

*HIGHLIGHTING WORLD PERSPECTIVES ON
SELF-REGULATED LEARNING*

Editors
Robin Akawi
Kendall Hartley

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LETTER FROM THE CHAIRS

Jill D. Salisbury-Glennon & Aubrey Whitehead

Auburn University & The College of Wooster

We warmly welcome you to the Spring 2022 Edition of the Studying and Self-Regulated Learning Newsletter! Aubrey Whitehead and I are both honored to have had the opportunity to serve as your Junior and Senior SIG Chairs for this last year.



Jill D. Salisbury-Glennon

I would encourage you to please take some time to read the excellent articles featured in this edition of the Newsletter. In Self-Regulated Learning in a Post-Colonial Context, Iris Hewitt-Bradshaw states that “we need today’s pedagogical strategies to be context specific and to take the identities and histories of learners into consideration”. She further asserts that flipped-classrooms are an excellent approach to achieving this important goal. Next, in The Fundamental and Global Significance of Self-Regulated Learning, Chris Deneen shares his varied expertise as he has literally worked in diverse educational settings around the world. His work is currently investigating innovative approaches to assessment, feedback and learning engagement especially technology-enabled systems of assessment and feedback, including ePortfolios. In Island Ridge Curve: An Invisible Hand Behind Self-Regulated Learning?, Yuyang Cai discusses language testing research with emphasis on the S shaped curve in language proficiency which has been referred to as the Island Ridge Curve (IRC). The Island Ridge Curve (IRC) is based on 3 theorems, Bipolarity, Golden Centrality and Self-Adaptation. Finally, in Researching Regulation in Learning with Advanced Technology Transfer, Sanna Jarvela makes the astute assertion that “Self-Regulated Learning (SRL) is more important than ever” as she discusses the latest research

emerging from The Learning and Educational Technology Research Unit (LET). We wanted to take a minute to express our most sincere appreciation to our SIG Program Chairs, Abraham Flanigan and Aloy Anyichie who have worked so diligently over the last few months to develop our excellent SIG: Studying and Self-Regulated Learning AERA 2022 Program. We also wanted to commend Gregory Callan and Megan Krou for their recruiting efforts, budgeting, and financial planning for the current year. Our webmaster, Charles Raffaele, and our Social Media Coordinator Rinat Levy-Cohen have both also done an outstanding job of keeping everyone informed of our SIG dates, information, and deadlines. In addition to all of the above, our SIG has been so fortunate to be able to publish two issues of an additional media outlet, The Studying and Self-Regulated Learning SIG Spotlight during this past year. Further, there are several recent articles that have been added to our SIG Website into the importance of self-regulated learning in today’s increasingly complex world. We are indebted to Hefer Bembenutty, Pamela Murphy, Kendall Hartley, Bridget Daleiden and Charles Raffaele for all of their dedication in making the SSRL SIG Spotlight possible. Last but most definitely not least, we wish to express our most sincere appreciation to Hefer Bembenutty and Pamela



Aubrey Whitehead

Murphy for also generously serving as the Editor-in-Chief and the Executive Editor, respectively of the SSRL SIG Times Magazine; and for their continued assistance and support of us all. If you have missed any of the past issues of The SIG newsletter, The SSRL SIG Times Magazine, or The SIG Spotlight, they can all be found on our website at <https://ssrlsig.org>. We send our best wishes for a better and brighter 2022 and we look forward to AERA 2022.

LETTER FROM THE SENIOR EDITOR

Robin Akawi

American River College

Welcome to our Spring 2022 edition of the SSRL SIG newsletter. With my time as Senior Secretary/Editor of this newsletter ending soon, it seems appropriate to share with you the amazing individuals who are continuing on and reflect on the wonderful researchers who have contributed to the newsletters from this past year, including this edition.

It is with great pleasure that I get to say your newsletter will be in the incredibly skilled hands of Dr. Kendall Hartley who will transition from Junior Editor to Senior Editor this summer. His thoughtfulness, enthusiasm, and tech savvy are top notch. He will also be exceptional at mentoring the incoming Junior Editor, to be announced at this year's AERA conference.



Robin Akawi

Adding to the supportive team in our SSRL SIG, this current newsletter starts with an important reflection by our chairs, Drs. Jill D. Salisbury-Glennon and Aubrey Whitehead who share thoughts on the research that has been done in these recent times along with details of our upcoming AERA conference in San Diego which we can attend in person and/or virtually. Their mentoring and dedication have been paramount in moving the SSRL SIG forward during the pandemic.

In reflecting on the past year, there have been an inordinate number of struggles the education world continued to confront through the ongoing pandemic. These obstacles included staying in the pandemic longer than expected and now finding ourselves transitioning to what can be dubbed "the new norm". With several decades of research behind us, these last couple years brought on important educational issues like never before. Harnessing those important topics

and incorporating them into the newsletters was also a challenge, yet all the wonderful contributors found ways to highlight their important work related to self-regulated learning.

The research topics discussed in the previous newsletters from this past year included supporting college students in times of emergency remote learning, various strategies and practices to foster students' development of SRL using a culturally diverse lens, in conjunction with research focused on coping with teachers' self-regulated learning challenges with immersive simulation, and professional development in SRL for Science Teachers in secondary education. There were also great reflections shared about the important work done by Dr. Albert Bandura who made a significant contribution to the world of psychology, including self-regulation.

This leads us to the theme of our current spring newsletter which extends our focus on views of SRL to perspectives from around the globe. Our contributors touched on SRL in a Post-Colonial Context (Iris Hewitt-Bradshaw from the University of Trinidad and Tobago), innovative approaches to assessment, feedback and learning engagement through ePortfolios (Chris Deneen from the University of South Australia), the *Island Ridge Curve* which stems from metacognitive strategies as a strategic competence factor of language proficiency performance (Yuyang Cai from the Shanghai University of International Business and Economics), and researching regulation in learning with advanced learning technologies (Sanna Järvelä from the University of Oulu, Finland).

Lots of fascinating and relevant research. Enjoy!

Robin

LETTER FROM THE JUNIOR EDITOR

Kendall Hartley

University of Nevada, Las Vegas

As we look forward to a new year for the SIG and Newsletter, I will say a few things about the past year and the year to come. First I would like to thank Robin Akawi for her guidance and leadership in the past year. Robin managed to navigate a year that was eventful for everyone. In addition, she managed to incorporate a new position. I am looking forward to working in the upcoming year with our incoming Junior Secretary/Newsletter Editor.

In the past year we have been very fortunate to have a substantial number of willing authors to contribute thoughtful pieces to the newsletter. We recognize the time involved in developing these articles and are very grateful for the investment in the newsletter and the SIG. The current issue is no exception with four authors from all over the world contributing.



Kendall Hartley

In the upcoming year I plan to institute changes that include adjusting the senior position to a purely supervisory role. The junior position will be adjusted to include complete responsibility for all aspects of the Newsletter/Secretary position.

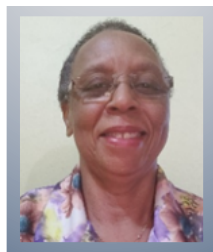
Seriously, I look forward to incorporating new ideas from the newly elected individual for the upcoming year. In addition, I hope to continue the work of our predecessors to produce a thoughtful, engaging, and professional newsletter. We will work to improve the newsletter distribution by incorporating an email management tool as has been done with the SSRL-SIG Spotlight. I welcome any thoughts and suggestions that the SSRL-SIG officers and members have for upcoming issues.

SELF-REGULATED LEARNING IN A POST-COLONIAL CONTEXT

Iris Hewitt-Bradshaw

University of Trinidad and Tobago

The process of self-regulated learning (SRL) is enhanced when learners understand themselves, their histories, and their world as they acquire the skills, knowledge, values and competencies needed to attain their goals. Correspondingly, educators who wish to facilitate self-regulation need to know their learners' histories and the relationship to indicators of SRL such as motivation, agency, self-efficacy and engagement. The perspective I share here does not contest constructs of theories of self-regulated learning, but supports the proposition that theories emerging from research in one context have to be adapted to take into account social, historical and cultural differences in other contexts.



Iris Hewitt-Bradshaw

In Anglophone Caribbean countries such as Trinidad and Tobago, colonialism and globalization have shaped education policies, and historically the education system was structured on a traditional British model. Today, teacher-centered pedagogies remain firmly entrenched in the education landscape and the socio-historical and cultural basis of this reality must be considered when educators apply theory to practice in classrooms. Despite innumerable initiatives to effect education transformation through curricular reform; discourage "banking" models of education (Friere, 1972); encourage more student-centered pedagogies; and promote active learning, the system remains largely traditional in content and structure, and authoritarian in approach. An emphasis on student success in high-stakes examinations persists as an indicator of education achievement. In the wider community, cultural factors proscribe roles for children and expectations of their behaviour and, depending

on social demographics, the degree to which children routinely exercise independence of thought and behaviour. Pedagogical strategies therefore must be context-specific and take the identities and histories of learners into consideration to address the habits of thinking and behaviour that might conflict with new pedagogical practices. I use one example from local research to illustrate.

The flipped classroom is one constructivist strategy designed to improve student learning and increase student engagement. At university level, when a classroom is flipped, lectures are converted into media that can be placed online while class sessions involve discussion, collaboration and problem-solving activities. These are ideal for developing SRL because they give students opportunities to construct knowledge as they take ownership of the process. However, research findings from instances when the strategy was employed (Birbal & Hewitt-Bradshaw, 2016) suggest that students were anxious about new roles that the strategy expected them to perform; roles that required them to assume greater independence in their learning, manage time engaging with online resources, and lead discussions in classes. Based on students' responses, my colleague and I concluded that students acknowledged benefits of the flipped classroom, they were uncomfortable with many aspects. Habits of SRL demanded by the strategy had not been cultivated by the authoritarian, post-colonial education system in which they had been schooled for the majority of their academic life. Thus, the strategy needed to be adapted to provide students with additional support. This may also be a consequence of schooling marked by the muting of students' voices and little active participation in classroom discourse.

This illustrative case does not argue for shifting responsibility from students in higher education to develop and apply attributes of SRL, but highlights the need for expectations to be informed by analysis of students' histories and experiences if theoretically grounded strategies are to be successfully utilized.

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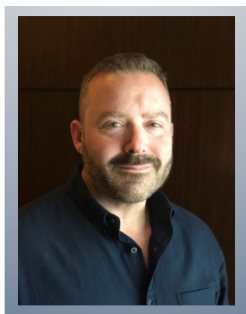
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THE FUNDAMENTAL AND GLOBAL SIGNIFICANCE OF SELF-REGULATED LEARNING

Chris Deneen

University of South Australia

I'm an associate professor and research fellow in Education Futures with University of South Australia. I've had a far-ranging career, geographically and topically. I've worked in the USA, Hong Kong, Singapore, and Australia. Over the years, my research has moved from focusing solely on teaching and teacher education to exploring how university students and teachers across many disciplines engage with learning, especially around assessment and feedback. What has remained constant is the importance of SRL to my research and practice. Supporting and achieving SRL often involves disciplinary, cultural, and contextual variations. The core value of SRL, however, remains fundamentally and globally important.



Chris Deneen

My research focuses on innovative approaches to assessment, feedback and learning engagement. I'm especially interested in complex, technology-enabled systems of assessment and feedback, such as ePortfolios and their potential for supporting and evidencing SRL-correspondent graduate competencies.

Understanding the relationship of technology to SRL is of timely importance. We face the need to mitigate the ongoing impact of COVID and guard against future disruptions. This requires resilient technology solutions, especially around developing and evidencing graduate competencies (Holzer, Luftenegger, Korlat, Pelikan, Salmela-Aro, Spiel & Schrober, 2021). There are good reasons for framing these intentions around SRL. Students who develop and demonstrate SRL capabilities tend to achieve

better academic outcomes (Jansen, van Leeuwen, Janssen, Jak, & Kester, 2019). My own research demonstrates the relationship of academic achievement and graduate competencies to SRL-relevant capabilities, such as learner autonomy, self-agency, forethought, and reflection (Deneen & Hoo, 2021; Hoo, Deneen, & Boud 2021; Shroff & Deneen, 2011).

ePortfolios are often promoted as the 'the whole package' solution to achieving and evidencing graduate competencies. ePortfolios are conceptualised as sophisticated, technology-enabled routes to achieving and evidencing learner-centred, high-impact practices (Watson, Kuh, Rhodes, Light, & Chen 2016). My research over the last decade supports this perspective; ePortfolios can foster and demonstrate students' SRL-relevant competencies (Deneen, Brown & Carless, 2018; Shroff, Deneen & Lim, 2014).

That's not the whole picture, though. There are formidable challenges to achieving and sustaining desired results. Threshold requirements for success are high, and involve deep, epistemic planning and meticulous curriculum articulation (Deneen, 2013; Deneen & Shroff, 2014). The field of research on ePortfolios is also problematic. We have too much aspirational cheerleading and not enough critical, empirical research (Rhodes & Chen, 2014). This imbalance hampers our ability to use existing research for improving practice (Deneen, Brown & Carless, 2018). The few empirical studies that connect ePortfolios to SRL rarely link specific elements of SRL to particular ePortfolio activities. Thus, it is difficult to map how ePortfolios function in relationship to SRL (Deneen, Ryan & Prosser, 2022). Looking at the big picture, we see a timely need for informative, empirical research exploring relationships of SRL to ePortfolios.

My current research aims to address this need. I'm begun leading a new project examining relationships between SRL and ePortfolios across multiple disciplines. This is a mixed-methods study involving four universities in Australia and the USA. Our project objectives are to (i) build on existing studies into SRL, ePortfolios, and their relationships; (ii) address gaps in research knowledge and methods; and (iii) advance our understandings and practices. I look forward to sharing progress and findings with the the Studying and Self-Regulated Learning SIG as our project develops.

SRL is of critical importance to students' learning and how we plan for, scaffold, and determine that learning. In my experience, when we look at the graduate competencies intended to sustain life and career-long learning, we see SRL. It is this fundamental and global significance that makes SRL a touchstone for my research and practice.

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impact practice. *International Journal of ePortfolio*, 6(2), 65-69.

ISLAND RIDGE CURVE: AN INVISIBLE HAND BEHIND SELF-REGULATED LEARNING?

Yuyang Cai

Shanghai University of International Business and Economics

Yuyang Cai, is an Eastern Scholar professor at School of Languages & Centre for Language Education and Assessment Research. His research interests cover language testing, self-regulated learning, system thinking, academic motivation, and quantitative methods. Yuyang's most recent attention has been on refining the hypothesis of the Island Ridge Curve to account for the effect variation of cognition-relevant factors due to contextual variables (cognitive and metacognitive strategies, higher-order thinking, self-efficacy, self-concept, growth mindset, etc.).



Yuyang Cai

Self-regulated learning is an empowering tool for empowering student learning. Through this empowering process, students activate metacognitive strategies such as setting goals, monitoring their learning progress, reflecting on learning outcomes, and adjusting their learning based on self-reflection. Reciprocally, students who have higher levels of achievement are more likely to deploy metacognitive strategies. However, individual constructs such as metacognitive strategies change across time and do not necessarily follow a linear pattern. More activation of metacognitive strategies alone does not automatically lead to more gaining in learning, and less activation does not necessarily lead to less achievement.

In language testing research, metacognitive strategies are known as strategic competence and have been considered a construct-relevant factor of language proficiency. We observed that the strategic competence effect on language performance did not follow a straight line but fluctuated in the *S* shape with the increase in language proficiency, what we called Island

Ridge Curve (IRC). The *S* shape was determined by three language thresholds: the lower, the middle, and the higher thresholds. The strategic competence effect was negative below the lower threshold, then gradually faded away between the lower and the middle thresholds. Starting from the middle threshold, the positive effect was released and gradually climbed up to the peak at the higher threshold. Afterward, the effect slowly stepped down.

We contend three theorems working under the IRC: *bipolarity*, *golden centrality*, and *self-adaptation*. **Bipolarity** assumes the effect of an individual construct (e.g., metacognitive strategies) has two moving directions: upwards or downwards, depending on the quality and context of the construct activation. If a strategy is appropriately activated, the activation may end up with a positive effect. Otherwise, a negative effect may occur. The quality of activation may either result from the mastery of the construct, or the context of the activation (e.g., language proficiency).

Golden centrality posits that the effect of a construct on learning achievement is definite and reaches its ceiling near the middle value of a conditional construct (e.g., language proficiency). This reasoning is consistent with the Aristotelian philosophy of the golden mean, and the Chinese ancient sage of *the middle way*. For metacognitive strategies, the largest effect occurs with students of intermediate language proficiency.

Self-adaptation takes place when an individual is aware that more activation of the construct brings about no additional value but increased cognitive load. This mechanism usually occurs with individuals at the higher end of language proficiency level.

Since 2019, we have been conducting exciting research to examine the universality of the IRC with students in higher education (addressing motivation regulation strategies, self-regulated writing strategies, critical thinking, medical knowledge), in the K-12 system (metacognitive strategies), and in kindergarten (executive functioning) in China and promising findings are accumulating. Among these studies, we observed the IRC for the relation between metacognitive reading strategies and reading and mathematics using OECD PISA 2018 data generated by 529,091 15-years old from 77 countries. In a three-year longitudinal study conducted in the Hong Kong

K-12 system, I found students self-adapted their strategy use to ensure efficient learning by adapting to average strategy users.

The function of metacognitive strategies rests upon the context and studies need to account for the possible interference from the contextual variables. IRC provides a promising lens to zoom into the reality blurred by the context. If you are interested, please contact me through sailor_cai@hotmail.com.

Relevant Publications

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Forthcoming Publications

Cai, Y. & Yang, Y. The fluid relation between reading strategies and mathematics learning: A perspective of the Island Ridge Curve.

Cai, Y. & Chen, H. The fluctuating effect of thinking on reading: new evidence for the Island Ridge Curve.

Wang, C. & Cai, Y. Examining the relation between cognitive and metacognitive writing strategies and writing performance from the perspective of the island ridge curve: The middle way is the golden way.

Cai, Y. & Lin, X. More is less and less is more: The relationship between kindergarten children's executive function and numeracy literacy.

Cai, Y. (in preparation). Moving from both ends towards the middle: longitudinal evidence for the self-adaptation of strategy use in learning English as a second language.

RESEARCHING REGULATION IN LEARNING WITH ADVANCED LEARNING TECHNOLOGIES

Sanna Järvelä

University of Oulu, Oulu, Finland

Self-regulated learning (SRL) is more important than ever. Children and young people today grow up in an era where technologies and Artificial Intelligence (AI) are impacting all aspects of their lives. The changes in learning and future work emphasize the need for learners to collaborate with different forms of technologies. More importantly, to be active participants when learning and living in digitalized world, new capabilities and skills are needed. We have decades of evidence that SRL can strengthen the “very human” competences, those that machines, technologies, or algorithms cannot replicate.



Sanna Järvelä

In our research agenda at the Learning and Educational Technology Research Unit (LET) we 1) develop theoretical understanding of socially shared regulation (SSRL) in collaborative learning; 2) study when, how and what makes regulation in collaborative learning functional and 3) implement our understanding of regulation to utilize advanced learning technologies to support learning.

SSRL development (Hadwin, Järvelä & Miller, 2018) has been guided by Winne and Hadwin’s (1998) model, which describes SRL as a cyclical feedback loop where metacognition is an “engine” that operates in the process of learning and activates regulation. SSRL empowers individuals and peers to have successful collective participation in groups, and affords their collective agency and goal setting, proactive skill training for individual adaptation, and working in teams, as well guidelines for leveraging technologies for supporting human learning (Järvelä, Malmberg, Sobocinski et al., 2021).

To understand the complex process of regulation in collaborative learning we have been working with gathering and analyzing multimodal data about self-regulated learning with intelligent learning technologies (Järvelä, Malmberg, Haataja et al., 2021). Several data modalities from different channels have been collected to investigate the cognitive, metacognitive, emotional and social processes related to learning regulation at both individual and group levels. These data include e.g., tracking logs, video, audio, and physiological data such as electrodermal activity (EDA) and heart rate. With interdisciplinary efforts (Järvelä, Gasevic, Seppänen & al. 2020) we are progressing with the alignment between theoretical notions, data structures and methodological assumptions underlying techniques used to analyze the data (Dindar, Järvelä, Nguyen et al., 2022).

In future we need more these sources of data to provide a means for researchers to examine the frequency, timing and sequence of regulatory traces situated in authentic learning activities to identify learners or groups that might be struggling and provide timely intervention or prompts to deploy regulatory strategies as needed. In educational digital tools there will be much data available, and with the help of AI we can create a deeper understanding of the learning process.

Thanks to Jacobs Foundation funding we have just started the Center for Learning and Living with AI (CELLA), to equip young learners to learn, live, and work in the age of AI. The global center will bring together research teams in learning and educational sciences, learning analytics and artificial intelligence to leverage on our extensive research on self-regulated learning to shape the future of AI driven learning technologies and help children’s learning. The CELLA is co-lead by Prof. Sanna Järvelä from the University of Oulu and Ass. Prof. Inge Molenaar from Radboud University and they are working together with the Technical University of Munich in Germany (Prof. Maria Bannert), Monash University in Australia (Prof. Dragan Gasevic) and University of Central Florida in the United States (Prof. Roger Azevedo).

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