

SPECIAL INTEREST GROUP

Studying and Self-Regulated Learning

**American Educational Research Association**

2020 Spring Newsletter

Researcher-Practitioner Partnerships
The Experiences of Self-Regulated
Learning Researchers

Edited by Dr. Abraham E. Flanigan and Dr. Aloysius C. Anyichie

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Letter From The Chairs

Dr. Pamela F. Murphy (Junior SSRL Chair), Ashford University

Dr. Taylor W. Acee (Senior SSRL Chair), Texas State University

Welcome to the Spring 2020 edition of the SSRL SIG Newsletter! We sure hope you and your families are safe and sound during the COVID-19 pandemic. We want to extend our heartfelt gratitude for being part of our SSRL SIG community. These are tough times and it is comforting to remember that we are part of a larger group living all over the world. Whether you recently joined our SIG or have been a part of its foundation from the beginning, you are part of us, and we are part of you.

By now you have probably learned that the 2020 AERA Virtual Annual Meeting has been canceled. Click here (<https://www.aera20.net/aera-annual-meeting-changes-page.html>) for information resources regarding the annual meeting changes. We will certainly miss seeing you this year.

We want to thank our newsletter editors, Dr. Abraham (Abe) Flanigan and Dr. Aloysius (Aloy) Anyichie, who have done a wonderful job of keeping us informed of happenings in the SIG and in the field of self-regulated learning. In addition to our newsletter, our SIG is fortunate to have the *SSRL SIG Times Magazine*, created and edited by Dr. Héfer Bembenutty. Thank you to all who have contributed to these publications and the field of self-regulated learning!

We would also like to thank our program chairs, Drs. Alexis Battista and Aubrey Whitehead, who put together a fantastic program for this year's conference, although unfortunately it will not be realized as planned. We will keep you posted about how AERA plans to handle canceling the virtual conference and where you might be able to read the excellent work that was accepted for presentation in our SSRL SIG sessions.

Final Comment from the Junior Chair

As a former high school teacher who graduated from Hampshire College (an undergraduate institution based on the concept of independent and self-regulated learning), I was interested in figuring out how I could help my own students develop self-regulation as learners. Eventually, I entered the Educational Research and Evaluation doctoral program at Virginia Tech.

I am eternally grateful that in the second year of the program, my professors required us to accompany them to AERA. It was then that I discovered the SSRL SIG and was thrilled to meet some of the people whose work I had been reading. This SIG is a nurturing and supportive place for new (both young and older) researchers who are enthusiastic about self-regulation of learning and related concepts of metacognition, motivation, self-efficacy and others.

Currently, I am an Associate Professor at Ashford University, where I design and teach research methods and statistics courses online for undergraduate and graduate Psychology students. Self-regulation is a vital survival skill for online students, but many of them come to their academic program without this preparation. I do what I can to help my students develop self-regulation, engage with the course content and each other, and achieve academic success.

Thank you for having me as your Junior SIG Chair this past year, and I hope to serve the SIG well in the coming year. The SSRL SIG is like a family and I want to thank every one of you for being part of it.



Dr. Taylor W. Acee



Dr. Pamela F. Murphy

Letter From The Editors

Dr. Abraham E. Flanigan, Georgia Southern University

Dr. Aloysius C. Anyichie, The University of British Columbia, Vancouver

Welcome to our Spring 2020 edition of the SSRL SIG newsletter. With the recent COVID -19 outbreak in mind, we hope that you are all doing well and taking good care of your health.

The theme of our spring newsletter focuses on the experiences of SRL researchers while partnering with educators within different educational contexts. We hope that you consider this edition of our newsletter interesting to read and so informative that you consider sharing it with others.

This newsletter opens with the message from our chairs, Drs. Taylor W. Acee and Pamela F. Murphy who highlight the current changes for this year's conference. As our SIG and program chairs noted, more information will be provided to you as things continue to evolve.

Based on our newsletter theme, we invited researchers that partner with educators to share their research experiences with us. We treat you to six interesting reports of researchers from different countries including Drs. Akane Zusho (Fordham University), Alexis Battista (Uniformed Services University of the Health Sciences), Deborah Butler (The University of British Columbia, Vancouver), Heikki Kontturi & Piia Näykki, (University of Oulu, Finland), Leyton Schnellert (The University of British Columbia), and Timothy J. Cleary (Rutgers University). Aligned with this year's AERA conference theme "The Power and Possibilities for the Public Good When Researchers and Organizational Stakeholders Collaborate," the submissions of these researchers advance our knowledge about Researcher- Practitioner Partnerships, with an emphasis on why and how we can partner with practitioners in our SRL research.

Also, you will find in our newsletter Dr. Roger Azevedo's announcement of our SIG's Poster Award winner, Juan Zheng whose work is titled "*Emotion or Emotion Variability: What Matters to Students' Performance in Clinical Reasoning*". Our graduate student committee continues to highlight their projects. In this edition, they spotlight the Learning and Educational Technology (LET) research Lab of Dr. Sanna Järvelä, University of Oulu, Finland; and research of Hyeyeon Lee, a doctoral student from Penn State University.

Finally, we would like to sincerely acknowledge the unique leadership role of Dr. Taylor Acee as our SIG Chair this past year. We look forward to the new insights Dr. Pamela Murphy will bring in this coming year.

Although we will miss your physical presence in San Francisco, we hope that you will be able to participate in any format this year's conference will finally take place. Meanwhile, keep safe and stay well.



Dr. Abraham Flanigan



Dr. Aloysius Anyichie

Aloy and Abe, Newsletter Co-Editors

Learning with Math and Science Teachers through Research Partnerships

Dr. Akane Zusho, Fordham University, NY

I have been fortunate to have received some great advice over the years from a number of established scholars of self-regulated learning (SRL). In relation to this topic of educational partnerships, I distinctly recall a conversation I had with Chris Wolters years ago when I was working on one of my first grant proposals. He urged me to find someone with more experience in schools who could help ground my research on SRL in important problems of practice.



Alas, the grant was never funded but Chris's advice stuck with me. As an educational psychologist, I of course knew the importance of emphasizing SRL in my courses; yet I often struggled to translate these principles in a way that was accessible to pre-service teachers. "There has to be more than just KWL sheets!", I remember thinking.

Well, there definitely was. But this was something I learned only after partnering with Rhonda Bondie, an educational researcher with decades of experience working in both special and general education classrooms in New York City (NYC) and Virginia. Rhonda has many gifts -- chief among them is a unique ability to translate research into practice and to grab the attention of educators. Through Rhonda's contacts, we have partnered with a number of schools and organizations, including Math for America (see Bondie & Zusho, 2018; Freedberg, Bondie, Zusho, & Allison, 2019).

Math for America (MfA) is a non-profit organization that provides professional development for teachers who: (1) teach math or science in a NYC public middle or high school; (2) demonstrate deep content knowledge; (3) understand pedagogical theory and practice; (4) show a commitment to sequenced development and growth through goal setting and reflection; and (5) understand students as individuals and learners. What better population is there to investigate how teachers promote SRL in the classroom to address issues of academic diversity?

Our collaboration dates back to 2010. Over the years, we developed our teacher decision-making framework in part through providing short professional development courses on differentiated instruction and following teacher use of the strategies with their students. We have learned that math and science teachers struggle to address the challenge of meeting the learning needs of all students. We have also learned that SRL principles are instrumental in supporting teachers to address this challenge. A cycle of listening to teacher concerns, situating those challenges within the research literature, and exploring solutions collaboratively has propelled our 10-year partnership.

Have there been challenges? Sure...Rhonda has to travel long distances now to work with our MfA teachers. Our work can also be messy at times, which sometimes makes publishing difficult. However, I firmly believe that the insights that we have gained into how teachers and students learn outweigh these challenges. When I see teachers "talk" SRL to their colleagues; when I see them referring to the literature to justify their instructional decisions; when I see the impact these teachers are having on their students --- this eclipses any journal publication. I hope you consider joining Rhonda and me on this journey.

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Partnerships in Examining How Physicians Self-Regulate their Clinical Reasoning Processes

Alexis Battista, PhD

Uniformed Services University of the Health Sciences



Dr. Alexis Battista

Over the past three years, I have worked with a team of researchers that includes individuals with expertise in self-regulated learning (SRL) on a grant aimed at examining how practicing physicians engage in clinical reasoning. Clinical reasoning involves the complex integration of clinical information (e.g., patient interview, diagnostic tests) and medical knowledge (Singh and Graber, 2015). This project is important because faulty clinical reasoning is a major contributor to diagnostic error, which can result in patient injury, or even death (Kohn, Corrigan & Donaldson, 2000).

The lead investigators, Drs. Steven Durning and Anthony Artino, sought to build a team with diverse expertise to study clinical reasoning using healthcare simulation, a technique mimicking an actual clinical environment and experience and allowing for a more careful, controlled methodological approach (Lopriato, 2016). They had a keen interest in understanding physicians' self-regulatory processes because prior research had focused primarily on diagnostic accuracy. The result was a team with the combined expertise of practicing physician educators, SRL microanalysis (Dr. Tim Cleary), and designing and implementing healthcare simulations (myself).

Many of the relationships formed years before start of the project. For example, Drs. Artino, Cleary and Durning had worked together before – adapting SRL microanalysis to examine undergraduate medical students' clinical reasoning processes (Artino, Cleary, Dong, Hemmer & Durning, 2014). My dissertation chair, Dr. Anastasia Kitsantas, introduced me to Dr. Cleary while I was a doctoral student at George Mason University when I realized that SRL microanalysis could be adapted for use in healthcare simulations. My introduction to Dr. Artino had come at an AERA meeting as a part of the graduate student mentorship program hosted by the Studying and Self-Regulated Learning SIG.

Some of the benefits of this partnership include having the opportunity to learn from each other about our respective fields, learning how to work in a way that honors our areas of expertise, and identifying new research opportunities to pursue in the future. For example, Drs. Cleary, Artino, and I are considering exploring whether we can identify behavioral markers of self-regulation by conducting an analysis of video-recordings captured during simulation. There have also been challenges, including coordinating dedicated time to meet and conduct analyses and learning how to combine our shared expertise cohesively, especially when writing manuscripts.

Working in a diverse team that includes educational practitioners, simulationists, and SRL researchers has helped bring the sound research already in place related to SRL into the field of medical education. In turn, these efforts could help advance the study of SRL based on lessons learned through studying new populations (i.e., medical education) and through its application in novel educational contexts such as healthcare simulation. For others considering similar partnerships, I encourage you to make time to form and nurture relationships with others and to come to understand each other's perspectives and contexts. One way to do this is through engagement in a small project as an early effort. Lastly, 'play the long game' when you meet new people – you never know when a fruitful partnership may emerge.

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Researcher-Educator Partnerships for Self-Regulated Learning

Deborah L. Butler

The University of British Columbia, Vancouver



My research on self-regulated learning (SRL) has always been motivated by a desire to understand and support intentional, deliberate forms of learning in authentic contexts. This motivation has consistently led me to engage in collaborative research with educational partners with whom I could investigate students' learning processes in situ, pedagogical practices with promise to support SRL, and corresponding benefits for educators and their students. Across the past 30 years, my partners have included educators and educational leaders in both post-secondary institutions and K-12 schools. With these partners I have investigated teaching and learning in a wide range of contexts (e.g., support settings; inclusive classrooms), across grade levels (i.e., kindergarten through post-graduate training), and in different subject areas (e.g., literacy education, inquiry-based science education, medical education).

Why collaborate with educational partners? Early on I recognized the incredible co-learning opportunity that was emerging when educators and I shared expertise in ways that were advancing understanding about SRL. I am very aware of the strengths and limits that I can contribute, given my expertise in SRL and experiences as an educator and researcher. My educational partners have reliably complemented my contributions by offering rich pedagogical and curricular knowledge as well as contextually-grounded insights into students' learning processes, strengths, and challenges. My research has been strengthened by studying SRL "on the ground" in authentic settings with these informed and insightful colleagues. Together we have co-constructed new knowledge that we have shared in workshops, presentations, and publications for both practice-based and scholarly communities (e.g., see Butler, Cartier, Schnellert, Gagnon, & Giammarino, 2011; Butler, Schnellert, & Perry, 2017).

How best to collaborate with educational partners? I have learned many lessons over the years. Among those, one was that it helped enormously to disabuse myself of the idea of planning a study and then "doing it" in an educator's classroom. Instead, I have worked to develop relationships with local practice communities, through conferences and workshops for example, and then invited educators who shared my goals or interests to co-construct research together. The result has been the development of long-standing partnerships (e.g., 10 years of sustained collaborative research with one local school district) wherein our projects have advanced research and practice in ways that were authentically meaningful from both perspectives. Another key insight has been to build partnerships around shared goals. Doing so creates a context where researchers and educators can collaboratively solve a problem, sharing expertise to do so. A final key insight has been to be less concerned about exporting the kind of technical discourse we need to use as researchers into practice environments. Instead, I have learned to enter a practice-based conversation by learning the language that is meaningful to the educators that I am working with (e.g., how science educators are talking about intentional, deliberate forms of learning). By focusing on our shared goals, we have then been able to negotiate shared terminology that has enabled us to advance understanding together. This approach has also enabled us to write for different discourse communities (e.g., for researchers in SRL but also an audience of science educators). There is quite a bit more to successful collaboration, but these are three approaches that have enabled me to forge many successful partnerships across the past 30 years.

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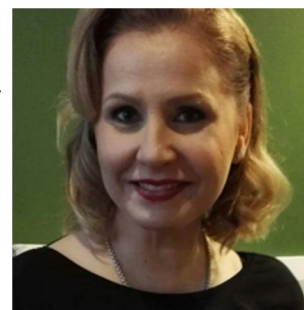
Partnering for Enhancing Teachers' Learning – pre-service and In-service teachers' continuous learning community

Heikki Kontturi & Piia Näykki, University of Oulu, Finland



Dr. Heikki Kontturi

There is a growing interest in developing teacher education to respond to the needs of 21st-century learning, such as skills in strategic learning, critical thinking and collaboration (Binkley et al. 2012; Häkkinen et al., 2017). These skills are important to enable pre-service teachers to study and work in their learning and working communities but should also be enhanced for their prospective pupils' learning (Kramarski & Kohen, 2017).



Dr. Piia Näykki

Another current aim is to provide opportunities for pre-service, in-service teachers, and teacher educators, to create collaborative learning communities in support of teachers' continuous professional development (Harlow & Cobb, 2014).

The concept of continuous learning is not new, but it is newly important in representing a lifelong learning ideology and combining formal and informal educational opportunities. In the University of Oulu, the continuous learning community was created and implemented as a part of developmental project OpenDigi. The participants comprised of pre-service teachers (N = 60) and teacher educators (N = 9) from the university and in-service teachers (N = 27) from four local comprehensive schools. The aim was to provide an opportunity for teachers to work together over six months and to learn from each other. The in-service and the pre-service teachers worked together to explore educational challenges and good learning principles. In practice, the development groups, each comprising one to two teachers and four to eight student teachers, created its own question and plans for the two practical implementations (i.e., lessons in schools).

During the project the data of participants' experiences were collected from the completed open-ended questionnaires. The study explored how teacher education can be developed by creating a continuous learning model that supports pre-service and in-service teachers as active, self-regulated and collaborative learners. The research questions were: (1) What did pre-service and in-service teachers learn when working as a learning community? (2) What challenges did pre-service and in-service teachers experience during their work?

The results showed that the pre-service and the in-service teachers reflected on their work somewhat differently. The former experienced learning group working, self-regulation, and pedagogic and didactic skills. The latter learned group working skills and new teaching methods. Both groups of teachers experienced challenges, one of which was named role confusion. The pre-service teachers experienced role confusion in terms of guided versus independent work. The in-service teachers' role confusion led them to wonder whether they should provide the pre-service teachers with expert support or participate as equal group members. Both pre-service and in-service teachers reflected that the model would require active involvement of all teachers and teacher educators involved.

Based on findings of study, we argued that to realise the opportunities for continuous learning, learners need to have a set of learning skills to be actively in control of their own learning process, as well as the will to make use of those skills and learning opportunities. In other words, the skill and the will to engage in active SRL set the stage for continuous learning. Therefore, to enhance continuous learning opportunities in the teacher education context, it is essential to characterise pre-service and in-service teachers as self-regulated learners (Dembo 2001; Kramarski & Kohen 2017; Randi 2004).

In the university of Oulu, we are currently developing the collaboration further with local schools. The Learning Teacher -model sets the stage for continuous learning where teachers from different professional phases work together implementing theory to practice and bringing challenges from school life to university. More information about The Learning Teacher model: http://bit.ly/learning_teacher_2019.

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Fostering the reciprocal relationships between self-regulated learning and middle years philosophy and pedagogy: A school district/teacher education partnership

Dr. Leyton Schnellert, Faculty of Education, University of British Columbia

Miriam Miller, PhD Candidate, University of British Columbia

Marna Macmillan, Middle School and Social Emotional Learning Coordinator, SD43 (Coquitlam)

Belanina Brant, Coordinator, Middle Years/SRL B.Ed. Cohort, University of British Columbia

In our collaborative endeavor, we are engaged in joint work with middle school teachers in School District No. 43 (SD43) and University of British Columbia (UBC) teacher candidates (TCs) in the *Self-Regulated Learning in the Middle Years* (SRLMY) cohort to find and enact the synergies between middle years teaching and self-regulated learning.



Left to Right: *Miriam Miller, Leyton Schnellert, Marna MacMillan, Carter Brown (SRLMY teacher candidate), Belanina Brant, Danielle Kraichy (SRLMY teacher candidate)*

We identified four courses with potential for integration and in situ application: (1) Cultivating Supportive School and Classroom Environments, (2) Inquiry Seminar, (3) Human Development, Learning and Diversity, and (4) Classroom Discourses. By aligning the four courses, and realizing the overlapping topics, we were able to integrate ideas, reinforce themes, and, importantly, provide TCs with opportunities to engage more deeply and purposefully in both their courses and applied experiences.

With the integrated coursework as a foundation, we worked with our SD43 partner, educational practitioner Marna Macmillan, and mentor teachers to co-construct the in situ experiences for the TCs. The UBC SRLMY cohort relocated to the city of Coquitlam each week to engage in hands-on learning, working with practitioners in their classrooms—moving the TCs from learning *about* SRL and other middle years concepts, to learning *through* practice and mentorship. This involved TCs co-planning, co-teaching, and co-reflecting with middle school teachers as part of three in-situ learning experiences.

Looking back across the two years of this collaborative project, both SD43 and UBC's SRLMY program have benefitted from this partnership. SD43 teachers have been able to access and collaborate with Dr. Leyton Schnellert and Miriam Miller in order to support and foster learning that supports middle years students, as well as participate in opportunities to plan and apply SRL and MY approaches alongside TCs. From a teacher education perspective, we found that TCs connected theories and concepts across two, three, and even all four courses. TCs shared how the in situ experiences and integrated courses significantly impacted their understanding of classroom management (i.e., as relational, co-constructed, strength-based, developing students' emotional literacy, and SRL-infused). Other key concepts included ongoing formative assessment to advance student learning; the healthy development of learner identities as embedded in curriculum; diversity-positive perspectives that recognize all students as self-regulating learners; and teachers sharing metacognitive reflections with students and offering students opportunities to reflect and self-assess.

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Fostering the reciprocal relationships between self-regulated learning and middle years philosophy and pedagogy: A school district/teacher education partnership — Cont'd

Finally, we have been able to realize and foster reciprocal relationships between SRL and middle years education philosophy and pedagogy. Synergies between SRL and middle years education philosophy and pedagogy include: *building classroom community* as foundational for engaged learning (AMLE, 2010; Butler, Schnellert & Perry, 2017); *using common-language* as a key factor in engaging middle years students as metacognitive, strategic learners (Johnston, 2020; Stout, et al., 2010); and *embedding and empowering social-emotional learning (SEL) practices* across middle years disciplines and contexts (Srinivasan, 2019).

While challenging to organize (e.g., moving the SRLMY cohort to SD43 one day a week, finding time for co-planning between mentors and TCs), this partnership has mobilized praxis for all involved and has the potential to inspire further collaboration between researchers and practitioners in the area of SRL.

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Research to Practice Initiatives: Reflections and Suggestions

Dr. Timothy J. Cleary, Rutgers University

As a former practicing school psychologist interested in the application of self-regulated learning (SRL) principles in schools, I strongly believe in the value and necessity of developing and nurturing positive research-practitioner partnerships. Over the past decade, I have collaborated extensively with school districts across the country, most notably in Milwaukee, Wisconsin and various cities in New Jersey. In New Jersey, I have implemented my intervention program (Self-Regulation Empowerment Program; Cleary, Velardi, & Schnaidman, 2017) and conducted survey research to explore the relations among contextual, regulatory, and achievement variables (Cleary & Kitsantas, 2017). Although the focus and scope of these studies were quite distinct, I was able to develop very strong relations and partnerships with those schools, in part, because of my belief that stakeholder voice was of equal value to the research that I wanted to conduct in those contexts. By stakeholder voice, I refer to the beliefs, attitudes, and perceptions of students, teachers, administrators, and parents regarding the implementation of a given intervention or other research-related activity (Cleary, Gregory, Kitsantas, & Slep, 2020).



Dr. Timothy J. Cleary

Stakeholder voice is a key concept of a model of social validity as discussed by Montrose Wolf (1978). According to Wolf, when attempting to implement interventions or some other initiative in a given context, it is critical for researchers to consider the beliefs and perceptions of stakeholders in terms of the significance of goals, appropriateness of procedures, and importance of outcomes. In other words, researchers need to ask themselves: (1) Does implementing an intervention (or some other activity) align with the goals and initiatives of that school?; (2) Are the research methods acceptable and appropriate to stakeholders? (3) Will the research activity lead to important benefits and outcomes for stakeholders within that school?

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Research to Practice Initiatives: Reflections and Suggestions — Cont'd

Reflecting on and considering these types of questions helps to develop an effective research-to-practice mindset that embodies empathy, respect, and a desire to pursue outcomes of mutual benefit to researchers and schools. I expand on this premise in the following recommendations:

1. Think about research – school fit. It is important to think ahead and reflect on whether your specific research goals and approaches fit with the overall objectives, needs, and initiatives of the school. It is much more effective to convey the message, whether implicitly or explicitly, “My primary interests involve how our collaboration can help you achieve some of your goals and initiatives”, rather than “This is my research and I am very interested in conducting it in your school”.

2. It takes time. Developing a relationship with school districts may not happen quickly. I can recall one recent partnership that took over a year before I was able to begin research. Some schools, due to negative prior experiences, often feel like they are being “used” by researchers (i.e., just to get the data and then leave). Thus, consider having multiple meetings, providing presentations or short lectures to staff, or conducting other initiatives, pre and post research, so that administrators experience your genuine interest in their school and initiatives, not just your research.

3. You are a guest. It is important to remember that schools are systems with myriad written and unwritten rules, norms, and values. In most situations, researchers are “outsiders” who are not part of the natural fabric of that system. Be careful to avoid conveying the message, regardless of how subtle such messages may be, that research is more important than working on the front lines on a daily basis with children and families. There is no question regarding the value of research in school contexts, but school administrators and teachers may not always see it that way. Take the time to understand the beliefs, customs, prior research experiences, and potential misconceptions school administrators may possess regarding research-related activities; then use that information to help build bridges or pathways to research success.

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Graduate Student Committee Report

The Graduate Student Committee (GSC) committee co-chairs (Laith Jumah and Sarah Davis) and our faculty mentor (Dr. Jake Follmer) would like to extend our sincere gratitude to our SSRL SIG members. The GSC was established to represent the voice, interests, and needs of SIG graduate students as well as to promote the professional development of SIG graduate students. To achieve these goals, we are working on the following projects:

1. **SSRL Research Lab Spotlight.** This project was established in 2018 and is ongoing. The GSC initiated this project to showcase research labs of world-class, highly productive scholars in our field. The purpose of this project is, in part, to foster the professional development of graduate students by introducing them to the works of prominent SRL scholars. We ask scholars to share information about their research labs that are published in our SIG Newsletter and Times Magazine as well as on our Facebook page and website. We have already published many showcases in the last two years and, in this issue, you will be able to read about Dr. Sanna Jarvela's work.
2. **Graduate Student Research Spotlight Series.** This spotlight series was initiated in 2019. This project highlights the current work of graduate students engaged in the SIG. The goal of the Graduate Student Research Spotlight Series is to provide an opportunity for the readership of the Studying and Self-Regulated Learning SIG to learn about the ongoing research being completed by graduate students of the SIG, and for graduate students to co-develop experience summarizing and disseminating their own work. In this issue, you will read about Hyeyeon Lee's summary of her work.
3. **Conversations with Productive Scholars Video Series.** This Video Series is one of the first projects of the GSC. In this project, the SSRL SIG's graduate student members interview highly productive educational scholars. The purpose of this project is to provide advice to graduate students on how to become successful in their research and study. GSC members believe that these interviews offer an excellent source for professional development for our SIG's graduate student members. Currently, we have published several interesting interviews with some of SRL's distinguished scholars (you can find all of the interviews on the SIG's website <https://ssrlsig.org/>).

We take this opportunity to thank all of you who have helped us and have contributed to the ongoing work of the GSC, and to the broader SIG community. We encourage all SIG graduate student members to participate in our projects (e.g., conducting interviews with SRL researchers or sending summaries about their work). We also encourage you to invite other interested graduate students to become members of our SIG. If you have any questions, concerns, or suggestions, please do not hesitate to contact us.

Our sincere regards,

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Lab Spotlight: The Learning and Educational Technology (LET) Research Lab

Sanna Järvelä, University of Oulu, Finland.

The Learning and Educational Technology Research Lab is led by Professor Sanna Järvelä at the University of Oulu, Finland. The purpose of the LET Research Lab is to increase human learning competence for 21st century needs. Our research agenda aims to advance theory and methods of social aspects of self-regulated learning, especially socially shared regulation in learning (SSRL). We study when, how, and what makes regulation in collaborative learning functional. We also utilize advanced learning technologies to study and support (S) SRL.



Prof. Sanna Järvelä



Sanna Järvelä has published more than 150 scientific papers in international refereed journals and about 50 book chapters and three edited books. Her Google Scholar h-index is 55. She has been an editor (e.g., *Learning and Instruction*) and editorial board member in many journals and is the current co-Chief Editor in the *International Journal of Computer Supported Collaborative Learning*. Järvelä is the member of the Finnish Academy of Science and Letters, the past EARLI (European Association for Research on Learning and Instruction) president, and invited member of the expert group of the OECD's PISA 2024 "Learning in the

Prof. Sanna Järvelä giving a keynote at the World Education Frontiers Summit 2019, Shenzhen, China Digital World".

The LET members working in the SRL field are: Associate Professor Hanna Järvenoja and Assistant Professor Jonna Malmberg; Post-Doctoral researchers Muhterem Dindar, Kristiina Mänty, Andy Nguen, and Piia Näykki; and, PhD students Eetu Haataja, Jaana Isohätälä, Marika Koivuniemi, Tiina Törmänen, Ahsen Cini, Tatiana Shubina and Marta Sobocinski.



The LET team hiking in the Finnish forest.

The LET Lab has a joint research agenda with Prof. Allyson Hadwin's Technology Integration and Evaluation (TIE) lab, and the collaborators are: Roger Azevedo, Maria Bannert, Dragan Gašević, Susanne Lajoie, Inge Molenaar, Paul Kirschner, Phil Winne, and their team members.

Continued on the next page



Jonna Malmberg, Hanna Järvenoja, and Marta Sobocinski at the face reading experiment.

We have been working for theoretical advancement of self-regulation in social learning contexts, namely socially shared regulation in learning (Järvelä, Hadwin, Malmberg & Miller, 2018) in collaborative learning (Järvelä, Malmberg, Haataja, Sobocinski & Kirschner, 2019). In our research agenda, we have evidenced that self-regulation is critical for successful learning and socially shared regulation contributes to productive collaborative learning. The problem is that the psychological processes at the foundation of regulation are invisible and, thus, very challenging to understand, support, and influence. Therefore, we have systematically worked for data collection methods to try to understand the complex process of regulation in the social learning context, for example, collaborative learning and computer-supported collaborative learning.

So far, we have empirically identified the importance of cognitive (Malmberg, Haataja, Seppänen & Järvelä, 2019), emotional (Järvenoja, Näykki & Törmänen, 2019), and adaptive/maladaptive regulation patterns in collaborative learning (Sobocinski, Järvelä, Malmberg et al. 2020) based on theories of (S)SRL. We highlight the importance of tracing the sequential and temporal characteristics of regulation in learning by focusing on data for individual- and group-level shared regulatory activities, and use technological research tools gathering in-situ data about students' challenges that provoke regulation of learning (Järvelä, Järvenoja & Malmberg, 2019). Therefore, we have been implementing multimodal methods (e.g., 360° video, log data, physiological data, situated self-reports) to identify when, how, and what makes regulation in collaborative learning functional. Our main analytical expertise covers video analysis, multimodal data analysis and learning process analytics.



PhD students Eetu Haataja and Tiina Törmänen by their research posters

LET lab—Cont'd

The guiding principle in our empirical work is that regulation of learning occurs in authentic learning settings. Our recent attempt to capture regulation of learning and how it evolves is collected in secondary school science lessons. The data consists of seven-week multichannel process data collection when high school students' (N = 100) worked collaboratively in groups of three during physics lessons. Students' collaboration was followed with video recordings and through individual level physiological measures. To capture the learning activity in its natural setting and to get multimodal process data related to the different cognitive, emotional, and motivational components, the learning session was recorded using four Insta360 Pro video cameras that were placed in the classroom and separate microphones placed in front of each group. Different situated self-report instruments were also implemented



Eetu Haataja, Jonna Malmberg, Sanna Järvelä, Muhterem Dindar, Kristiina Kurki and Sara Ahola exploring mobile eye-tracking at the LeaF research infrastructure (<https://www.oulu.fi/leaf-eng/>).

The LET Lab's research output implications contribute to advances in theory underlying the cognitive, social, motivational and emotional components of individual and group learning (e.g., SSRL). In practice, we create theory and evidence-based solutions for better learning and technological solutions and digital tools for future learning and education.

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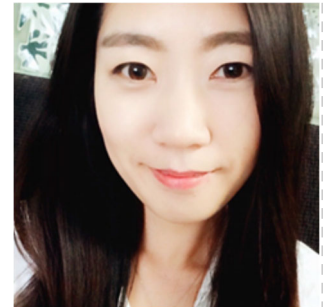
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Graduate Student Research Spotlight

Self-Regulation in Multiple Text Use

Hyeyeon Lee, Doctoral Student of Educational Psychology program at Penn State University

My work has focused on how students self-regulate their learning processes within the context of Multiple text use. With increasing interest being given to students' digital literacy, more attention has been paid to how students learn not only from single texts, but from multiple texts as well. Learning from multiple texts exposes students to a larger volume of information during the learning process, which means that students' self-regulation, especially in the absence of teacher support, might be a critical factor in understanding students' learning processes and outcomes while learning from multiple texts. Many open questions remain in this area, such as how students choose which texts to access and how they determine which information from the different texts, to ultimately prioritize in the written response they compose.



Hyeyeon Lee

I have conceptualized the model of students' self-regulatory processes during multiple text use. This model gained insight from the *Multiple Documents Task-Based Relevance Assessment and Content Extraction* model (MD-TRACE, Rouet & Britt, 2011), as a model of multiple text use, and model of self-regulated learning in terms of conditions, operations, products, evaluations, and standards (COPEs, Winne & Hadwin, 1998), as a model of self-regulation. Going forward, I will examine (a) how students form their task models when asked to complete a multiple text task, (b) how students justify their source selections, (c) how students evaluate their comprehension throughout multiple text use, and (d) the extent to which students' task models are reflected in the final written products that they compose. Currently, as a part of this project, I have investigated how students select and justify their text access and navigate texts while completing a multiple text task. Specifically, I have investigated profiles of text selection and text navigation and associated theses with task performance. My future research will continue exploring other parts of the project and validate my theoretical framework with corresponding empirical studies. In the long run, I would like to design and develop interventions to promote students' self-regulatory processes when learning from multiple texts.

I believe this work integrating the fields of multiple text use and SRL is an emerging area in educational research. Very fortunately, I have two influential mentors to support my academic work. One is my advisor, Dr. Alexandra List at Pennsylvania State University. Her work examining students' multiple source use has influenced my academic work. I appreciate her guidance and emotional support, as well. The other is my mentor, Dr. Jeffrey Greene at the University of North Carolina at Chapel Hill. Dr. Greene is a prominent member of the field of SRL research. I was delighted to have an opportunity to share my work with Dr. Greene and to receive his feedback.

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Outstanding Poster Award Announcement!

*Dr. Roger Azevedo
University of Central Florida*

This year's outstanding poster award for a submission to the AERA SSRL SIG is awarded to **Juan Zheng** from **McGill University** for "*Emotion or Emotion Variability: What Matters to Students' Performance in Clinical Reasoning*".

Medical students experience a range of emotions in clinical settings. For example, when a medical student is trying to diagnose a patient, the student may fear their own incompetence, worry about the patient's emotions and expectations, and may feel relief once a correct diagnosis is reached. These emotions – fear, worry, and relief – undoubtedly affect an individual's thoughts, behaviors, and performance. However, the role of emotions in clinical reasoning has received little attention from medical education researchers.



Juan Zheng

In addition, a review of medical education literature revealed that no research has examined the relations between emotion variability and performance as students diagnose patients. Emotion variability refers to the fluctuations in emotional states and is an underexplored area of research even outside of the realm of medical education. For instance, two medical students may have a similar level of positive emotions, but they are different from one another in their emotion variability, with one student changing his or her emotions frequently and the other person changing rarely.

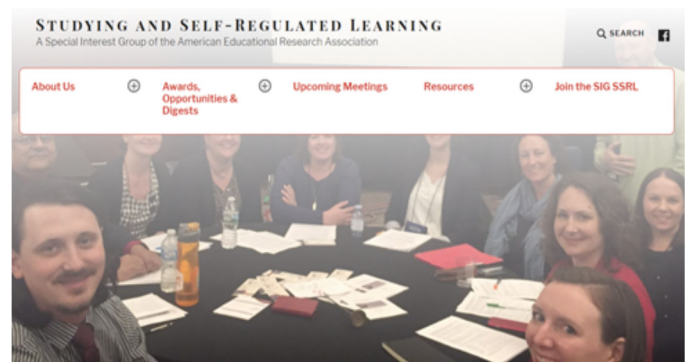
The purpose of this study was to examine the roles of emotion and emotion variability in clinical reasoning and to compare their relative importance in predicting diagnostic performance. Results indicate that both emotion and emotion variability matter in students' performance and they functioned differently in the clinical reasoning process. This study helps shift the focus of research from the effect of emotions on performance to the joint effect of emotion and emotion variability, which has the potential to address the inconsistency in emotion-related research findings. This study also informs the practice of clinical reasoning in terms of eliciting and regulating emotions. Nevertheless, this study is not without limitations. We examined the influence of the frequency of emotions in each SRL phase on diagnostic performance rather than specific emotions, for example, happy and angry. It is possible that one type of emotion has greater predictive power than another emotion. A larger cohort of medical students is needed to verify the generalizability of our findings as they diagnose patients with different levels of complexities.



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<https://ssrlsig.org/>



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