a unique perspective to *responsive*, *sustaining*, *relevant*, or *revitalizing* pedagogies. Proactive pedagogy focuses on initiating and activating agentic and planned action, behavior, and performance instead of reacting to the needs of learners and teachers. In a proactive pedagogy, both teachers and learners are agents that concomitantly pursue academic goals (White & Bembenutty, 2014, 2016).

Third, we could dedicate more research to investigate the quality of life of all students and to identify the needs of students of color and those with special educational needs. In this vein, it is crucial that our pedagogy has the potential to attract and make learning possible to culturally diverse learners. Teachers need to continue communicating caring and display a welcoming disposition to all learners. The curriculum needs to be transformed to proactively and simultaneously promote content knowledge as well as self-regulated learning.

Fourth, we could avoid the unnecessary multiplication of constructs reflecting similar ones. In our discipline there are a plethora of constructs that instead of facilitating clarification and focus, endanger us to fall into the FrankenSRL phenomenon we are called to avoid. For instance, with the well-established constructs such as self-regulated learning and delay of gratification it is not clear whether the construct of grit adds something new to our discipline. *Grit* is a new non-cognitive trait construct reflecting individuals' passion and perseverance (Duckworth, 2016). Ultimately, as Steven Goodman (2018) observed, with all the challenges that young learners experience, it is not all about grit or at least like David De Steno (2018) posited, we are teaching grit the wrong way. Inner city children need a self-regulated learning pedagogy and research that address the needs that grit does not provide.

Fifth, we could focus more of our attention on examining how self-regulated learning with computers facilitates learning. More needs to be uncovered about the role of cognition, metacognition, emotion, and motivation concerning technology, multimedia, artificial intelligence, hypermedia, human factors, and ergonomics research. In this regard, Roger Azevedo, Matthew Bernacki, Anastasia Kitsantas, and Phil Winne have taken leading roles; and they are commended for focusing their research on understanding complex interactions between humans and intelligent learning systems and their impact on learning. Nevertheless, more work is needed for learning how the advantages of computer research have favor diverse learners. We need to be assured that our technological creations do not put in disadvantages culturally diverse learners. Otherwise, if we do have children left behind, our technological creations could turn out to be a monster with moral shortcomings like those of Frankenstein. On this matter, the call from van den Belt to assume responsibility for the vicissitudes of our technological creations will continue resonating in our research labs.

All interested in self-regulated learning research are invited to embark on the paths that the new era of self-regulated learning science presents to us. We are called to adopt evidence-based self-regulated learning approaches and practices to strengthen the educational opportunities of all learners, in particular, those students in poverty, marginalized, and minoritized. We need to provide proven-effective tools that teachers can endorse to ameliorate the adverse effects of outside classroom factors that could impede the development of empowered, agentic, and self-regulated learners. By adopting a *self-regulated culturally proactive pedagogy* and a *self-regulated culturally proactive research* we will continue taking care of the construct we created, and it will not fend for itself, as it happened to Frankenstein. We could avoid the FrankenSRL effects in the new era of self-regulated learning science.

Message from the Editors of the Newsletter

Welcome to our SIG SSRL spring newsletter. We will, fortunately, get together soon during the AERA Annual Meeting in New York City.

Dr. Stephen J. Aguilar , *University of Southern California, Los Angeles*, USA

Among many exciting highlights, this Newsletter was designed to give us a preview of the very insightful papers that will be presented at the meeting in New York City during the AERA annual conference. Contributors have submitted abstracts of their presentations. All scholars with proposals selected to be presented during posters sessions were invited to submit their abstracts to this newsletter. As you will read, our members are doing research that significantly continues impacting the lives of learners at all level of education.

You will find very remarkable contributions of committed researchers, which add a lot to the advancement of the knowledge about self-regulated learning in different directions and perspectives.

In this newsletter, you will also find the message from our senior chair, which surprised all of us by making connections between Frankenstein and self-regulated learning and invite us to avoid what he identifies as *FrankenSRL*. The chair message leads us to reflect upon our responsibility for the knowledge we construct. In addition, our senior chair provides an insightful review of Jeffrey Greene's latest book, *Self-Regulation in Education*.

We look forward to seeing you during our business meeting. We hope you will join us for a nice dinner immediately after the business meeting. We wish you an enjoyable reading, and we hope to see you soon in New York!

Dr. Evely Boruchovitch, *University of Campinas*, Brazil

Results of the SIG SSRL Election

SIG SSRL Executive Committee ~ 2018-2019

SIG Chairs
Senior: Héfer Bembenutty:
bembenuttyseys@yahoo.com
Junior: Taylor Acee: aceet@txstate.edu

Program Chairs
Senior: Pamela Ford Murphy:
pamela.murphy@ashford.edu
Junior: Stephen Aguilar: aguilars@usc.edu

Secretary/Newsletter
Senior: Evely Boruchovitch: evely@unicamp.br
Junior: Abraham Flanigan:
abrahamflanigan@gmail.com

Treasurers/Membership
Senior: Linda Sturges: lsturges@sunymaritime.edu
Junior: Divya Varier: dvarier@gmu.edu

Consistent with our SIG SSRL Bylaw, the SIG current Executive Committee has voted unanimously to keep Héfer Bembenutty serving as the senior chair for one more year.

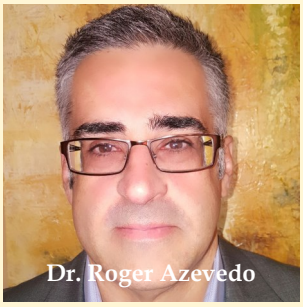
Barry J. Zimmerman Award for Outstanding Contributions

Dr. Linda Bol, Chair of the Committee
Old Dominion University


Dr. Linda Bol

This year's SSRL SIG **Barry J. Zimmerman Award for Outstanding Contributions** has been awarded to **Dr. Roger Azevedo**. This annual award is being established to honor mid-career and senior scholars who have made significant contributions to the fields of studying and self-regulated learning research. The focus of the award is to recognize a researcher who has developed a programmatic area of research that has made a strong theoretical, empirical, and applied impact on the field. Zimmerman is among the most prolific and important figures in the fields of studying and self-regulated learning and is an AERA fellow. He is also one of the founders of the Studying and Self-Regulated Learning SIG. This award is open to any researcher who has actively conducted research in studying and self-regulated learning for a sustained period (i.e., at least seven years) and has produced a strong record of scholarly achievement.

Dr. Azevedo will be officially recognized at the SSRL SIG business meeting at AERA with a check for $500.00 and an award plaque. **Congratulations, Dr. Azevedo!**


Dr. Roger Azevedo

Dr. Azevedo, a professor in the Department of Psychology at *North Carolina State University* in the area of human factors and ergonomics, examines the role of cognitive, metacognitive, affective and motivational self-regulatory processes during learning with computer-based learning environments. He focuses on understanding complex interactions between humans and intelligent learning systems by using interdisciplinary methods to measure cognitive, metacognitive, emotional and motivational processes and their impact on learning and transfer.

Dr. Azevedo has published more than 200 peer-reviewed papers, chapters and refereed conference proceedings. He is the editor of the *Metacognition and Learning* journal and serves on the editorial board of several top-tiered journals. His research is funded by the National Science Foundation, National Institutes of Health, Institute of Education Sciences, Social Sciences and Humanities Research Council of Canada, Natural Sciences and Engineering Research Council of Canada, and the Canadian Foundation for Innovation. He is a fellow of the American Psychological Association and the recipient of the prestigious NSF Faculty Early Career Development Award.

SSRL SIG Business Meeting
Keynote Speaker: Dr. Jeffrey A. Greene

University of North Carolina at Chapel Hill

Title of the Address:

Rediscovering the Foundations of Self-Regulation in the Digital Age

Dr. Jeffrey A. Greene will discuss the novel self-regulatory challenges that have resulted from the explosion of information afforded by the digital age. He will argue the challenges require researchers and educators to return to, and broaden, the foundations of self-regulated learning research and practice.


Dr. Jeffrey A. Greene

Dr. Greene is the Interim Associate Dean for Academic Affairs and Director of Graduate Studies and an Associate Professor in the Learning Science and Psychological Studies Program and Educational Psychology, Measurement, and Evaluation Program. Dr. Greene was awarded the 2016 Richard E. Snow Award for Distinguished Early Contributions in Educational Psychology from Division 15 of the American Psychological Association. His research focuses upon particular aspects of digital literacy, such as student cognition, regulation and beliefs in science and history domains. Specifically, he studies self-regulated learning, or how students' knowledge, beliefs and characteristics interact with their ability to actively and adaptively monitor and control their learning, motivation, behavior and context. Dr. Greene is Associate Editor of *Contemporary Educational Psychology*, and is on the editorial board of numerous top-tiered journals.

Message from the Chair of the Graduate Student Mentoring Program

Dr. Timothy J. Cleary, *Rutgers, The State University of New Jersey*

The SSRL SIG is sponsoring its fifth annual Graduate Student Mentoring Program (GSMP) at AERA. This year, we have 16 graduate students participating in the program, which represents an incredible increase in participation from prior years. Each graduate student will receive individualized mentoring from a prominent scholar in the field of SRL and will participate in a SIG-sponsored breakfast for additional programming and mentoring. The GSMP committee looks forward to sharing details of this experience with SIG members during our Business Meeting on Sunday, April 15th.

Dr. Timothy J. Cleary,
Rutgers, The State University of New Jersey

The SSRL SIG Great Dinner Celebration in New York City

Join us for a great dinner celebration at an authentic New York dining experience!

Our SIG dinner will take place following the business meeting on Sunday, April 15 at a branch of the famous New York eatery, Junior's. You can order whatever you wish from the menu, and each person pays for their own meal. There are two locations of Junior's in walking distance of the Crowne Plaza. The exact location of our dinner and how to RSVP will be announced later. In the meantime, you can view the history of Junior's and the extensive menu (with prices) at their website:
http://www.juniorscheesecake.com/content/wp-content/uploads/2017/12/4149-Broadway-Main-Menu-12.05.17_With-Prices.pdf

Looking forward to seeing you there!

Graduate Student Research Award

Dr. Roger Azevedo, Chair of the Committee,
North Carolina State University

Dr. Roger Azevedo
North Carolina State University

Each year the AERA's SSRL SIG presents up to five awards to graduate students who are first authors of papers accepted for presentation at the annual meeting of AERA for one of the SSRL sessions.

We received over a dozen student papers spanning various research areas, methodologies, and analytical approaches related to studying self-regulated learning.

The Graduate Students Research Award committee, comprised on Dr. Roger Azevedo (Chair), Dr. Christian Brandmo, Dr. Kara Makara, Dr. Fani Lauermann, and Mr. Abraham Flanigan, have the pleasure of announcing the four awardees of this year. We congratulate the winners:

- Mr. Aloysius C. Anyichie from the University of British Columbia for his paper entitled *Culturally Responsive Teaching and Self-Regulated Learning: An Integrated Approach to Supporting Engagement in Inquiry-Based Learning*.
- Ms. Megan Cogliano from the University of Nevada at Las Vegas for her paper entitled *The Effects of a Retrieval Practice Intervention on Undergraduates' Monitoring and Control Using Performance Feedback*.
- Ms. Deana Ford from Old Dominion University for her paper on *The Effects of Self-Regulation Strategies on Middle School Students' Calibration Accuracy and Achievement*.
- Mr. John Eric M. Lingat from the University of Kentucky for his paper entitled *Patterns in Metacognitive Awareness: An Investigation of Undergraduate Biology Students*.

We would like to thank all the students for submitting their work and look forward to receiving even more papers next year! As the Chair, I'd like to thank my committee members for their time and invaluable contributions to evaluating students' research.

AERA SIG SSRL Outstanding Poster Award

Dr. Matthew L. Bernacki, Chair of the Committee
University of Nevada, Las Vegas

Dr. Matthew L Bernacki
University of Nevada, Las Vegas

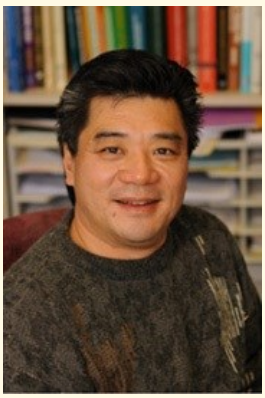
This year's **SSRL SIG Outstanding Poster Award** has been awarded to **Naomi Malone** (StraCon Group) and **Haiyan Bai** (University of Central Florida) for their poster, ***Effects of Metacognitive Monitoring During Problem Solving on Academic Achievement***. This proposal was evaluated against other nominees recommended to the committee by the SIG leadership. Committee members Adar Ben-Eliyahu, Evely Borukovich, and Amy Dent appraised the proposals along AERA's standard scoring criteria and rendered their decision to Matthew Bernacki, who chaired the committee. Naomi and Haiyan will present their poster at a SSRL Poster session (#15) on **Mon, April 16, 2:15 to 3:45pm, New York Hilton Midtown, Third Floor, Americas Hall 1-2 - Exhibit Hall** and will be recognized at Sunday night's SIG's Business Meeting with a plaque and an opportunity to summarize the paper for attendees. Congratulations to the authorship team!

SIG SSRL NEWSLETTER

Effects of Metacognitive Monitoring during Problem Solving on Academic Achievement

Dr. Naomi Malone,

Dr. Haiyan Bai, &



Dr. Atsusi Hirumi

University of Central Florida

References available upon request (grokkar@gmail.com)

Objectives: Although self-regulated learning (SRL) is assumed to benefit academic achievement in higher education online learning environments, few empirical studies have investigated what levels of support are most effective for promoting students' self-regulated learning behaviors online. Additionally, these studies reported conflicting results. Some found maximum support to be most effective, while others found no significant difference. The purpose of this study was to investigate the effectiveness of different levels of support for self-regulated learning during a complex learning activity to solve an ill-structured problem-solving situation in an online learning environment. In addition, the role of students' self-efficacy on their academic achievement was examined.

Theoretical Framework: The study is based on the self-regulatory phases of the social cognitive SRL model, supporting students' knowledge of and use of the three main phases of forethought, performance, and self-regulation during learning.

Methods: A total of 101 undergraduate students from three international studies courses offered at a large urban Southeastern public university in the United States participated in the study. The students were randomly assigned to treatment (minimum support, maximum support) and control groups. Students' academic achievement scores were measured using a conceptual knowledge test created by the course professor. O'Neil's (1997) Trait Self-Regulation Questionnaire measured students' self-efficacy. Analysis of Co-Variance (ANCOVA) was conducted to analyze the data.

Results: The ANCOVA results indicated significant improvement of the academic achievement of the minimum support group versus both the maximum support and control groups. Additionally, self-efficacy as a co-variable did not significantly influence students' achievement scores in any of the groups.

Scholarly Significance: The overall results indicated that it is important to consider the level of self-regulated learning support when designing online learning environments promoting students' critical thinking skills. Promoting students' self-regulated learning skills is vital when designing online higher education courses.

SIG SSRL NEWSLETTER

Chelsea Cameron
Ian S. Cameron
Peggy N. Van Meter
The Pennsylvania State University

References available upon request (cec5144@psu.edu)

The Benefits of Question Generation to Support Multiple Document Learning

Objective: Learners often struggle to learn from multiple documents without instructional task supports. The purpose of this study is to test the effects of experimental instructions on the quality of questions college students generate during a multiple documents task. This instruction is aimed to increase the number of questions learners generate that go beyond single text comprehension, improve the ability to recognize those questions, and increase attention to multiple texts to improve multiple document learning.

Theoretical Framework: The Multiple-Document Task-based Relevance Assessment and Content Extraction (MD-TRACE) model explains the comprehension and integration processes of multiple documents reading (Rouet & Britt, 2011). The model proposes that tasks effect multiple documents processing. Questioning is one such task that can be learner-driven, can be taught, and has the potential to influence multiple document learning.

Method: Forty-one participants from an introductory college course were randomly divided into two conditions, a Multiple Document Question Instruction (MDQI) or No Question Instruction (NoQI) condition. Participants in the MDQI condition received instruction on how to generate questions aimed at multiple document comprehension. After reading two conflicting historical documents, participants generated questions based on the documents, selected the question aimed at multiple document comprehension, and then responded to an essay prompt.

Results. Results indicate that MDQI supports the generation of questions aimed at multiple document comprehension. In addition, the significant association between MDQI and the inclusion of multiple sources in the participant responses suggests increased attention to multiple documents. MDQI, however, may not be necessary to recognize questions aimed at multiple document integration.

Scholarly Significance: These findings suggest MDQI supports the learner's ability to generate and use questions as a multiple documents task to direct attention to and integrate multiple documents. This is an important step toward improving multiple document comprehension as we begin to address the need to provide learners with tools to support multiple document learning.

SIG SSRL NEWSLETTER

The Effects of a Retrieval Practice Intervention on Undergraduates' Monitoring and Control Using Performance Feedback

Ms. MeganClaire Cogliano
University of Nevada Las Vegas

Dr. Matthew L. Bernacki
University of Nevada Las Vegas

References available upon request (cogliano@unlv.nevada.edu or matt.bernacki@unlv.edu)

Background: Feedback has a powerful influence on learning and academic performance in the classroom (Hattie & Timperley, 2007) and is found to enhance the effects of retrieval practice (Rawson & Dunlosky, 2011). However, prior research has shown that self-evaluation of practice-test performance is a skill that is difficult for most college students (Grimaldi & Karpicke, 2012; Rawson & Dunlosky, 2007).

Aim: The present study investigated whether training self-evaluation skills for evaluating practice-test feedback improves exam performance, and also tests the mediation of monitoring accuracy and strategy decisions. More specifically, this study examined whether training influences students' abilities to accurately discriminate between information that is well-learned versus information that is yet-to-be-learned from practice-test performance in a college classroom context.

Sample: Participants were 49 undergraduate students enrolled in two sections of an introductory educational psychology course at a southwestern university (M_{age} of 20.71, SD = 3.74, 79% female). The students were randomly assigned in each section to the training condition (n = 25) and the control condition (n = 21). The students were randomly assigned to the treatment condition (n = 25) and the control condition (n = 21).

Methods: Across a 15-week semester, students completed weekly multiple-choice practice-tests and feedback assignments. The feedback assignments asked students to discriminate between topics they do (i.e., well-learned) or do not understand (i.e., yet-to-be-learned) from each chapter. Monitoring accuracy scores were calculated by whether or not students were able to identify topics that were well-learned and those that were yet-to-be-learned based on their practice-test performance feedback. The students in the treatment condition were trained about the benefits of retrieval practice and how to use retrieval practice (i.e., repeated practice with spacing). Training of these skills were grouped into a metacognitive monitoring scale. In addition, students were trained on how to monitor performance and evaluate feedback from practice-tests. Training of these skills were grouped into a metacognitive control scale. The students in the control condition completed additional selected readings and assignments related to the course material.

Results: Results from structural equation modeling showed that training about metacognitive knowledge and metacognitive regulation of retrieval practice increased final examination performance. We also found that monitoring accuracy of performance from feedback for both well-learned and yet-to-be-learned topics were more beneficial for non-quizzed items on the examination. Last, the effects of training on final exam performance of non-quizzed items was mediated by monitoring accuracy of both well-known and yet-to-be-learned topics.

Scholarly Significance: The present results suggest that students' abilities to monitor feedback from practice-tests accurately is critical for strategy selection for yet-to-be-learned topics. In addition, our findings suggest that monitoring feedback accurately from practice-test feedback is important and can be improved with training.

SIG SSRL NEWSLETTER

Insufficient Effort Responding: Pest or Plague When Assessing Self-Regulated Learning with Self-Report Surveys

Mr. Ryan Iaconelli
The Ohio State University

Dr. Christopher A. Wolters,
The Ohio State University

Objectives: A great deal of research examining SRL and its relationship to student engagement, learning, and achievement continues to rely on self-report measures (Winne & Perry, 2000; Wolters & Won, 2018). Despite this popularity, criticisms of these methods and the validity of the data they produce remains a critical concern (Karabenick & Zusho, 2011; Schellings & Van Hout-Wolters, 2011). Our primary aims were to determine: a) the prevalence of IER in SRL research and b) the stability, or consistency, of IER by individuals across multiple surveys.

Theoretical Framework: IER is a response set characterized by respondents who answer survey items with little motivation to provide accurate information (cite). The need to evaluate and understand problems associated with IER are grounded in contemporary perspectives of validity (AERA, APA, NCME, 2014). In particular, IER conflicts with the assumption that validity is dependent on participants appropriately engaging in five cognitive processes necessary for completion of a self-report (Duckworth & Yeager, 2015; Schwartz & Oyserman, 2001).

Methods: After collecting survey data at three time points during one semester, we screened the data for the presence of IER using four validated indices common in the IER literature: response time, individual response variability, psychometric synonyms, and odd-even consistency.

Data Sources: Participants were 305 undergraduate students (55% male) from a large Midwestern university. Participants responded to three surveys over the course of a semester as part of the regularly assigned work for a learning-to-learn course. Surveys were designed to assess beliefs, attitudes, and behaviors associated with engagement, learning, and academic success.

Results: Depending on the particular criteria utilized, between 12% and 16% of participants were identified as having engaged in IER. This level of IER is consistent, albeit slightly higher, than previous IER research (Meade & Craig, 2012; Maniaci & Roggee, 2014). We found that only 3 participants engaged in IER for all three surveys, and just 22 participants did so on at least two of the surveys. Additionally, we found that the presence of IER within our data set did not impact the relationships between SRL variables.

Scholarly Significance: This study presents a first direct examination of IER in web-based self-report surveys of college students' SRL. Our results suggest that IER is a threat to validity that SRL researchers who rely on self-report data need to be aware of when they collect data. Further, our findings suggest that IER was not a pervasive concern for individuals across different survey administrations, which suggests that IER may be an individual characteristic, but is situationally-situated. Based on our findings, we recommend that SRL researchers take precautions to ensure they administer SRL surveys in situations that are conducive to active engagement by participants.

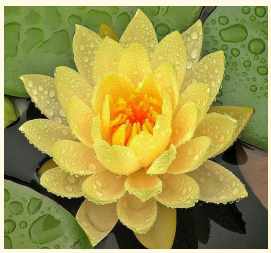
References available upon request (iaconelli.1@buckeyemail.osu.edu or wolters.21@osu.edu)

SIG SSRL NEWSLETTER

A Holistic Self-regulation Model to Enhance Meta-Cognition and Meta-Affect: A Mixed Methods Study

Meirav Tzohar-Rozen
Bar-Ilan University

Bracha Kramarski
Bar-Ilan University



Objectives. This study reports the findings of three SRL programs in which we explored how effective the holistic program (MC + MA) is compared to each program separately: MC; MA and to a control group, on each SRL aspect and problem solving.

Theoretical Framework. Self-regulation in learning (SRL) is perceived as critical for meaningful mathematical learning (Mevarech & Kramarski, 2014). SRL is a cyclical holistic process that involves metacognitive and meta-affective aspects within a learning context to achieve personal goals (Zimmerman, 2008). Despite the theoretical importance of using both aspects simultaneously in the holistic SRL, training programs focus mainly on metacognitive regulation, particularly in mathematics for older students (e.g., Kramarski, et al., 2013). However, this conclusion was not tested explicitly relating to scaffolding the meta-affect aspect, and particularly not against an holistic program that integrated both aspects (meta-cognition/meta-affect) and its effect on SRL and problem solving.

Sample. 238 fifth graders (boys and girls) aged 10-11 from six middle socio-economic schools selected randomly from one district and randomly assigned to each group. No significant differences on pretest measures were found between groups.

Methods. A mixed methods approach was used—quantitative and qualitative analyses—for assessing research variables. Including pre/post questionnaires and tests: ***Meta-cognition,*** knowledge and regulation aspects (Sperling et al., 2002); ***Meta-affect***, self-efficacy (MSLQ; Pintrich, 1990), negative emotions (Moos et al., 1987) when solving mathematical problems, and a problem solving test (routine and novel task); ***Thinking-aloud*** protocols of one novel task in a focus group (40 students, 10 per group) at the end of the study. The intervention programs were based on Pintrich's model (2000). Each group, MC+MA, MC, MA was based on self-questions adapted to the relevant SRL aspect and oriented to the three SRL phases (planning, monitoring and reflection).

Results. SRL groups significantly outperformed the control group. The Holistic group effectively used SRL processes by combining *metacognitive* and *affective thinking* paths, and demonstrated higher *self-efficacy* and problem solving. The MC group was more successful in the *metacognitive* aspect, and the MA group in reducing their *negative emot*ions. No differences were found between the two groups in problem solving. Thinking-aloud protocols on a novel task confirmed the quantitative results. The Holistic group used metacognitive and meta-affective regulation extensively in each phase of self-regulation. The MC group used metacognitive processes extensively in each phase of self-regulation, but did not use any meta-affective self-regulation statements. In contrast, the MA group used meta-affective processes extensively in each phase of self-regulation, and used the largest quantity of meta-affective self-regulation. The control group used very few metacognitive statements compared to the other groups.

Scholarly Significance. Theoretically, the study deepens our understanding about supporting younger students' learning of the two SRL aspects: Metacognition and Meta-affect, in a holistic scaffold approach. The study adds dynamic SRL process thinking - aloud data, that can provide a more detailed explanation for the mechanisms underlying success or lack of self-regulation in mathematics (Azevedo, 2014).

References available upon request (meirav@gmail.com or bracha.kramarski@biu.ac.il)

SIG SSRL NEWSLETTER

The Effects of Self-Regulation Strategies on Middle School Students' Calibration Accuracy and Achievement

Ms. Deana J. Ford
Old Dominion University

Dr. Linda Bol
Old Dominion University

References available upon request (lbol@odu.edu or deesinru2@yahoo.com)

Background: Low student achievement in mathematics has been a significant challenge for educators. This challenge is more pronounced with learners for whom mathematics is a difficult subject. Self-regulation strategies have been found to increase students' metacognitive skills and learning, specifically for lower achieving students.

Aims: In this study, we investigated the impact of self-regulation strategies on metacognitive judgments (calibration) and mathematics achievement of typical and advanced achieving 7th grade mathematics students.

Methods: A total of 84 seventh-grade mathematics students participated in the study. Four classes of students were randomly assigned to the intervention or control conditions. The intervention included strategies such as four square graphic organizers and educational games to that promote vocabulary and mathematics learning. The control classes received traditional instruction. The study was conducted for seven weeks.

Results: Consistent with the literature, the results revealed that advanced achieving students were more accurately calibrated. On average, all students in all conditions were overconfident in their predictions, and only participants in the control condition were underconfident in their postdictions. The results also revealed that participants in the treatment condition were more accurate in their postdiction calibrations than participants in the control condition.

Conclusions: In this study, the self-regulation strategies required students to assess their understanding of academic terminology. These results suggest that self-regulated training positively influences students' calibration accuracy; but in this study, it did not influence students' achievement.

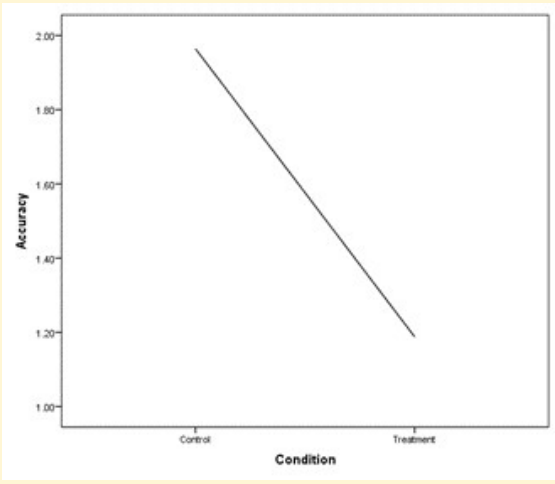


Figure. The main effect of condition on participants' postdiction accuracy. Note: Lower scores mean better calibration accuracy.

SIG SSRL NEWSLETTER

Parent Involvement in Middle School: Views of Adolescents and Their Parents on Self-Regulated Learning

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Celine Cocquyt;,
Jeltsen Peeters, &
Koen Lombaerts

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Background: The transition period from primary to middle school is very challenging. Students are expected to be more autonomous. To cope with these increased levels of autonomy self-regulated skills can help. Through the years, research showed that self-regulated learning (e.g., Martinez-Pons, 2002; Zimmerman, 2000) and parental involvement (e.g., Borgonovi & Montt, 2012; Purdie, Caroll, & Roche, 2004; Raftery, Grolnick, & Flamm, 2012) matters. Only, so far, little is known about parental involvement in middle school and specific parental practices parents use at home that can foster self-regulated learning.

Aims: The present study explores the parental practices parents use at home to support middle school students for their autonomy and self-regulated learning.

Sample: The participants of our study were eighteen parents (mean age = 45 years) and their middle school youngsters (mean age = 13 years). More specifically, one father and seventeen mothers and seven boys and eleven girls participated. Eighty-three per cent of the youngsters lived with both parents and all youngsters were born in Belgium. Ten out of the 18 youngsters are the oldest child of the family.

Methods: Semi-structured interviews with parents and youngsters were used. The interviews followed an interview guide based on earlier qualitative research with parents (e.g., Grolnick & Ryan, 1989) and frameworks on self-regulated learning (e.g., Zimmerman, 2002; Pino-Pasternak & Whitebread, 2010; Kistner et al., 2010). The interviews were administered outside the school hours at the home of the parent and youngster. Both parties were interviewed separately with similar questions. The interviews with the parents lasted approximately 40 minutes and with the youngsters lasted 20 minutes on average.

Results The results showed parents stimulate youngsters' self-regulated learning on multiple levels. Data gathered by the interviews revealed that parents stimulate youngsters' learning behaviour, by for example structuring the learning environment. The parents in our study also indicated to foster youngsters' motivation (e.g., being present and encourage youngster) and metacognition (e.g., stimulate self-evaluation). Additionally, groups of parents and youngsters differing on the extent of autonomy granting during studying could be identified, showing varying practices parents use to foster self-regulated learning. A first group, parents who let their youngster study autonomously, use a large variety of practices to stimulate youngsters' self-regulated learning and especially focus on youngsters' metacognitive strategies (e.g., planning skills). In contrast, a second group, parents who study together with their youngster, appeared to encourage a far smaller variety of learning strategies in comparison to the 'autonomous' group. More in specific, these parents especially stimulated youngsters' effort and persistence and provided instructional scaffolds.

Scholarly Significance: The present study can be considered a first step in getting a deeper, qualitative insight in parents' educational involvement in middle school education, viewed by parents and youngsters, and specifically, what practices parents use to stimulate middle school youngsters' autonomy and self-regulated learning at home. Exploring these practices can help educators get more insight in what parents do at home for youngsters' learning and capitalize these practices with their own to get a more coherent approach to support the middle school student.

References available upon request (valerie.thomas@vub.ac.be)

SIG SSRL NEWSLETTER

Culturally Responsive Teaching and Self-Regulated Learning: An Integrated Approach to Supporting Engagement in Inquiry-Based Learning

Mr. Aloysius C. Anyichie
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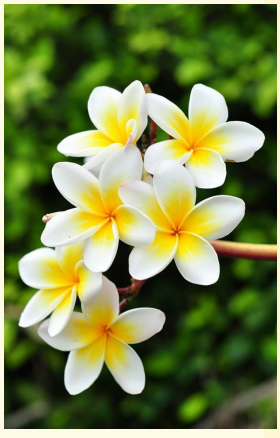
Dr. Deborah L. Butler
The University of British Columbia, Vancouver, BC, Canada



Background: Research on culturally responsive teaching (CRT) and self-regulated learning (SRL) both identify pedagogical practices that increase student engagement, albeit from different perspectives. CRT defines how to design classroom activities to connect with all learners' cultural backgrounds, interests and experiences (Gay, 2010); but, with less attention to fostering learners' agency. SRL practices speak to empowerment of learners in taking up classroom practices including culturally responsive ones (Perry, 2013); but, with less attention to influence of learners' cultural background on regulatory processes and engagement. Together, CRT and SRL principles and practices can be combined to complement each other and consider more completely how to foster all learners' engagement processes (Anyichie & Butler, 2017).

Purpose: The purpose of this study was to explore how classroom teachers were supporting culturally diverse learners' engagement using a combination of SRL and CRT principles in an inquiry-based activity; and possible connections of observed practices with students' engagement.

Methodology: This study employed a case study design that involved a teacher and 6 students in her combined grade 5, 6, & 7 multicultural classroom in Canada. Building on "A Culturally Responsive Self-Regulated Learning Framework" (See Figure 1; Anyichie, & Butler, 2017), the lead researcher co-designed CR-SRL practices, including an inquiry-based project, with the teacher that connected with students' cultural backgrounds to enhance their engagement. Data collected in Spring/Summer 2017 included classroom observations, practice records and documents, students' work samples, teacher and student interviews and student surveys.

Results: Preliminary findings indicated the importance of integrated CR-SRL practices in supporting culturally diverse learners' engagement. These CR-SRL practices included: (a) *classroom foundational practices*; that is, practices that make all students feel welcome and included (e.g., accommodation of cultural diversity by recognizing students' cultural values); (b) *culturally responsive self -regulated learning practices*; that is, practices that attend to both CR-SRL in tandem (e.g., providing choices for inquiry projects that enable students to connect with their background experiences); and, (c) *dynamic supportive practices* that describe available supports for students as their learning unfolds (e.g., feedback and formative assessment).

Conclusions and Significance: We conclude that CRT and SRL practices can be integrated to support culturally diverse students' engagement. Educators can facilitate *all* learners' engagement by designing classroom contexts and activities that build across CRT and SRL practices. Finally, a case study approach can be employed to examine how engagement unfolds in context.

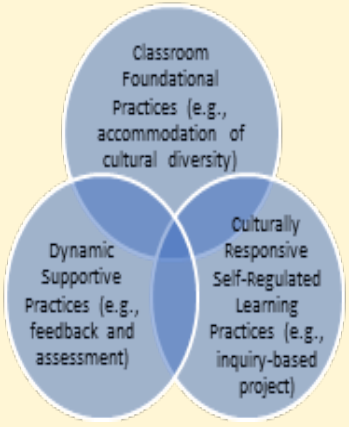


Figure 1. A Culturally Responsive Self-Regulated Learning Framework

References available upon request (aloy.anyichie@alumni.ubc.ca or deborah.butler@ubc.ca)

SIG SSRL NEWSLETTER

Relations between Ineffective Academic Self-Regulation and College Students' Implicit Intelligence Beliefs

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Objectives: This research reports on the findings of two studies in which we explored how ineffective self-regulation of learning relates to computer science students' implicit intelligence beliefs at different times during the semester.

Theoretical Framework: Research indicates implicit intelligence beliefs change across time (e.g., Dai & Cromley, 2014) and this change is most pronounced for students who excel at, or who struggle to, self-regulate their learning (Flanigan, Peteranetz, Shell, & Soh, 2017).

Samples: 416 undergraduate computer science students participated in Study 1; 222 undergraduate computer science students participated in Study 2. Participants in both studies represented a mixture of upperclassmen and underclassmen.

Methods and Data Sources: Participants in both studies completed the Implicit Theories of Intelligence Scale (Dweck, 2000). Participants in Study 1 completed this measures at the beginning and end of the semester; participants in Study 2 completed this measures at the beginning, middle, and end of the semester. Participants in both studies completed the Lack of Regulation Scale of the Student Perceptions of Classroom Knowledge Building instrument (Shell & Husman, 2008)—participants in Study 1 only completed this measure at the end of the semester; participants in Study 2 completed this measure at the middle and end of the semester.

Results: Study 1 used two-step regression to determine if adding end-of-semester Lack of Regulation scores enhanced the prediction of end-of-semester implicit intelligence beliefs scores beyond the initial model including only beginning-of-semester beliefs. Results indicate that adding Lack of Regulation scores improved the proportion of variance accounted for in end-of-semester entity scores, but not incremental scores. Study 2 used path analysis to investigate how Lack of Regulation scores mediated change in implicit intelligence beliefs across the semester. Results indicated that Lack of Regulation scores significantly predicted mid-semester entity belief scores, but end-of-semester Lack of Regulation scores did not predict end-of-semester entity beliefs. No relationships were found between Lack of Regulation and incremental belief scores.

Scholarly Significance: Results indicate that students who struggle to effectively self-regulate their learning process strengthen in the belief that intelligence is a fixed entity that cannot be improved through their own effort or use of learning strategies. In Study 1, we found that students' self-regulation experiences during the semester predicted their entity beliefs at the end of the semester. In Study 2, results indicated that ineffective self-regulation early in the semester is positively predictive of entity beliefs at the middle of the semester. Incremental beliefs were not predicted by Lack of Regulation scores in either study. These findings provide evidence that students who are not successful in their self-regulation increase in belief that intelligence is fixed and not amenable to change through effort. This finding suggests that belief in the fixed nature of intelligence is tied to actual success in one's self-regulation of their learning.

SIG SSRL NEWSLETTER

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Patterns in Metacognitive Awareness: An Investigation of Undergraduate Biology Students

Objectives: We examined undergraduate biology students' metacognitive awareness across one semester using two measures: calibration and metacognitive self-regulation. The relationship between these variables and student achievement was explored.

Theoretical Framework: Metacognition is central to effective learning (Schunk & Usher, 2011; Zimmerman, 2000). The discrepancy between students' estimated and actual performance provides one measure of metacognitive awareness known as calibration (Lin & Zabrucky, 1998; Stone, 2000). Calibration is essential to the metacognitive process and influences strategy use, task completion, and academic success (Bembenutty, 2009). Few studies have measured calibration in introductory undergraduate biology courses (Jensen & Moore, 2008; VanderStoep, Pintrich, & Fagerlin, 1996).

Methods: Participants were 428 undergraduate students enrolled in introductory biology. Calibration was measured as the discrepancy between students' estimated and actual grades on four exams. The Metacognitive Self-Regulation subscale of the Motivated Strategies for Learning Questionnaire (MSLQ; Pintrich, Smith, Garcia, & McKeachie, 1991) was used to assess self-reported metacognitive self-regulation ($\alpha = .77$). Instructors provided students' final course grades. Repeated measures and latent class growth analyses were conducted.

Results: Students' calibration generally improved across the semester (see Table 1). However, three distinct calibration patterns emerged: overestimators who improved (early miscalibration that was later regulated), consistent overestimators who did not improve (persistent miscalibration), and consistent calibrators whose estimates were not highly discrepant (relatively good calibration). Mean miscalibration scores were significantly related to final grades, but metacognitive self-regulation scores were not.

Scholarly Significance: Findings support the idea that calibration is essential to metacognitive awareness and academic success (Bembenutty, 2009). Students who were better calibrated performed significantly better in the course overall. This approach to examining metacognitive awareness may offer an improvement over self-report measures of metacognition. Based on this study, instructors should regularly check for students' metacognitive judgement throughout the semester and provide support to those who demonstrate persistent miscalibration.

Variables	*N*	*M*	*SD*
Exam 1	384	75.97	15.45
Expected scores	328	82.89	7.87
Raw discrepancy scores	312	6.44	14.49
Absolute value discrepancy scores	312	11.45	10.96
Exam 2	383	74.90	16.73
Expected scores	346	80.78	8.91
Raw discrepancy scores	334	5.58	13.70
Absolute value discrepancy scores	334	11.36	9.46
Exam 3	381	70.44	18.46
Expected scores	317	80.24	9.17
Raw discrepancy scores	317	9.53	15.67
Absolute value discrepancy scores	317	13.89	11.96
Final Exam	373	82.87	11.00
Expected scores	315	82.04	9.80
Raw discrepancy scores	314	-1.39	11.32
Absolute value discrepancy scores	314	8.25	7.87

Table 1. *Descriptive Statistics for All Exam and Calibration Scores. Note.* Raw discrepancy scores were computed by subtracting each of the students' expected exam scores from their corresponding actual exam score. The corresponding positive and negative signs were then removed to allow the numbers to be an absolute value, which was used as the absolute value discrepancy scores.

SIG SSRL NEWSLETTER

Interactions Between Reader and Text: Contributions of Executive Function, Strategy Use, and Text Cohesion to Comprehension of Expository Science Text

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Objectives: The primary aim of this study was to examine whether text that varied in referential cohesion elicited differential use of specific executive functions, metacognitive monitoring, and reading strategy use, as well as other established variables, including reading time and vocabulary ability.

Theoretical Framework: Emerging evidence suggests that features of text, such as text type and complexity, demonstrate differential recruitment of cognitive processes involved in comprehension of text (Eason et al., 2012; Miller et al., 2014). Such work suggests the need to better understand the role regulatory processes play in reading comprehension as well as how such processes interact with features of text to contribute to comprehension outcomes (e.g., Butterfuss & Kendeou, 2017).

Method and Data Sources: College learners (*N*=305) completed measures of vocabulary ability, executive function, metacognitive monitoring, reading strategy use, and reading comprehension. Two versions of an approximately 1,000-word science text were used in the current study; the text was constructed to differ in referential cohesion (O'Reilly & McNamara, 2007). Participants were randomly assigned to either the low referential cohesion (*n*=154) or high referential cohesion (*n*=151) text condition.

Results: Moderation analyses revealed that the relations between both shifting and comprehension and updating and comprehension were moderated by the level of referential cohesion of the text that was read. When referential cohesion of text was low, shifting, but not inhibition or updating, significantly predicted comprehension. When referential cohesion of text was high, updating, but not inhibition or shifting, significantly predicted comprehension. Metacognitive monitoring and strategy use predicted comprehension independent of the cohesion of the text that was read.

Scholarly Significance: The current study provides additional evidence for the important role of text cohesion in readers' understanding of text (Best et al., 2005). Further, this work demonstrates the potential for texts that vary in cohesion to rely differentially on specific regulatory processes that have been shown to be involved in reading comprehension (e.g., Eason et al., 2012). Overall, this research suggests that important reader characteristics may interact with characteristics of text in specific ways to support comprehension.

SIG SSRL NEWSLETTER

Measuring the Creative Process: Examining a SRL Microanalysis Protocol for Creative Problem Solving

Dr. Gregory Callan, Ms. Lisa Rubenstein, Mr. John McCall, & Ms. Lisa Ridgley
Ball State University

Objectives: Understanding how individuals regulate themselves during the creative process provides important information for designing interventions to develop individuals' creative thinking. Typically, the creative process has been measured retrospectively and at a global level; however, in this study, we used a structured interview, self-regulated learning (SRL) microanalysis, to measure SRL processes in real-time, during a creative problem solving (CPS) task to explain creative performance outcomes.

Theoretical Framework: Our work aligns with Zimmerman's (2000) model of SRL which describes three interconnected phases of SRL (forethought, performance, and reflection). The task was designed to study students' CPS.

Methods: Research assistants individually interviewed 58 fifth and sixth graders using the CPS Microanalysis Protocol (see Table 1). This protocol asked students to generate solutions to several preliminary novel stories (CPS-Introduction). Students responded to SRL microanalysis questions before (self-efficacy, interest, and strategic planning), during (strategy use), and after (self-evaluation) generating solutions to a final novel story.

Data Sources:
Self-efficacy was measured in relation to students' perceptions of their ability to (a) generate many solutions (Self-Efficacy-Fluency) and (b) many different types of solutions (Self-Efficacy-Flexibility). Strategic planning was measured using students' planned strategies to enhance idea generation (Strategic-Planning-Solve) and to address a creative block (Strategic-Planning-Stuck). Anchored in the dual process approach for creativity (Finke, Ward, & Smith, 1992), creative performances were evaluated using students' ability to generate ideas: Creative-Fluency (number of ideas) and Creative-Flexibility (type of ideas). Prior academic achievement was controlled using participants' performance on a state required, standardized language assessment (Table 1).

Results: Strategic-Planning-Stuck, Strategic-Planning-Solve and Self-Efficacy-Fluency each explained a significant amount of unique variation in Creative-Fluency. Strategic-Planning-Solve, Strategic-Planning-Stuck, and Self-Efficacy-Fluency each explained a significant amount of the variation in Creative-Flexibility.

Significance of the Study: SRL processes (self-efficacy and strategic planning) uniquely explained variations in creative performances after controlling for academic achievement. This variant and the traditional planning items both explained a significant amount of unique variation, suggesting that perceived task difficulty influences students' intended strategy use.

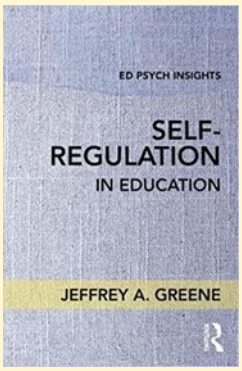
References available upon request (glcallan@bsu.edu)

SRL Phase / CPS Task	Measures	Measure Description and Sample Questions*	Coding or Scale for Response
CPS	1. CPS-Introduction-Task	Four CPS story problems. (e.g., *"The school nurse accidently ordered 1,000 boxes of bandaids rather than 1,000 individual bandaids. Can you help the nurse come up with different ways to use the extra boxes of bandaids?"*)	**Fluency:** Number of ideas **Flexibility:** Number of different types of ideas
Forethought SRL Processes	2. Strategic-Planning	Two measures: (1) strategic planning to identify solutions and (2) strategic planning if the task is challenging. (e.g., *"Before I tell you the next problem, what could you do to help you come up with solutions to the problem?"*)	Number of CPS strategies (Osborn, 1963) indicated by participants.
	3. Self-Efficacy	Two measures: (1) Self-efficacy-fluency and (2) Self-efficacy-flexibility *"How sure are you that you can create many ideas to solve the problem?"*	**Likert Rating:** 1(not at all sure) to 7 (very sure)
	4. Interest	*"How interested are you in solving these types of problems?"*	**Likert Rating:** 1(not at all interested) to 7 (very interested)
CPS	5. CPS-Final-Task	One CPS story problem similar to previous CPS-Introduction-Task problems. (*"The concession manager accidently orders 5,000 bags of forks instead of 5,000 individual forks. Can you help the concession stand manager..."*)	**Fluency:** Number of ideas **Flexibility:** Number of different types of ideas
Performance SRL Processes	6. Strategy-Use	*"Tell me all the things you did to help you solve this problem."*	Identical to strategic planning items.
Reflection SRL processes	7. Self-Evaluation	*"How likely is it that the stakeholder will select your best solution as the one to implement or use?"*	**Likert Rating:** 1(definitely not) to 7 (definitely would)

Self-Regulation in Education: A Book for the New Era of Self-Regulated Learning Science

Book Reviewed by Dr. Héfer Bembenutty, *Queens College, The City University of New York*

Self-Regulation in Education by Jeffrey A. Greene. Routledge, 2018, 162 pp. ISBN 978-1-138-6810. $25.85.



Jeffrey A. Greene's favorite subject for research and writing is undoubtedly self-regulation in education. In his most recent book, *Self-Regulation in Education*, Greene paints with a dedicated brush the valleys and mountains traveled in the processes of becoming a self-regulated learner. Delineating his principles by using watercolors and rainbows with vernacular appropriate to most levels of readers, he explains how learners can take control of what and how they learn and how they can be successful in their quest for long-term academic and professional achievement. His focus is to provide data on self-regulation principles that educators, researchers, and parents can use to reach their personal and professional goals. For learners, Greene offers cognitive, metacognitive, motivational, and behavioral tools for them to be academically successful and to prevail in the face of unbearable circumstances. Greene paints an interesting scenario focused on how learners could endure and enjoy their learning process, rather than focusing on the outcomes.

Greene, a proliferate writer, an extraordinary and charismatic educator, and a leading scholar on self-regulation with a long history of professional success, mesmerizes his readers with eloquent but untraditional prose in academic cycles. He places readers in a situation in which they are called to actions and are invited to envision how academic tasks can be used when self-regulation is adopted as a guiding principle for academic success. Greene's unorthodox prose, in the form of a nonfictional novel, does not distract readers from the essence and thesis of the book and the delightful scenes he paints page by page.

In *Self-Regulation in Education,* Greene shares the historical and theoretical foundations, uses, and applications of self-regulation across diverse disciplines and at varying developmental levels. The book is short, with only 162 pages including the glossary, references, and index. It could be assigned to any course addressing the principles of self-regulation, such as courses in teacher education programs. The book provides essential information to researchers investigating motivation, metacognition, and self-regulated learning.

Greene divides the book into five logically sequenced chapters. In Chapter 1, Greene provides compelling evidence supporting his contention that self-regulation is critical for successful learning. He calls for bringing the fields of self-regulated learning and self-regulation research together as one. In Chapter 2, Greene discusses the different models of self-regulated learning, implicit aspects and targets of self-regulation (e.g., cognition, metacognition, motivation, behavior, affect, and external environment), and the phases of self-regulated learning. In Chapter 3, Greene provides discourse on the relations between self-regulated learning and achievement, school readiness, and disciplinary differences in self-regulation in education (e.g., mathematics, reading, writing, science, and history), and he also discusses educational computing contexts. In Chapter 4, he describes interventions aimed towards fostering self-regulation and self-regulated learning while emphasizing teachers' dual roles as self-regulated learners and teachers of self-regulated learning. In the final chapter, Greene permeates deeply into the importance of confronting the challenges associated with measuring self-regulation in education, and the role of scaffolding and social aspects of self-regulation in education.

The important points discussed in *Self-Regulation in Education* strengthen the understanding of contemporary theories, research, and practice. To educators who understand the importance of self-regulation in education, this well-planned and skillfully written book will help them approach tasks such as homework assignments through new lenses and mindsets. Educators will feel compelled to equip their students with self-regulatory strategies such as goal setting, self-monitoring, help -seeking, and self-evaluation. Educators are genuinely invited to help students with cognitive, metacognitive, motivational, and behavior challenges by providing the essential competencies Greene discussed. Educators interested in promoting willingness to delay gratification among their students will find that Greene's book offers the gears and mechanisms for successful completion of tasks even while distractions call for attention. In Greene's book, there are no unsubstantiated claims about the critical role of self-regulation in education. Greene takes a realistic approach and discusses its affordances and constraints without fancy words or hidden agenda; instead, he uses straightforward vocabulary abstracted from reliable research.

Indeed, Greene is at the vanguard in the era of self-regulated learning science with his teaching, writing, and research. As I read Greene's very informative book, I conceive that he is calling educators to approach self-regulation as educators but also as learners. Although it is not spelled out in these terms, he is urging all educators to adopt a *self-regulated culturally proactive pedagogy* in which teachers and students both work together to transform their classrooms into academies of self-regulated learners. The classroom environment that Greene paints is framed with self-regulatory skills in which learners' cultural awareness and their cultural differences are welcomed, celebrated, and the entire curriculum is transformed with the integration of equity, diversity, and inclusion of all learners and educators. The self-regulated culturally proactive pedagogy depicted in Greene's book epitomizes a step beyond the traditional culturally *responsive* pedagogy, *sustaining* pedagogy, *relevant* pedagogy, or *inclusive* pedagogy.

What are the most important insights readers would get from reading *Self-Regulation in Education*? It would give readers a better conceptual understanding of self-regulation, the tools for them to be proactive self-regulated learners, and how to integrate self-regulation in education. *Self-Regulation in Education* is an inordinate book that should be on the desk of every educator and learner. Greene proves that self-regulation in education is essential and he is commended for very successfully proving that.

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AERA SIG SSRL Times Magazine

The Purpose of the SSRL Times Magazine

The purpose of the AERA SIG SSRL Times, a monthly magazine, is to promote the development of theory and research in academic studying and self-regulated learning across the life span. It provides an eye-catching forum where researchers, educators, and practitioners share expertise in all aspects of self-regulated learning.

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To make our group a success, we need your help posting content. The more we hear from members, the more interesting and interactive this group will be. Examples of posts you can make are: questions and polls, announcements, photos/video, links to your publications, and links to other articles you find interesting.

If you have any questions regarding this group, please message our group administrator, Mr. Charles Raffaele (craffaele@gradcenter.cuny.edu).

We are looking forward to reading what you have to share!

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Acee, T. W., Weinstein, C. E., Hoang, T. V., & **Flaggs, D. A.** (2018). Value reappraisal as a conceptual model for task-value interventions. *The Journal of Experimental Education*, *86*(1), 69-85.

Aguilar, S. J. (2018). Examining the Relationship Between Comparative and Self-Focused Academic Data Visualizations in At-Risk College Students' Academic Motivation. *Journal of Research on Technology in Education*, *50*(1), 84-103.

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Azevedo, R., Taub, M., Mudrick, N. V., Millar, G. C., Bradbury, A. E., & Price, M. J. (2017). Using data visualizations to foster emotion regulation during self-regulated learning with advanced learning technologies. In *Informational Environments* (pp. 225-247). Springer, Cham.

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Flanigan, A. E., & Kiewra, K. A. (2017). What College Instructors Can Do About Student Cyber-slacking. *Educational Psychology Review*, 1-13.

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George, T. P., DeCristofaro, C., **Murphy, P. F.,** & Remle, C. R. (2018). Knowledge, Attitudes, and Experience With Advance Directives Among Prelicensure Nursing Students. *Journal of Nursing Education*, *57*(1), 35-39.

Herndon, J. S., & **Bembenutty, H.** (2017). Self-regulation of learning and performance among students enrolled in a disciplinary alternative school. *Personality and Individual Differences*, *104*, 266-271.

Peters-Burton, E. E., **Cleary, T. J.,** & Kitsantas, A. (2018). Computational Thinking in the Context of Science and Engineering Practices: A Self-Regulated Learning Approach. In *Digital Technologies: Sustainable Innovations for Improving Teaching and Learning* (pp. 223-240). Springer, Cham.

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Walkington, C., & **Bernacki, M. L.** (2018). Personalization of instruction: Design dimensions and implications for cognition. *The Journal of Experimental Education*, *86*(1), 50-68.

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