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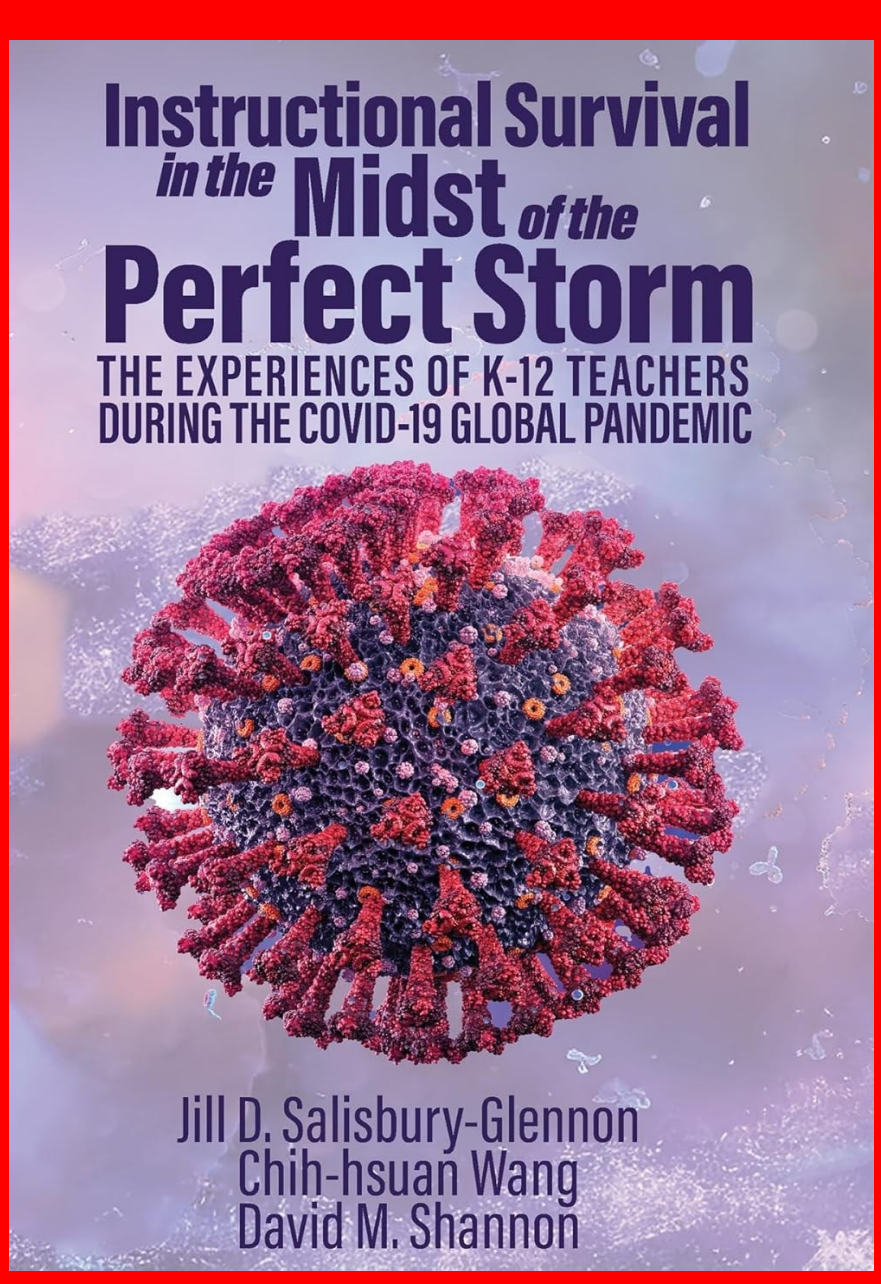
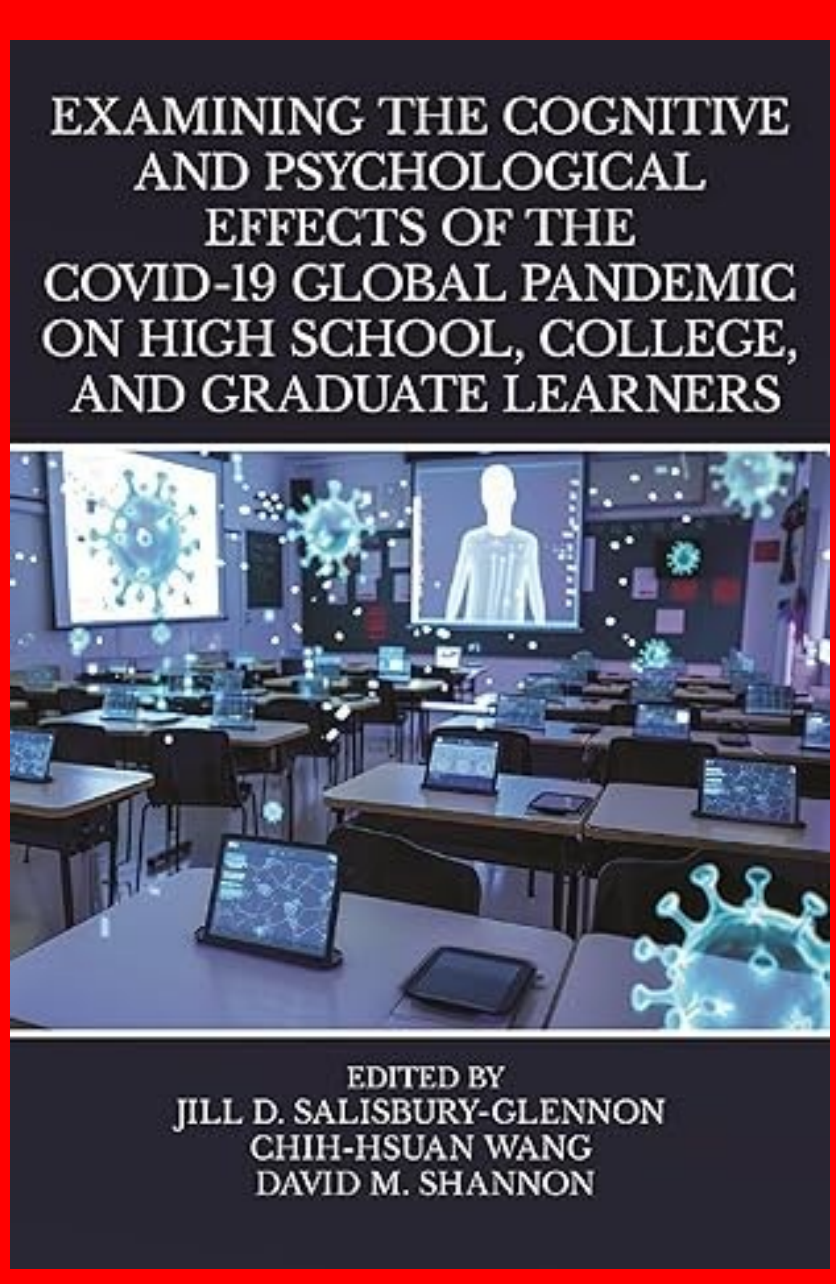
Self-Regulated Learning Enables Success in the Midst of the Perfect Storm





These co-edited books synthesize the research conducted by the authors with a focus on the cognitive and psychological effects of the COVID-19 global pandemic on high school, college, and graduate learners, as well as effects on K-12 teachers.

"Self-regulation is a triadic reciprocal interaction of personal, behavioral, and environmental processes…"

Yan (Diane) Dai (Guest Editor)
Charles Raffaele (Executive Editor)
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Self-Regulated Learning Enables Success in the Midst of the Perfect Storm

Yan (Diane) Dai

Editorial

Yan (Diane) Dai, PhD, is an Assistant Professor in Educational Psychology and Methodology at the University at Albany (SUNY). Her research focuses on self-regulated learning, motivation, educational technology, and student success in diverse learning environments.

This special issue brings together reflections from authors whose work originally appeared in two volumes edited by Dr. Salisbury-Glennon and her colleagues, examining the cognitive and psychological impacts of the COVID-19 pandemic on education. The reflections reveal both the challenges created by the pandemic and lessons learned through the lens of self-regulated learning (SRL).

The COVID-19 pandemic is one of the most disruptive educational events of the 21st century (National Center for Education Statistics, 2022; UNESCO, 2023). Overnight, instruction shifted to emergency remote learning, and opportunities for social interaction diminished. Learners across educational settings were forced to navigate academic, social, emotional, and technological challenges with little preparation (Centers for Disease Control and Prevention, 2022; National Academy of Education, 2020; U.S. Department of Education, 2022). Yet, this unprecedented global crisis provided a unique opportunity to examine how SRL enables learners to succeed when external structures become unstable.

Self-Regulated Learning in Times of Crisis

SRL has been conceptualized as a process in which learners actively regulate their learning rather than passively receiving instruction (Bandura, 1986; Pintrich, 2000; Zimmerman, 2002; Zimmerman & Schunk, 2001). Zimmerman (2000) conceptualized self-regulation as a cyclical process involving forethought, performance, and self-reflection. Pintrich (2000) emphasized learners' active management of cognition, motivation, behavior, and context, while Winne and Hadwin (1998, 2000) highlighted the importance of monitoring and adapting learning strategies in response to changing conditions. These theoretical perspectives portray self-regulation as a dynamic process that enables learners to adapt their thoughts, behaviors, and strategies in response to challenges.

Importantly, these self-regulatory competencies can be intentionally cultivated through educational practice. As Bembenutty, Raffaele, and Pisari (2025) described, explicit instruction in SRL, self-reflection, and academic delay of gratification helped teacher candidates navigate the challenges of emergency remote instruction. Their work illustrates that self-regulation is a set of competencies that can be developed through instruction.

The COVID-19 pandemic provided a context in which these self-regulatory competencies became essential for learning. As Salisbury-Glennon, Wang, and Dai (2025) observed, during the pandemic, in-person instruction and peer interactions became unavailable. Learners faced challenges related to socialization, mental health, technology, and in-person resources. Under these circumstances, SRL became an everyday necessity to cope with challenges. It also serves as an adaptive capacity that enables learners to adapt to uncertainty when educational environments become unpredictable.

Self-Regulation Is Social

Although SRL research has traditionally focused on individual learners, contemporary perspectives increasingly recognize that regulation also occurs within social and collaborative contexts (Hadwin, Järvelä, and Miller, 2018; Panadero & Järvelä, 2015). Specifically, Hadwin and colleagues (2018) describe two forms of social regulation: co-regulation, in which others temporarily support an individual's regulatory processes; and socially shared regulation, in which members of a group collectively regulate learning toward shared goals.

The reflections underscore the importance of these social dimensions of regulation during times of crisis. For example, Salisbury-Glennon and colleagues (2025) found that support from instructors, peers, mentors, and family members played an important role in sustaining students' motivation. Similarly, Raffaele's (2025) reflection illustrates how teacher educators intentionally fostered social-emotional support while transitioning to remote instruction. These efforts provided learners with the external scaffolds necessary to maintain internal regulation.

These reflections demonstrate that self-regulation is often supported through processes of co-regulation and socially shared regulation, which provide guidance, feedback, encouragement, accountability, and opportunities for collaboration. When educational communities remain connected, they can collectively sustain learners' capacity to regulate their learning during a crisis.

The Emotional Foundations of Self-Regulated Learning

The reflections also highlight the important role of emotional processes in SRL. Boekaerts (1996) posited that learners regulate not only cognition but also emotions in pursuit of academic goals. When learners experience high levels of stress, anxiety, or negative affect, their capacity to effectively regulate learning may be compromised.

Several reflections in this issue illustrate this connection. For instance, Manning (2025) noted that female graduate students reported significantly higher levels of stress, negative affect, and homesickness during the pandemic. Drawing on SRL theory, she argued that such emotional strain may threaten the motivational foundations that sustain self-regulation. Similarly, Daumiller and colleagues (2025) posited that the pandemic functioned as a stress test of the psychological and environmental conditions necessary for successful learning. Both of these reflections highlight that emotional well-being is an integral component of regulation during times of disruption.

Looking Forward

The COVID-19 pandemic exposed vulnerabilities within educational settings. However, it also provided a remarkable opportunity to examine how SRL enables success in the midst of the perfect storm. Across the reflections in this special issue, a common theme emerges: learners drew upon self-regulatory processes to remain engaged and continue learning despite significant challenges.

As we prepare students for future uncertainties, fostering SRL should remain a priority. The reflections by Cromley and colleagues (2025) and Wong and Wong Hernandez (2025) highlight the importance of flexibility, agency, adaptive expertise, and digital literacy in responding to changing educational conditions. Hence, developing these capacities through SRL may better prepare learners to navigate future crises. Ultimately, these reflections remind us that when experiencing an external crisis, learners increasingly rely on internal regulatory processes. The ability to plan, monitor, adapt, seek support, and persist may determine whether learners continue to thrive.

References are available upon request from Yan (Diane) Dai (dydai@albany.edu)

Cognitive and Psychological Effects of the COVID-19 Pandemic: What Have We Learned and How Can We Be Better Prepared for the Future?

Jill D. Salisbury-Glennon, Chih-hsuan Wang, & Yan (Diane) Dai

The COVID-19 pandemic caused an unprecedented disruption to education, affecting learners and educators across all educational levels worldwide (Alizadah, et al., 2022; Mazrekaj, et al., 2023; Pokhrel, et al., 2021; Tang, 2022). In response to this global crisis, we co-edited *Examining the Cognitive and Psychological Effects of the COVID-19 Global Pandemic on High School, College, and Graduate Learners* (Salisbury-Glennon et al., 2025). This volume brought together diverse perspectives and methodologies to explore the cognitive, psychological, and educational effects of the pandemic on learners. The concluding chapter (Salisbury-Glennon et al., 2025) synthesized findings across the volume and identified six themes that characterized learners' experiences during this period: socialization; mental health and well-being; self-regulated learning, self-directed learning, autonomy, and responsibility; the experiences of underrepresented and underserved learners; technology; and familial effects.

Summary of Core Findings

Socialization

Regarding socialization, learners experienced both challenges and support during the pandemic. Students from disadvantaged backgrounds reported reduced engagement (Fletcher et al., 2025, Chapter 3), while engineering doctoral students identified limited social interaction and travel restrictions as significant stressors, particularly for international students (Cromley et al., 2025, Chapter 17). Meanwhile, some first-generation college students reported benefiting from increased family support (Bridges et al., 2025, Chapter 6), and doctoral students developed informal communities that helped reduce stress during their transition to graduate study (Trammell et al., 2025, Chapter 16).

Mental Health and Well-Being

The COVID-19 pandemic negatively affected students' mental health, with increased depression, stress, anxiety, burnout, technostress, and sleep disturbances reported across studies (Jorales et al., 2020; as cited in Quadlander-Goff et al., 2025, Chapter 8; Daumiller et al., 2025, Chapter 20). Overall, these findings suggest a significant decline in psychological well-being during the pandemic. However, some positive outcomes also emerged. Bridges et al. (2025, Chapter 6) found that some students benefited from increased study time and greater instructor empathy.

Self-Regulated Learning, Self-Directed Learning, Autonomy, and Responsibility

Many college students struggled with emergency remote instruction because they lacked the self-regulation, autonomy, and discipline needed to learn independently without the structure of face-to-face classrooms. However, Bembenutty et al. (2025, Chapter 19) found that implementing self-regulated learning strategies in teacher education courses helped learners cope more effectively with the challenges of the pandemic.

Underrepresented and Underserved Learners

Underrepresented and underserved learners faced significant challenges during campus shutdowns due to reduced access to resources such as tutoring, accommodations, library study spaces, technology, and extracurricular activities (Quadlander-Goff et al., 2025, Chapter 8). Despite these barriers, Tyler et al. (2025, Chapter 11) found that undergraduate STEM students from disadvantaged backgrounds demonstrated resilience and adaptation through participation in a Mentoring Bridge Model.

Technology

The rapid transition to emergency remote instruction presented significant challenges for many learners. ACT scores declined across grade levels from pre-pandemic to post-pandemic, with the largest declines observed among students in virtual settings, followed by hybrid and onsite modalities (Allen et al., 2025, Chapter 2). Students with ADHD experienced additional difficulties, and concerns emerged regarding widening achievement gaps (Quadlander-Goff et al., 2025, Chapter 8). At the same time, the pandemic increased the adoption of online instruction and educational technologies, leading to lasting changes in teaching and learning practices (Miller et al., 2025, Chapter 3; Daumiller et al., 2025, Chapter 20).

Familial Effects

The pandemic affected learners and educators through changing family responsibilities, separation from loved ones, and travel restrictions. For example, some graduate students reported not seeing close family members for more than two years due to COVID-19 travel restrictions (Cromley et al., 2025, Chapter 17). At the same time, some students benefited from increased family time and support (Bridges et al., 2025, Chapter 6). Additionally, graduate student parents demonstrated higher levels of life satisfaction and self-efficacy than their peers without children (Yoo & Marshall, 2025, Chapter 15), providing support for role accumulation theory (Sieber, 1974).

SRL Application

Across all six themes, self-regulated learning emerged as a critical framework for understanding how students navigated the challenges of the pandemic. Learners were required to manage uncertainty, adapt to changing instructional environments, maintain motivation, and persist despite disruptions to their routines. These experiences highlighted the importance of key self-regulatory processes, including goal setting, strategic planning, self-monitoring, help-seeking, and adaptive self-reflection. Importantly, the findings demonstrated that self-regulation does not occur in isolation. Social support from instructors, peers, family members, and mentors played a vital role in sustaining motivation and engagement during periods of disruption. The pandemic illustrated that successful self-regulated learning often involves co-regulation and the strategic use of resources. As a result, educational institutions should intentionally cultivate self-regulation, autonomy, and resilience as essential components of student development.

Future Directions

The lessons learned from the COVID-19 pandemic have important implications for future educational practice. First, institutions should prepare students and educators to use remote and hybrid learning technologies before a crisis occurs. Second, self-regulated learning should be embedded throughout educational programs to help students become more adaptable and independent learners.

The findings also emphasize the importance of maintaining social connections and access to mental health resources during periods of disruption. Particular attention should be given to underrepresented and underserved students, who may face disproportionate challenges during crises. Institutions should continue developing flexible support systems that allow students to maintain connections with instructors, peers, and family members regardless of location.

Although the COVID-19 pandemic caused significant challenges, it also revealed the resilience of students, educators, and institutions. The experiences documented throughout this volume suggest that fostering self-regulated learning, social support, adaptability, and technological readiness can help educational communities better respond to future crisis situations while continuing to support student success.

References are available upon request from Jill D. Salisbury-Glennon (salisji@auburn.edu).

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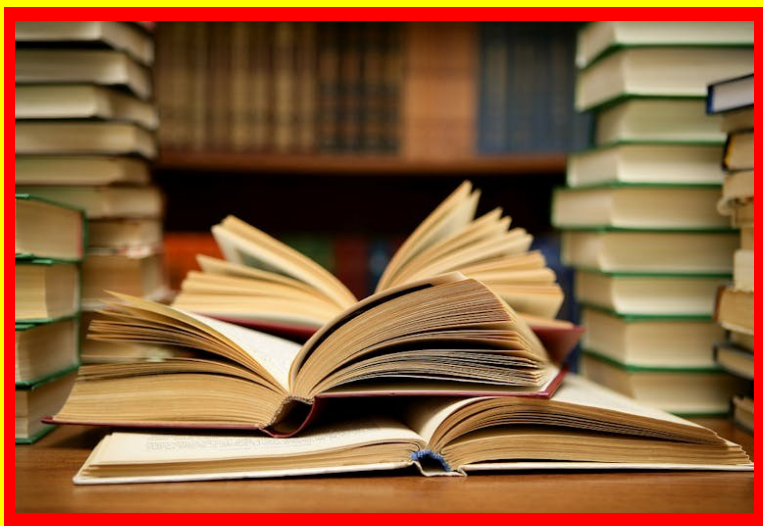

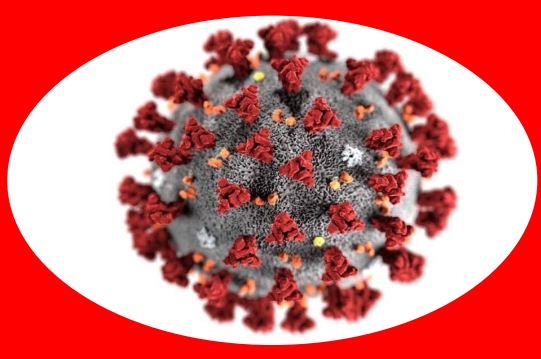

Impacts of Pandemic Environments on Self-Regulated Learning for Doctoral Engineering Students

Jennifer Cromley, Karin Jensen, & Joseph Mirabelli

During the 2021-2022 academic year, our team conducted a longitudinal interview study of doctoral engineering students' sources of stress, coping strategies, and the impact of stressors on participants' mental well-being and persistence in their PhD programs (Cromley et al., 2022; Mirabelli, 2023). Our initial study design sought to explore widely reported stressors, such as those arising from research demands or advisor relationships. However, an emergent finding of our study was the role of the COVID-19 pandemic environment on our participants (Cromley et al., 2025).

Our study did not explicitly focus on self-regulated learning (SRL) as a theoretical framework; instead, it used bioecological systems theory (Bronfenbrenner, 1977) and the job-hindrance-control-support model (Dawson et al., 2016) as guiding theories. However, three findings from our work are relevant to doctoral engineering students' experiences with SRL in the COVID-19 pandemic environment, particularly in their progress towards research milestones for their degrees:

(1) Disruptions to worksites and supply chain issues interrupted our participants' ability to goal-set. Specific factors that impacted planning and goal setting included rapidly shifting national or state policies in the pandemic environment (e.g., lockdowns), changing university policies impacting participants' ability to conduct research (e.g., building closures, absence due to illness), and fluctuating costs of groceries, gas prices, and other needs. These changes made it difficult to plan for immediate research outcomes, doctoral milestone timelines, and personal matters such as individual finances and time off. Participants whose work involved biological samples were particularly susceptible to supply chain disruptions and lost research time. Additionally, for early-stage PhD students, a shift to online classes posed challenges in planning future coursework (e.g., whether required laboratory courses would be available on the expected schedule) and required adjustments to different work settings for both classroom learning and research (e.g., working from home).

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Jennifer Cromley, PhD, is a Professor of Educational Psychology at the University of Illinois Urbana-Champaign who researches cognition and motivation in the context of STEM student learning strategies and persistence.

Karin Jensen, PhD, is an Assistant Professor of Biomedical Engineering and Graduate Chair of Engineering Education Research at the University of Michigan, Ann Arbor, who researches thriving and well-being.

Furthermore, participants likely engaged less in metacognition about their research progress or skills (beyond in-class learning), as the pandemic environment was an exceptional situation that might not reflect what their learning progress would have been under normal circumstances.

(2) Our participants explicitly tied their experiences of uncertainty and stress due to the impact of the COVID-19 pandemic to feelings of being overwhelmed and lacking energy for research. As research demands became more uncertain, many participants reported increased stress around research, decreased energy to engage, and greater stress from research. Energy for engagement was also damaged by decreased opportunities for socialization and interpersonal connections in laboratory and classroom settings.

(3) For these reasons above, a pervading theme in our findings was a sense of a decreased locus of control over students' environments and their research progress, and to a lesser extent, their in-class participation and success. This lack of control was tied to both decreased energy for engagement and difficulties with planning.

We hope that the COVID-19 pandemic will be a singular event in our lifetimes, but if another highly disruptive event should occur, we encourage faculty to foster a greater sense of control and community among their mentees. Specific strategies could include giving doctoral students agency to redraft their research plans and timelines without fear of losing progress or status, encouraging students to evaluate the quality of their work and learning in altered work environments, promoting virtual study groups among classmates or body-doubling research meetings among labmates, and encouraging participation in virtual classes or lab meetings. Department and graduate chairs can clearly communicate shifting policies and procedures under the pandemic environment and consider stress-reducing changes, such as increasing the flexibility of doctoral milestone timelines.

References are available upon request from Jennifer Cromley (jcromley@illinois.edu).

From February 2020 "What's Zoom?" to May 2020 "We Taught Successfully": Supporting Teacher Candidates' Self-Regulated Learning During a Crisis

Charles Raffaele

Héfer Bembenutty, Daniel Pisari, and I taught secondary education teacher candidates as the COVID-19 pandemic unfolded. Like everyone else who taught at that time, we found that our routines were suddenly upended, and we had to support our learners as best we could using digital tools few had used much before (e.g., Zoom).

To document effective (and ineffective) self-regulated learning-supporting methods in such crisis situations (and in remote instruction more generally), we wrote the chapter *A Self-Study on Promoting Self-Regulated Learning Using Technology During Remote Instruction*, in Dr. Jill Salisbury-Glennon and co-editors' 2025 book, *Examining the Cognitive and Psychological Effects of the COVID-19 Global Pandemic on High School, Undergraduate and Graduate Learners*. Our chapter's method, self-study, involves reflection on teaching practices, with privileging of qualitative approaches and collegial collaboration, and validation based on trustworthiness (Vanassche & Kelchtermans, 2015). Berry and Kitchen (2020) suggested self-study had important contributions during the pandemic for documenting experiences and insights from radical educational change.

We reflected on our experiences and compared which experiences we have in common. We examined the self-regulatory focuses and pedagogical approaches we employed, considering both our instructional rationale and the intended outcomes for candidates.

The results demonstrated myriad efforts we made, finding much success but pandemic-related limitations too. We gave (and the students engaged with) social and emotional support, and building of self-efficacy and academic delay of gratification. Our pandemic-necessitated switch from in-person fieldwork at schools to video observations of recorded content was a good adaptation, if unable to be a true replacement. We adapted mid-lesson to technology difficulties in the Zoom interface new to all of us (e.g., letting candidates with microphone difficulties participate in the chatbox instead).

Students who kept their cameras off presented a challenge, but our practice of cold-calling—while giving students time to prepare their responses—kept participation high without hurting rapport. We gave our students positive regard for persevering in their education despite pandemic challenges, and they showed us encouraging appreciation in return.

From our data analysis emerged three themes: (a) It is important for teacher educators to promote social and emotional learning, delay of gratification, and self-regulated learning, (b) It is important to utilize established pedagogical approaches, particularly during crises, and (c) It is important for teacher educators to be reflective and overcome challenges during difficult situations in supporting candidates.

SRL Application

These findings show, beyond just good intentions of teacher educators and their students during a crisis, educators' support of self-regulated learning is necessary to foster best possible outcomes. Students will face distractions, routine disruptions, and even personal tragedies and risk, and they need structure, opportunities and confidence to set long- and short-term goals, continue on their desired career path, and co-regulate with their instructor and classmates.

Implications/Future Directions

Teacher educators having both the pedagogical ability and resources to go remote during an unexpected crisis makes a difference. Continuing research on instructors' experiences in making these transitions, across different grade levels, subject areas, and types of crises, will inform readiness for such transitions in future education.

References are available upon request from Charles Raffaele (**charles.raffaele@nyu.edu**).

Charles Raffaele, PhD, is a research scientist in the CREATE lab in the Educational Communication and Technology department at New York University. He researches technology's role in development and learning, with a special focus on second language learning.

Gender, Stress, and Self-Regulated Learning: Reflections on Graduate Student Adjustment During COVID-19

Kailea Q. Manning

Kailea Q. Manning is a doctoral candidate in Educational Psychology in the Department of Educational Foundations, Leadership, and Technology at Auburn University. Her work centers on faculty adoption of emerging technologies in higher education, with related interests in graduate student motivation and learning.

Graduate students are often assumed to be resilient and self-sufficient, capable of managing the demands of advanced study even under pressure. Yet as the COVID-19 pandemic demonstrated, even experienced learners are not immune to the combined weight of stress, uncertainty, and disruption. Chapter 18, "Gender Differences in Graduate Students' Adjustment, Mental Health, Motivation and Learning Strategies During the COVID-19 Global Pandemic," explored whether the pandemic's toll was experienced differently across gender lines among graduate students at a large Southeastern university.

Using a quantitative survey design (n = 301), we examined graduate students across four domains (college adjustment, mental health, motivation, and self-regulated learning strategies) using the College Adjustment Test (CAT), the Depression Anxiety and Stress Scale (DASS-21), and selected subscales from the Motivated Strategies for Learning Questionnaire (MSLQ). MANOVA results revealed that female graduate students reported significantly higher levels of negative affect, homesickness, and stress than their male peers. No statistically significant gender differences emerged in motivation, cognitive strategy use, metacognitive self-regulation, time management, effort regulation, or peer learning – even as depression showed moderate negative correlations with self-efficacy, time and environment management, and effort regulation.

Implications for Self-Regulated Learning

Self-regulated learning research often treats the learner as though they exist in a stable environment – examining strategy use, metacognitive monitoring, and goal setting as though these processes unfold independently of what else is happening in their life. The COVID-19 pandemic directly challenged that assumption, and this chapter's findings help illustrate why context cannot be separated from self-regulation.

The absence of gender differences across all MSLQ subscales might suggest that the pandemic's disruption was experienced similarly in learning behavior. However, this interpretation warrants caution. The conditions that predict self-regulated learning breakdown were already present, and female graduate students were disproportionately exposed to them through elevated stress, negative affect, and homesickness. Pintrich (1999, 2000) describes self-efficacy beliefs, intrinsic goal orientation, and task value as the motivational foundation that sustains strategy use. When those beliefs are threatened by chronic stress, the capacity to self-regulate becomes fragile, even before behavioral evidence of decline appears. Zimmerman's (2000) cyclical model similarly frames forethought, performance, and self-reflection as interdependent phases; disruption in one spills into the others over time.

For the SSRL community, this is a meaningful reminder that affect and adjustment are not peripheral to self-regulated learning – they are integral to whether regulation is possible at all.

Future Directions: Lessons Learned

First, stress is not a background variable; it is a competitor to self-regulation. Graduate students who appear to be coping on the surface may be quietly managing a level of stress that is already eroding the motivational foundation beneath their strategy use. For advisors, program coordinators, and faculty mentors, checking in on adjustment and well-being should not be separate from supporting academic success – it is part of it. Proactive support structures and access to mentorship are conditions that enable sustained self-regulation.

Second, graduate students are not a monolith. Gender was one lens in this study, but personal characteristics (caregiving responsibilities, financial pressures, family circumstances, and disciplinary context) interact in ways that shape a student's ability to navigate challenges and persist. Support systems that do not account for the varied circumstances graduate students bring with them will miss the students who need them most.

References are available upon request from Kailea Q. Manning (kem0147@auburn.edu).

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The Impact of the COVID-19 Global Pandemic on K-12 Students, Teachers, and Schools in the U.S.

Daniel W. Wong & Lucy Wong Hernandez

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Lucy Wong Hernandez has been a university professor, disability advocate, speaker, and trainer at national and international conferences and seminars for over thirty years. She has authored and contributed to numerous articles on disability rights, social policy, and multicultural issues, and co-authored books.

The effects of the COVID-19 global pandemic, both in the U.S. and globally, will be felt for many years to come. In March 2020, virtually all public school districts, citywide and rural, in the U.S. closed their doors. For the next 18 months, schooling changed drastically, as had never happened before. This unprecedented health-related pandemic kept families sheltered in place in their homes for months.

One of the major changes was that homes became improvised classrooms and study rooms, and parents and older siblings became temporary teachers. As a result of this unprecedented event, relationships with the government and local educational entities, the outside world, our communities, and each other had to be reoriented. Much was learned from this unexpected and scary experience.

After much planning and agreements that always kept the best interests of the students in mind, by late fall 2022, many aspects of K-12 education had returned to semi-normal and, slowly, to "normal." Schools resumed in-person classes, extracurricular activities flourished, and slowly mask mandates faded. The COVID -19 pandemic was both a new experience for the U.S. and sat alongside events like the terrorist attack of September 11, 2001, as a crisis whose impacts will remain as a tragic, defining historical moment affecting all aspects of society.

Unfortunately, society must be aware that tragic events like these unforgettable experiences could happen again. The COVID-19 pandemic caused a fundamental transformation in K-12 education. It reshaped the educational landscape at all levels, presenting both opportunities and challenges for students, educators, and policymakers.

The pandemic abruptly disrupted education by forcing rapid shifts to remote learning, leading to significant learning losses, widening equity gaps, and increasing mental health challenges for students and their parents. The COVID-19 outbreak was so sudden that many schools had little to no time to design and implement programs to support children's learning while at home. A significant proportion of teachers were unprepared for online learning, lacking the appropriate pedagogical and digital skills.

Teachers faced work-related stress as they adapted to work schedules and digital platforms with minimal training, fundamentally altering the teacher-student dynamic and underscoring the need for more supportive, technology-enabled pedagogical approaches.

Accelerated technology adoption was one of the most immediate and visible changes brought about by the pandemic. The rapid integration of technology into the classroom, which shifted to remote learning in March 2020, forced schools to fully embrace Learning Management Systems (LMSs), Zoom, and educational software almost overnight.

This was a challenge for teachers, parents, and students. The opportunity was to quickly learn about a new educational system and the use of technologies, which, in many cases, parents could not access or afford for their children.

The COVID-19 pandemic fundamentally transformed the relationship between students and teachers by forcing a shift from traditional classrooms and in-person interactions to a more distant, digital-first, and more emotionally integrated model. This relationship became a cornerstone for maintaining educational continuity and building resilience during unprecedented disruption.

There is adaptive expertise from this pandemic experience. Both students and teachers have developed self-regulation and learning skills, as well as "adaptive expertise," enabling them to navigate future disruptions more effectively through improved digital literacy and enhanced adaptability and change management. We can agree that after this experience, schools are not just for learning academics; they are vital social networks, essential for early human development and adaptation, and for teaching citizens to be responsible, resourceful, and productive in the world. This global pandemic experience will, hopefully, better prepare our communities for future human-made and natural disasters.

"We can agree that after this experience, schools are not just for learning academics; they are vital social networks, essential for early human development and adaptation, and for teaching citizens to be responsible, resourceful, and productive in the world."




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Ingrid Schoon, PhD, is Professor of Human Development and Social Policy at University College London and Research Professor at the WZB Berlin Social Science Center; her work focuses on youth development, social inequality, resilience, agency, and life-course transitions.

Marko Lüftenegger, PhD, heads the Department of Developmental and Educational Psychology of the School Age at the University of Vienna; his research focuses on motivational and emotional conditions of teaching and learning as well as the development and evaluation of educational measures and programs.

Self-Regulated Learning in Times of Educational Disruption: What the Pandemic Made Visible

Martin Daumiller, Raven Rinas, Ingrid Schoon, & Marko Lüftenegger

We originally conducted this meta-review as part of a *special issue of the Zeitschrift für Psychologie* on navigating the pandemic and future crises from developmental and educational psychology perspectives (Lüftenegger et al., 2023). Like many colleagues, we were concerned about how COVID-19 affected education. We therefore sought to synthesize the emerging evidence base across students, teachers, and parents.

In this review, we synthesized systematic reviews and meta-analyses on COVID-19-related educational experiences published until November 2022. Across 55 reports, we identified six groups of psychological and cognitive variables: mental health, emotional experiences, attitudes and worries, social relationships, achievement-related variables, and meaning (Daumiller et al., 2023).

Overall, the pandemic was associated with mental health burdens, emotional distress, disrupted relationships, challenges in emergency remote teaching and learning, and learning losses. The effects were heterogeneous and depended on students' resources, social background, family support, access to technology, teachers' work, and institutional preparedness. This illustrated how the pandemic functioned as a stress test of the conditions underlying successful learning.

For the SSRL community, these findings are central because they made visible both the importance and the limits of self-regulated learning. Under pandemic conditions, students were expected to structure their time, monitor their understanding, sustain effort, regulate their emotions, and remain motivated in learning environments that were often weakly structured and emotionally demanding. From a self-determination theory perspective, this disruption can also be understood as a threat to students' basic psychological needs for autonomy, competence, and relatedness, especially when distance learning reduced structure, feedback, and social connection (Lüftenegger et al., 2026).

Learning strategies, self-efficacy, technological literacy, and learning challenges are therefore important concepts for understanding pandemic learning. At the same time, the subsequent literature cited in our review shows that beyond pandemic research, it has been taken up across several related conversations regarding learning loss and educational recovery, student mental health and well-being, online learning and instructional quality, home learning environments and inequality, teacher stress and school leadership, and methodological questions of evidence synthesis. This indicates how the pandemic got increasingly understood not merely as a temporary interruption of instruction, but a disruption of the psychological and material conditions under which students are asked to regulate their learning, which allowed new insights into self-regulated learning.

Another relevant takeaway from our study concerns the importance of the teacher perspective. Teachers are often overlooked actors in educational crisis narratives, even though they provide many of the external structures that enable students' internal regulation, such as routines, feedback, relational orientation, task clarity, and trust. Research taking up our review has extended this point to teacher stress among educators working with marginalized populations and to the demands placed on school leaders in trauma-informed special education contexts (Rosado et al., 2024; Waite, 2025). For SSRL, this means that supporting students' self-regulation also means supporting teachers' and school leaders' capacity to create appropriate learning environments.

Finally, the review also carries two meta-level lessons about research. First, the pandemic generated vast educational research quickly, but with risks: fragmentation, overlapping reviews, uneven quality, and empirically unwarranted conclusions. Crisis research must therefore distinguish evidence from projection, evaluate quality, and communicate uncertainty.

Second, educational resilience requires research resilience. Later methodological work reinforces the value and emphasizes that they do not replace expert judgment, transparent documentation, open materials, or careful interpretation (Quan et al., 2024; Quan & Hui, 2024). In future crises, research must be rapid, collaborative, cumulative, unideological, and open. Supporting researchers in doing this work is part of supporting education itself.

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Examining the Cognitive and Psychological Effects of the COVID-19 Global Pandemic on High School, College, and Graduate Learners

Book 1: Table of Contents

Instructional Survival in the Midst of the Perfect Storm: The Experiences of K-12 Teachers During the COVID-19 Global Pandemic

Book 2: Table of Contents

"To date, there remains limited knowledge about the cognitive, motivational and psychological impact of the COVID-19 global pandemic on K-12 teachers in both private and public educational sectors around the world. This book seeks to explore the impact of this global pandemic on the educational stakeholders as well, including K-12 teachers and administrators.

To date, there are no conceptual models which depict the impact of this event on the learner from an educational psychological perspective. Finally, this book seeks to investigate how K-12 teachers and administrators can best meet the needs of their learners in a challenging set of circumstances such as a global pandemic, while maintaining educational excellence to ensure that all learners continue to learn and achieve to the best of their abilities."