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Studying and
Self-Regulated
Learning

"Decolonize their minds..."
(Zusho & King, 2024).

Akane
Zusho
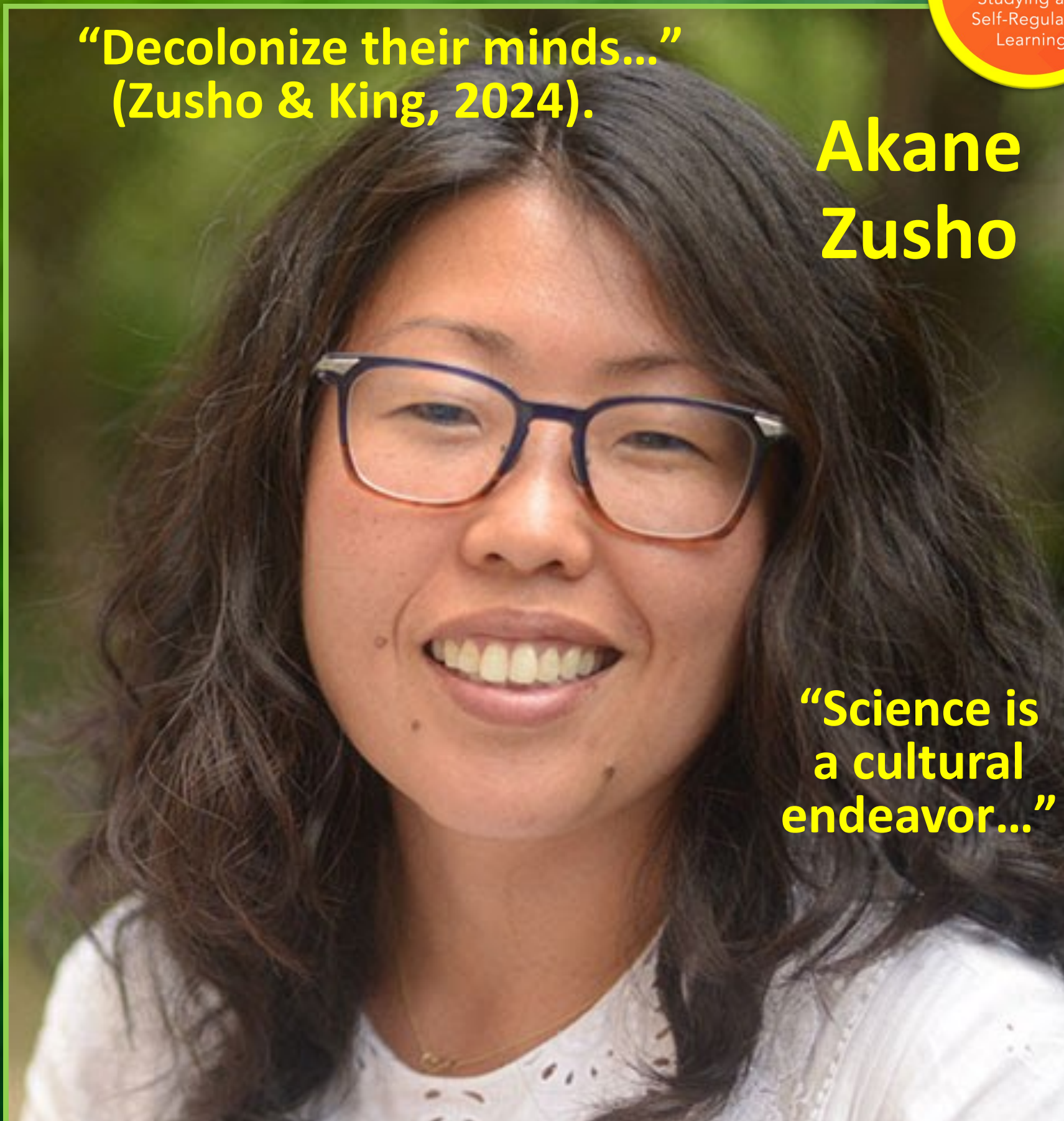
"Science is
a cultural
endeavor..."

EDITOR-IN-CHIEF'S CHOICE:
SELECTED 2024 WRITINGS RELEVANT TO
SELF-REGULATED LEARNING

Studying and Self-Regulated Learning Special Interest Group of
the American Educational Research Association

PAMELA F. MURPHY (EXECUTIVE EDITOR)
HÉFER BEMBENUTTY (EDITOR-IN-CHIEF, CONTENT & GRAPHIC EDITOR)

Editor-In-Chief's Choice: Epistrepho to Selected 2024 Writings Relevant to Self-Regulated Learning
Héfer Bembenutty

This issue of *Times Magazine*, curated by the Studying and Self-Regulated Learning (SSRL) Special Interest Group (SIG) of the American Educational Research Association, highlights a selection of key 2024 writings related to self-regulated learning. While numerous other exceptional works could have been included, space constraints necessitated a focused collection.

The chosen articles aim to inspire researchers, educators, and learners to further explore the dynamic nature of human agency, self-reflection, and proactivity in the pursuit of self-regulated learning skills. By fostering these abilities, individuals can better set and achieve their goals, contributing to personal and academic growth. This compilation underscores the importance of continued inquiry into the processes that empower individuals to take ownership of their learning and professional journeys.

Words, spoken or written, hold extraordinary power. They can spark movements, question conventions, promote empathy, and drive transformation. Across history, words have served as a foundation for societal advancement and a catalyst for impactful change. Iconic words, such as Nelson Mandela's opening when he said, "I greet you all in the name of peace, democracy, and freedom for all" (Mandela, 1990, para. 1) have significantly impacted the world. Similarly, Mother Teresa's emphasis on love and purpose when she said, "Love begins at home, and it is not how much we do, but how much love we put into what we do" (Mother Teresa, 1994, para. 12) has moved many toward a more caring world.

Within the domain of self-regulated learning, examples of impactful words include those of Karen R. Harris when she stated, "In training, emphasize the development of meta-cognitive, self-regulatory skills" (Harris, 1982, p. 13). Other vibrant words came from Barry J. Zimmerman who underscored the importance of fostering self-regulatory skills, as well as distinguishing between processes and strategies to optimize learning in this quote: "It is important to distinguish between self-regulated learning *processes*, such as self-monitoring, and *strategies* designed to optimize these processes, such as record-keeping" (Zimmerman, 1990, p. 185).

Written by visionary pioneers, the selected writings emphasize the importance to turn back, that is, to *epistrepho* (not to be confused with epistrophe)—to engage in a reflective process of drawing knowledge from the past while aligning it with present actions and future aspirations. This approach, rooted in scientific rigor and evidence-based practices, fosters a balanced perspective that empowers researchers, educators, and learners to address contemporary challenges with purpose.

Central to this perspective is the principle of self-regulated learning, which serves as a foundation for both personal development and educational progress. By continuously refining methodologies and embracing innovation grounded in empirical evidence, the field ensures that its practices remain dynamic and impactful.

This issue highlights and celebrates some of the most recent research conducted with rigorous methodologies, published in reputable journals with wide acceptance in our field, and that have the potential to advance our field while revealing the nature and processes associated with self-regulated learning. Articles focused on motivation, culture, race, racism, effective writing instruction, note-taking, and interventions for pre-service teachers are of particular interest for self-regulated learning scholars, those who want to conduct research, teach, and learn in culturally self-regulated learning communities.

Essentials of Research Methods for Educators, authored by Anastasia Kitsantas, Timothy J. Cleary, Maria K. DiBenedetto, and Suzanne E. Hiller, is a comprehensive textbook rooted in the principles of self-regulated learning included in this issue. Written to equip educators with practical tools, it integrates hands-on activities that promote the development of self-regulation skills essential for effective researching, teaching, and learning.

Their textbook emphasizes strategies such as goal-setting and highlights the cyclical nature of education through planning, execution, and reflection. By combining theoretical foundations with practical applications, the authors provide a valuable resource for fostering a deeper understanding of research methods while encouraging the adoption of self-regulated learning approaches in educational settings.

Selected for this issue is Stephen J. Aguilar's GLINTS—a YouTube platform designed to support doctoral students and early career researchers in navigating their academic journeys with self-efficacy and purpose. By emphasizing self-efficacy and self-regulated learning, GLINTS equips graduate students with practical strategies to excel in academia. Aguilar shares insightful advice tailored to fostering academic success while serving as a valuable guide for those aspiring to contribute meaningfully to academia and achieve their scholarly goals in culturally self-regulated communities.

We hope this issue of the *Times Magazine* will inspire all of us to engage in a true epistrepho process to turn back to reflect on our beliefs, actions, and behaviors concerning critical topics such as motivation, culture, race, racism, and effective teaching practices. By fostering this reflection, we all could examine past perspectives but also envision forward-thinking approaches.

Topics like metacognition, multimedia learning, note-taking, and interventions for pre-service teachers are explored in this issue with the goal of enhancing educational practices and fostering culturally self-regulated environments. Through epistrepho and effort, we all hope to contribute to the creation of culturally self-regulated learning communities that support equitable learning experiences for all.
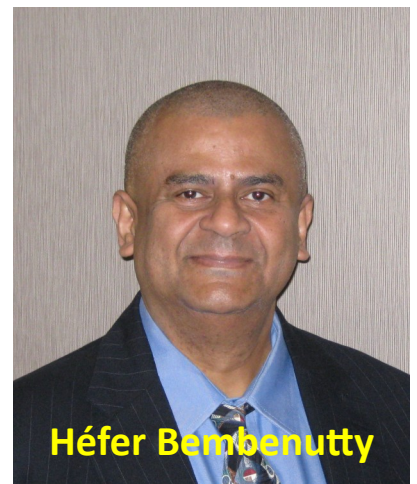
Héfer Bembenutty

CROSS-CULTURAL RESEARCH ON LEARNING AND TEACHING
Akane Zusho & Ronnel B. King

Abstract

"In short, culture has always been relegated to the periphery in the field of educational psychology – important, but never central. Yet, there is, especially within the last several years, growing recognition that culture matters – that, given demographic shifts, culture is essential to understanding the schooling experiences of a growing number of students. This chapter provides an overview of the theoretical assumptions and goals guiding the research in cross-cultural psychology, followed by a critical analysis of empirical studies on achievement, instruction, and attitudes and beliefs about learning and instruction according to these guiding principles. Compared with the fields of anthropology and sociology, psychology has been decidedly slower in recognizing the centrality of culture's influence on mind and behavior. The first principle of cross-cultural psychology is that culture is neither an add-on to universal machinery that can simply be ignored in investigations of the mind or behavior; nor is it something that can be studied completely independently of nature."

Zusho, A., & King, R. B. (2024). Cross-cultural research on learning and teaching. In P. A. Schutz & K. R. Muis (Eds.), *Handbook of educational psychology* (4th ed., pp. 92-118). Routledge.

The chapter underscores the imperative for educational psychologists to recognize the inherently cultural nature of science and its implications for research and practice. It emphasizes the need to move beyond broad generalizations and instead critically examine the tensions, gaps, and biases within the existing body of literature.

The authors highlight the prevalence of cultural bias and deficit perspectives that can shape educational discourse, often to the detriment of diverse learners. They advocate for an exploration of how sociocultural and ecological factors influence schooling, urging a shift toward more inclusive and contextually responsive approaches.

What is culture?

To Zusho and King, *culture* is a fundamental framework for human life, encompassing the collective use of resources within an environment to achieve shared goals. It is an integral part of all human groups, characterized by its learned, shared, and regulated nature through political, legal, and social systems. Culture shapes behaviors, beliefs, and practices, serving as a guiding structure for societal interactions and development.

What is Cross-Cultural Psychology?

To Zusho and King, *cross-cultural psychology* focuses on examining the similarities and differences in psychological processes across various cultures. This field seeks to understand how cultural contexts influence human thought, emotion, and behavior, providing valuable insights into the interplay between universal psychological principles and culturally specific variations. Together, the study of culture and cross-cultural psychology enhances our understanding of human diversity and fosters greater appreciation for the complexities of global interactions.

Future Directions

The authors made important practical and vital recommendations:

⇒ Future research must prioritize diversification in all aspects— broadening the diversity of samples, ensuring inclusivity among researchers conducting these studies, and embracing varied cultural and methodological approaches.

⇒ Emic, indigenous, and holistic perspectives should be integrated to enrich our understanding and analysis.

⇒ Efforts should shift away from rank ordering groups or countries and instead focus on exploring within-group and within-country variability. This approach will provide deeper insights into the factors contributing to observed differences.

⇒ Researchers are encouraged to complement cross-cultural comparisons with in-depth, structure-oriented studies that uncover the underlying elements driving variability within specific contexts.

⇒ The educational psychology community must engage in reflexivity, critically examining the cultural dimensions, understanding that **science is a cultural endeavor**.

⇒ Researchers can adopt a more inclusive and comprehensive approach to their work, fostering a more equitable and globally relevant body of knowledge.

Conclusion

Zusho and King concluded that by fostering understanding and reducing divisions, recognizing similarities in practices and values between ourselves and others is crucial. By acknowledging commonalities, we bridge gaps and create opportunities for meaningful connection. Encouraging individuals to critically examine their biases and work toward **decolonizing their minds** can further promote humility and open-mindedness.

This process not only enriches our interactions but also diminishes the tendency to judge or alienate those who are different from us. As we strive for a more inclusive and empathetic world, these efforts become essential in cultivating mutual respect and shared humanity.

Akane Zusho, PhD, is a Professor in the Graduate School of Education at Fordham University. She holds a Ph.D. in Education and Psychology, from the University of Michigan, Ann Arbor. Zusho's research is dedicated to empowering students, teachers, and leaders to transform learning environments and promote systemic change, ensuring that all students feel competent and engaged. Her work extensively explores the intersection of culture, achievement motivation, and self-regulated learning, examining how cultural, cognitive, and motivational processes influence learning. In recognition of her significant contributions to educational psychology, Zusho received the Richard E. Snow Early Contributions Award from the American Psychological Association. She is the co-author of the textbook *Differentiated Instruction made Practical* with Rhonda Bondie. Zusho currently serves as the Editor-in-Chief of The *Journal of Experimental Education*. (zusho@fordham.edu)

Ronnel B. King, PhD, is an Associate Professor in the Department of Curriculum and Instruction, Faculty of Education, The Chinese University of Hong Kong. He is interested in understanding the factors that underpin motivation, socio-emotional learning, and well-being in K-12 and higher education settings. He is also keen on leveraging positive psychology/education interventions to enhance these optimal states. He has published more than 150 journal articles on these core topics which have appeared in the top-ranked journals in educational psychology. He obtained his PhD from The University of Hong Kong. His research has been funded by external bodies such as UNICEF and General Research Fund (GRF) among others. (rbking@cuhk.edu.hk)

Past Due! Racializing Aspects of Situated Expectancy-Value Theory Through the Lens of Critical Race Theory

Jamaal S. Matthews & Allan Wigfield

Abstract

"The authors take first steps in racializing Eccles and Wigfield's situated expectancy-value theory (SEVT). SEVT was initially developed to explain gender differences in motivation for and choice of science, technology, engineering, and mathematics majors and careers but has been mostly silent on issues of race and racism in motivation research. Thus, the authors focus on Black American adolescents' school experiences and reconceptualize three parts of the model: SEVT's conceptualization of the cultural milieu, its portrayal of the socialization of motivation in school and at home, and aspects of individuals' subjective task values, one of the key constructs in the model. To "break down silos" we connect SEVT to critical race theory by suggesting the cultural milieu "box" in the model be reimagined to include the impact of systemic racism and discrimination, power differentials, school segregation, and inequities in teacher quality and transience. Regarding racial socialization patterns within schools, we propose the notion of stage-culture-environment misfit, and evaluate teachers' beliefs, biases, and cultural (in)competence. We also connect SEVT to empirical research on racial-ethnic socialization, specifically how the parents of Black children prepare them for discriminatory experiences and foster healthy racial identities. Turning to individuals' subjective task values, we suggest expanding the perceived cost aspect of task value to include racialized opportunity cost. We also extend intrinsic and attainment aspects of task value through integrating the emergent literature on Black joy. We conclude by suggesting critical pragmaticism as a possible broad framework in which motivation researchers from different perspectives can work together."

Matthews and Wigfield argue that motivation research has historically emphasized the need to account for cultural diversity, yet significant gaps remain in the empirical exploration of achievement motivation across varied cultural contexts.

Traditional motivational theories in educational psychology often overlook the profound effects of interpersonal discrimination and systemic racism on the academic drive of diverse student populations.

To address these limitations, they integrate critical race theory (CRT) as a framework to critique and enhance the situated expectancy-value theory (SEVT; Eccles & Wigfield, 2020).

By incorporating CRT, they aim to deepen the understanding of how sociocultural and structural inequities shape motivational processes, offering a more inclusive and nuanced perspective.

This approach seeks to bridge existing theoretical gaps and provide actionable insights for fostering equitable educational outcomes.

Eccles and Wigfield's SEVT

Eccles, Wigfield, and their collaborators introduced the expectancy-value model, a foundational framework in the study of achievement motivation, decision-making, and performance outcomes. Over the past four decades, this model has significantly influenced research in educational psychology and related fields. It emphasizes the interplay between individuals' expectations of success and the subjective value they assign to tasks as key determinants of their motivation and subsequent behavior.

Reconceptualizing and Racializing the Cultural Milieu Box in SEVT

Matthews and Wigfield explain that Eccles-Parsons et al. (1983) introduced their model to explore the cultural, social, and psychological factors contributing to the underrepresentation of women and girls in STEM fields, framing this as a critical issue of social justice.

While the model has been instrumental in addressing gender disparities, its application has not been sufficiently broadened to encompass other forms of social inequity, such as racial disparities in education or the compounded challenges faced by individuals with intersecting marginalized identities.

To address these gaps, they argue that it is imperative to reconceptualize the cultural and socialization dimensions of the model. This would involve integrating a deeper focus on the roles of systemic power dynamics, subjugation, and disenfranchisement in shaping the educational experiences and motivational frameworks of racially marginalized students.

What CRT Offers to Cultural and Socialization Aspects of SEVT

To reimagine SEVT's cultural milieu through the lens of CRT, the authors considered Dixon and Anderson's (2018) call to reject ahistoricism to critically analyze how historical patterns of racial oppression continue to shape contemporary educational inequities.

By acknowledging that race is a socially constructed concept designed to sustain systems of racism—defined as the intersection of power and racial prejudice—Matthews and Wigfield claim that it is more useful to understand the structural barriers that perpetuate disparities (i.e., power + racial prejudice = racism).

Suggestions

⇒ They suggest adding the following to the school socialization influences considered by SEVT: identity-stage-environment misfit; power differentials.

⇒ They suggest adding the following to the parent socialization model in SEVT: parent teaching about race and ethnicity; promoting ethnic pride; preparing children for bias and discrimination; power differentials; and promotion of mistrust.

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Jamaal S. Matthews

Effective Writing Instruction for Students in Grades 6 to 12: A Best Evidence Meta-Analysis

Steve Graham, Yucheng Cao, Young-Suk Grace Kim, Joongwon Lee, Tamara Tate, Penelope Collins, Minkyung Cho, Youngsun Moon, Huy Quoc Chung, & Carol Booth Olson

Abstract

"The current best evidence meta-analysis reanalyzed the data from a meta-analysis by Graham et al. (J Educ Psychol 115:1004–1027, 2023). This meta-analysis and the prior one examined if teaching writing improved the writing of students in Grades 6 to 12, examining effects from writing intervention studies employing experimental and quasi-experimental designs (with pretests). In contrast to the prior meta-analysis, we eliminated all N of 1 treatment/control comparisons, studies with an attrition rate over 20%, studies that did not control for teacher effects, and studies that did not contain at least one reliable writing measure (0.70 or greater). Any writing outcome that was not reliable was also eliminated. Across 148 independent treatment/control comparisons, yielding 1,076 writing effect sizes (ESs) involving 22,838 students, teaching writing resulted in a positive and statistically detectable impact on students' writing (ES = 0.38). Further, six of the 10 writing treatments tested in four or more independent comparisons improved students' performance. This included the process approach to writing (0.75), strategy instruction (0.59), transcription instruction (0.54), feedback (0.30), pre-writing activities (0.32), and peer assistance (0.59). In addition, the Self-Regulated Strategy Development model for teaching writing strategies yielded a statistically significant ES of 0.84, whereas other approaches to teaching writing strategies resulted in a statistically significant ES of 0.51. The findings from this meta-analysis and the Graham et al. (2023) review which included studies that were methodologically weaker were compared. Implications for practice, research, and theory are presented."

Graham and his colleagues posited that to enhance writing instruction in secondary schools, educators require access to evidence-based teaching practices with demonstrated effectiveness. They conceived that meta-analysis serves as a valuable method to evaluate and synthesize findings from multiple research studies addressing similar topics.

By analyzing the collective direction and strength of the effects reported, this approach helps identify strategies that consistently yield positive outcomes. Such insights enable teachers to adopt practices that are not only research-supported but also tailored to improve student writing skills effectively.

Question 1: Does Teaching Writing Improve Writing Outcomes?

Research findings indicate that teaching writing has a statistically significant positive impact on students' performance, with an effect size (ES) of 0.38. Notably, 72% of the effect sizes analyzed were positive, underscoring the consistent benefits of writing instruction.

Question 2: Do Study Attributes Predict the Magnitude of Writing Outcomes?

Their analysis revealed that none of the examined predictors demonstrated a unique or statistically significant relationship with variations in writing outcomes. This suggests that the factors under consideration may not independently influence the observed effects on writing performance.

### Question 3: Do Specific Writing Treatments Improve Writing Outcomes?

⇒ Comprehensive writing programs demonstrated a statistically significant impact on students' writing performance when all writing outcomes were considered collectively.

⇒ Instruction focused on teaching specific writing strategies also showed a measurable positive effect across all writing outcomes. However, digital writing tools, including word processing, enhanced word processing, and speech-to-text synthesis, did not yield statistically significant improvements in overall writing measures, writing quality, or ideation.

⇒ In contrast, transcription instruction produced a notable effect size (ES = 0.54) for overall writing outcomes, indicating its effectiveness in enhancing students' writing skills.

⇒ Feedback interventions were similarly impactful, with an ES of 0.30 for all writing measures.

⇒ Pre-writing activities also contributed to improved writing outcomes with an ES of 0.32, though their effects were not statistically significant for writing quality or ideation.

⇒ Computer-assisted instruction did not result in a statistically significant impact on any writing outcomes.

Conclusion

Graham and colleagues' meta-analysis highlights that secondary students' writing skills can be significantly enhanced when they receive explicit instruction on how to write. Furthermore, the study identifies various effective writing interventions that contribute to improving adolescents' writing abilities. These findings offer valuable guidance for those aiming to strengthen writing instruction in middle and high schools.

Steve Graham, EdD, is a recipient of the AERA SSRL SIG's Barry J. Zimmerman Award for Outstanding Contributions. He is a Regents Professor and the Warner Professor in the Division of Leadership and Innovation at Mary Lou Fulton Teachers College, Arizona State University. Since the 1980s, he has studied how writing develops, how to teach it effectively, and how it can be used to support reading and learning. Graham's research involves typically developing writers and students with special needs in both elementary and secondary schools, with much of this research occurring in classrooms in urban schools. (steve.graham@asu.edu)
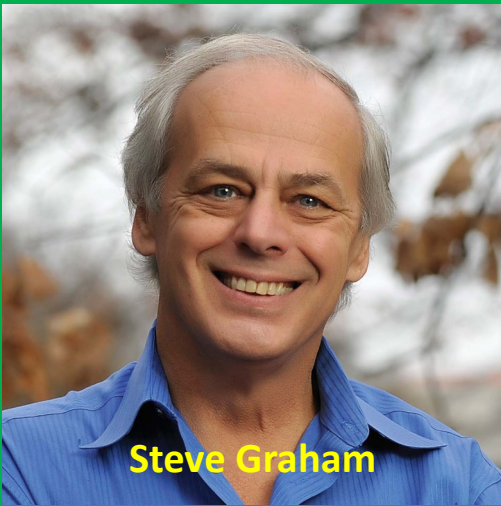
Steve Graham

Self-Regulated Learning Interventions for Pre-Service Teachers: A Systematic Review

Alazne Fernández Ortube, Ernesto Panadero, & Charlotte Dignath

Abstract

"Self-regulated learning (SRL) is a key competence for pre-service teachers to develop, both for their own activities as learners and for their future activities as teachers. Therefore, it is crucial to understand how pre-service teachers can be supported in acquiring SRL competence in their initial training. To reach this aim, we conducted a systematic review of SRL interventions for pre-service teachers. Sixty-six intervention studies fulfilled the inclusion criteria. We explored three aspects of those SRL interventions, and how they moderate the interventions' effectiveness: (1) the theoretical and practical underpinnings of SRL, (2) whether the intervention aimed to promote SRL learning and/or teaching of SRL, and (3) the intervention's pedagogical characteristics and content related to the SRL professional competences. We found that the most effective SRL interventions (1) focused the training on one or two SRL areas (especially cognition and metacognition); (2) when targeted both, SRL learning and teaching of SRL, pre-service teachers' SRL skills improved as well as their pedagogical skills; and (3) addressed direct and implicit SRL instruction, inside which self-assessment of learning and teaching practices appear as an effective pedagogical method. We derive implications from our findings for designing effective SRL interventions for prospective teachers."

In this study, Ortube, Panadero, and Dignath emphasize that understanding how teachers develop the competence to promote self-regulated learning (SRL) is crucial for improving education.

They advocate for embedding SRL principles into teacher training from the start to foster these skills early. Teachers, as self-regulated professionals, should continuously reflect on their practices to adapt their methods effectively. They need strong pedagogical expertise to implement SRL strategies suited to diverse classroom contexts.

By building these capacities early, teachers can empower students to cultivate autonomy, motivation, and effective learning skills, fostering dynamic, self-directed learning environments.

Some Findings

⇒ The findings revealed that, regardless of the combination of areas promoted by the SRL interventions, Zimmerman's (2000) model emerged as the most frequently cited model (74%), closely followed by Pintrich's (2000) model (67.4%).

⇒ They found that interventions emphasizing the dual role of SRL are more likely to incorporate SRL knowledge instruction compared to those focusing solely on the teacher's role as an SRL facilitator.

⇒ These interventions employ indirect instructional methods to foster SRL, with direct instruction—particularly metacognitive training—playing a supporting role.

⇒ To maximize SRL development, frameworks outlining the principles and components of SRL should underpin the design of such interventions.

⇒ Targeted approaches addressing specific SRL processes yield greater effectiveness than broader, generalized strategies.

⇒ By concentrating on distinct areas of SRL, interventions can provide more precise and impactful support, ultimately enhancing learners' ability to regulate their own learning processes.

Recommendations

1. Effective SRL interventions for pre-service teachers should focus on specific SRL areas for maximum impact.
2. Research underscores the value of metacognitive strategy training, which enhances individuals' ability to regulate their learning.
3. Integrating self-reflection and self-assessment into training fosters deeper understanding of learning and teaching, building both SRL skills and the capacity to teach these strategies.
4. Highlighting teachers' dual role as self-regulated learners and SRL facilitators creates a robust intervention framework, strengthening their skills while equipping them to nurture SRL in students, ultimately enhancing educational outcomes.

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Ernesto Panadero   Alazne Fernández Ortube   Charlotte Dignath

Revisiting the Metacognitive and Affective Model of Self-Regulated Learning: Origins, Development, and Future Directions
Anastasia Efklides & Bennett L. Schwartz

Abstract
"Efklides and colleagues developed the Metacognitive and Affective model of Self-Regulated Learning (MASRL) to provide a comprehensive theoretical framework of self-regulated learning (SRL). The distinguishing feature of MASRL is that it stresses metacognitive experiences and other subjective experiences (e.g., motivational, affective) as critical components of SRL. The insights underlying the model are that metacognitive experiences are related to affect, and that metacognition, motivation, and affect interact in SRL rather than function independently. Moreover, the MASRL proposes that SRL takes place at two levels, the Person and the Task X Person levels, with the latter being specific to the learning task and its demands. Although SRL can start with goal setting and planning in a top-down manner, monitoring and control processes at the Task X Person level provide input for bottom-up SRL. To highlight the theory-building process that led to the MASRL theory, we present questions that inspired its conception, its theoretical underpinnings, and current evidence supporting it. We also discuss the implications of the MASRL theory for understanding SRL in the classroom and for teacher–student interactions. Finally, we discuss open questions and issues that future research on MASRL would address in the context of educational psychology and SRL promotion."

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Anastasia Efklides

focusing on its three foundational principles. These principles include the interplay between ME and affect, the connections between ME and individual person-level characteristics, and the distinction between top-down and bottom-up SRL.

In this article, Efklides and Schwartz offer an in-depth analysis of the Metacognitive and Affective Model of Self-Regulated Learning (MASRL), discussing its scope, core principles, and impact on the field. They examine the theoretical foundations shaping MASRL and its role in addressing key challenges in self-regulated learning.

The authors highlight the theory's relevance to educational research and its potential to enhance teaching strategies and learner support.

Efklides and Schwartz propose key questions that underpin the MASRL model, exploring the relationship between metacognition, motivation, and self-regulation.

1. *What is the nature of subjective experiences in SRL (e.g., feelings and judgments about one's cognitive states or performance in learning tasks), and what are their functions?*

Metacognitive Experiences (ME) play a distinct role in cognition, separate from emotions. They help individuals gauge the ease or difficulty of tasks, offering reflective feedback on thought fluency or obstacles. This awareness aids in evaluating accuracy, guiding cognitive control decisions.

2. *What is the role of emotions in SRL and what are their possible interrelations with ME?*

The MASRL theory highlights the interconnectedness of motivation and emotions in learning, proposing that the Affective system regulates motivation-driven effort.

3. *What is the relation of ME to relatively stable personal characteristics, such as cognitive ability, metacognitive knowledge and skills, motivation, and affect?*

When tackling a learning task, students rely on various internal resources that shape their engagement and success. Their prior knowledge and skills establish a base for understanding, while metacognitive abilities help them plan, monitor, and adjust strategies.

What Inspired the Theory and What Was the Evidence That Led to Its Formulation?

The evolution of ideas behind MASRL underscores the vital role of subjective experiences in shaping cognitive and metacognitive processes. These experiences offer insights into individual perceptions, linking self-awareness with the regulation of thinking.

Central to this is the "feeling of difficulty," which informs how individuals evaluate and adjust their efforts during learning or problem-solving. Moreover, the connection between metacognitive experiences and self-concept highlights their influence on identity and approaches to challenges.

Evidence Supporting the MASRL Framework

Efklides and Schwartz provide a comprehensive review of evidence supporting the MASRL framework,

The Virtues of MASRL Theory

One of the theory's most significant strengths is its ability to offer a comprehensive explanation of the mechanisms driving SRL. The theory enables researchers to rigorously test its predictions, fostering a deeper understanding of the cognitive and behavioral processes involved.

This level of specificity enhances the potential for identifying contradictory evidence, which can catalyze refining existing models or developing new insights. Such an approach advances theoretical knowledge and contributes to practical applications that support effective learning strategies.

Open Questions

1. Absence of metamotivational and meta-affective knowledge representation in MASRL.
2. Uncertainty regarding which subjective experiences influence specific person-level characteristics.
3. Impact of teacher instructional style (e.g., teacher-directed vs. child-centered) on promoting SRL.
4. Influence of student age and individual differences on SRL acquisition.
5. Potential lack of spare cognitive resources for some students, despite their metacognitive knowledge of strategies.

The Development, Testing, and Refinement of Eccles, Wigfield, and Colleagues' Situated Expectancy-Value Model of Achievement Performance and Choice

Jacquelynne S. Eccles & Allan Wigfield

Abstract

"To address the seven guiding questions posed for authors of articles in this special issue, we begin by discussing the development (in the late 1970s-early 1980s) of Eccles' expectancy-value theory of achievement choice (EEVT), a theory developed to explain the cultural phenomenon of why girls were less likely to participate in STEM courses and careers. We then discuss how we tested key predictions from the theory, notably how expectancies and values relate to achievement choices and performance and how socialization practices at home and in school influence them. Next, we discuss three main refinements: addressing developmental aspects of the theory, refining construct definitions, and renaming the theory situated expectancy value theory. We discuss reasons for that change, and their implications. To illustrate the theory's practicality, we discuss intervention projects based in the model, and what next steps should be in SEVT-based intervention research. We close with suggestions for future research, emphasizing attaining consensus on how to measure the central constructs, expanding the model to capture better motivation of diverse groups, and the challenges of testing the increasingly complex predictions stemming from the model. Throughout the manuscript, we make suggestions for early career researchers to provide guidance for their own development of theories."

Eccles and Wigfield showcase the Situated Expectancy-Value Theory (SEVT), which represents a significant advancement in understanding motivation and decision-making processes. This article aims to explore the development and foundations of SEVT, structured around seven key questions that guide its conceptual framework:

1. **Did Findings Lead to Some Changes in the Theory? or Did Unexpected Findings Lead to New Directions?**
2. **When Do Expectancies and Values Emerge During Childhood? The Childhood and Beyond (CAB) Study**
3. **What Is the Current Status of the Theory? How Is It Similar and Different Than the Initial Theory You Created?**
4. **From EEVT to SEVT: Why the Change?**
5. **What Are the Contributions of This Theory? How Has It Benefitted Educational Psychology Research, Practice, and/or Policy?**
6. **What Are the Virtues of the Theory?**

Question 7: What Do You See as Some Promising "Next Steps" or "Open Questions" for Future Development of the Theory?

⇒ Current trends highlight the situated nature of expectancies and subjective task values (STVs), emphasizing their connections to self-regulated learning and their roles across diverse groups.

⇒ A critical area for future exploration involves understanding how different aspects of tasks interact to shape overall STVs and the hierarchical structure of STVs and academic self-concepts.

⇒ Addressing methodological challenges, particularly in measuring expectancies, values, and related constructs, remains a priority.

⇒ Recent advancements in the study of cost provide promising new tools for this purpose.

⇒ Researchers applying SEVT frameworks to ethnicity must consider how systemic factors like racism, discrimination, and oppression shape children's evolving self-concepts of ability (SCAs) and STVs.

⇒ Matthews and Wigfield (2024) have proposed integrating racialized perspectives into SEVT, particularly within the cultural milieu and socialization components, to better understand the motivational development of Black children.

Conclusion

Eccles and Wigfield conclude by highlighting that SEVT continues to thrive as a dynamic and increasingly intricate framework, offering critical insights into the factors influencing individual decision-making and performance across various activities. Its applicability and relevance underscore its value in advancing both theoretical understanding and practical applications.

The theory presents significant opportunities for further exploration, with numerous unanswered questions and areas for refinement. They anticipate that future studies will build upon this foundation, driving innovation and uncovering new dimensions of its utility.
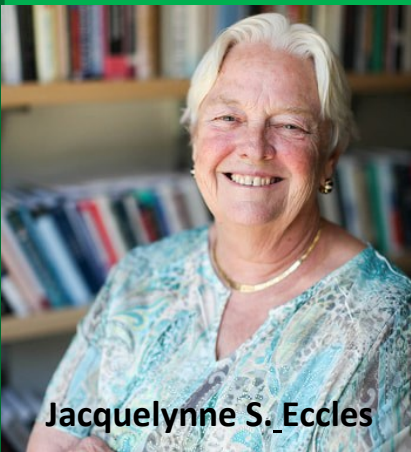
Jacquelynne S. Eccles, PhD, is the Distinguished Professor of Education at the University of California, Irvine and formerly the McKeachie/Pintrich Distinguished University Professor of Psychology and Education at the University of Michigan, as well as Senior Research Scientist and Director of the Gender and Achievement Research Program at the Institute for Social Research at the University of Michigan. Over the past 40 years, Eccles has conducted research on a wide variety of topics including gender-role socialization, teacher expectancies, classroom influences on student motivation, and social development in the family and school context. One of the leading developmental scientists of her generation, she has made seminal contributions to the study of achievement-related decisions and development. Most notably, her expectancy-value theory of motivation and her concept of stage-environment have served as perhaps the most dominant models of achievement during the school years, contributing to extensive research and reform efforts to improve the nature of secondary school transitions. (jseccles@uci.edu)

Allan Wigfield, PhD, is now professor emeritus in the Department of Human Development and Quantitative Methodology, Distinguished Scholar-Teacher and University Honors faculty fellow at the University of Maryland. His research centers on how children's motivation develops across the school years in different areas. He has designed interventions to help improve children's reading motivation and comprehension, as well as to improve students' STEM motivation and participation. Wigfield has received the Sylvia Scribner Award from Division C of the American Educational Research Association and the University of Maryland Graduate School's Graduate Mentor of the Year Award. He is a fellow of the American Educational Research Association, the American Psychological Association and the Association for Psychological Science. (awigfiel@umd.edu)

Jacquelynne S. Eccles

Allan Wigfield

Editor-In-Chief's Textbook Choice:
Essentials of Research Methods for Educators
Anastasia Kitsantas, Timothy J. Cleary, Maria K. DiBenedetto, & Suzanne E. Hiller
Essentials of Research Methods for Educators - Google Books

"*Essentials of Research Methods for Educators* provides future teachers, specialists, administrators, and educational leaders with a textbook and a resource that goes beyond the classroom to use in their careers. With a focus on the wide variety of data available to educators and the importance of data literacy for all those involved in education, this book presents research methods in a relatable educational context with a variety of concrete examples. The authors use their expertise in educational psychology to optimize learning. The structure of the book breaks down research into discrete steps with "Let's See It!, Let's Do It!, and You Do It!" steps in each chapter so students feel motivated to complete their research projects. By covering qualitative, quantitative, and mixed methods research, with additional chapters on action research and program evaluation, students get a complete picture of the current research methods landscape. This highly scaffolded book supports future educational leaders in incorporating research and methods into their work and lives."
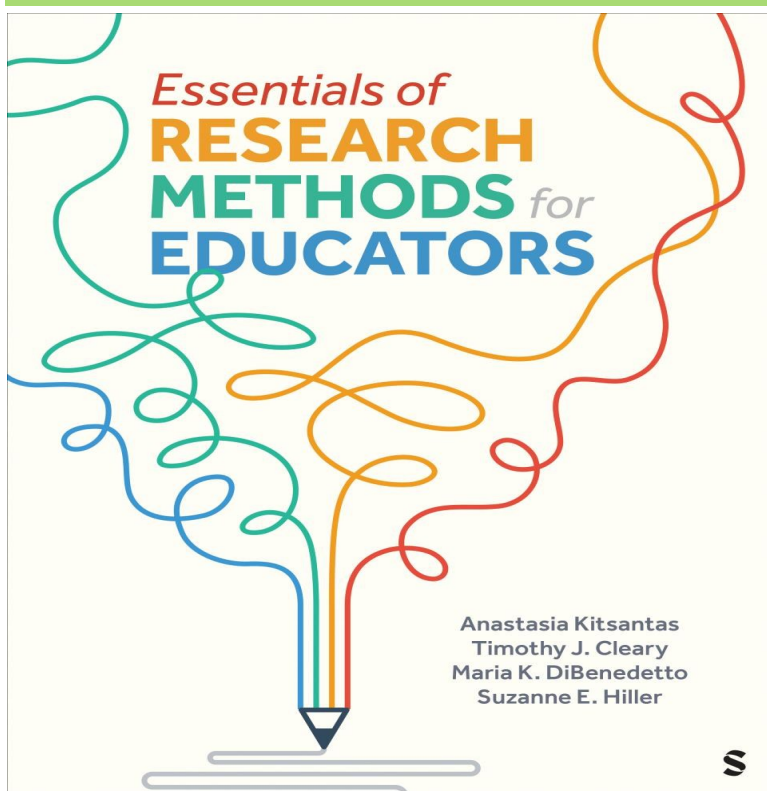
Anastasia Kitsantas, Timothy J. Cleary, Maria K. DiBenedetto, and Suzanne E. Hiller have authored a comprehensive book titled *Essentials of Research Methods for Educators*, published by SAGE. This textbook is designed for preservice teachers, experienced educators, administrators, and other school-based practitioners to enhance their ability to effectively interpret, analyze, and utilize data findings to improve teaching and learning. Grounded in the theory of self-regulated learning, a unique feature of this textbook is its emphasis on engaging learners through hands-on activities that foster the development of self-regulation skills. Each chapter includes self-regulated learning activities that guide readers through modeling concepts ("Let's see it!"), guided practice ("Let's do it!"), and independent practice ("You do it!"). Another distinctive feature of the textbook is its incorporation of self-regulated learning strategies, such as goal-setting, knowledge checks, and key takeaways, which promote a cyclical process of planning, doing, and reflecting. This approach not only enhances interest and self-efficacy in research methods but also provides a structured method to mastering these skills though self-regulation.

Anastasia Kitsantas, PhD, is a recipient of the AERA SSRL SIG's Barry J. Zimmerman Award for Outstanding Contributions and is professor of Educational Psychology in the College of Education and Human Development at George Mason University. She has served as Director of the PhD in Education Program and the Division of Educational Psychology, Research Methods, and Education Policy. She received her Ph.D. in Educational Psychology from the Graduate School and University Center of the City University of New York. Kitsantas' research interests focus on the development of self-regulated learning and student motivation across diverse areas of functioning. (akitsant@gmu.edu)

Timothy J. Cleary, PhD, is a recipient of the AERA SSRL SIG's Barry J. Zimmerman Award for Outstanding Contributions and is a professor and Chair of the Department of School Psychology in the Graduate School of Applied and Professional Psychology (GSAPP) at Rutgers University. He earned his Ph.D. in Educational Psychology from CUNY Graduate School and University Center. Cleary devotes most of his time to conducting research on SRL and motivation-related intervention and assessment issues as well as emerging trends and professional issues among school-based practitioners and educators. (timothy.cleary@gsapp.rutgers.edu)

Maria K. DiBenedetto, PhD, holds a doctorate in Educational Psychology with a specialization in Learning, Development, and Instruction from the Graduate School and University Center of the City University of New York. She has taught undergraduate and graduate students (courses include research methods and educational psychology). DiBenedetto's current position is at the University of North Carolina, Greensboro, in the Bryan School of Business and Economics where she is a member of the Dean's Leadership Team. (m_dibene@uncg.edu)

Suzanne E. Hiller, PhD, has worked in the field of education as a practitioner, professor, researcher, and evaluator for over three decades. She has served as an assistant professor teaching educational psychology, program evaluation, research, and preservice teacher courses in curriculum and assessment. She was the Director of the Graduate Education Program and the Director of Multidisciplinary Studies in Education with Hood College. Currently, she is the Executive Director of the *Blue Swallow Farm Foundation*, an organization dedicated to promoting inclusive, authentic experiences in outdoor education through research and training while motivating students in STEM careers. (hiller@blueswallowfarmfoundation.org)

Editor-In-Chief's YouTube 2024 Choice: GLINTS by Stephen J. Aguilar

HTTPS://WWW.YOUTUBE.COM/@AGUILARPHD

GLINTS is a resource dedicated to guiding graduate students and early career scholars through their academic journey with self-efficacy, purpose, and self-regulated learning. Spearheaded by Stephen J. Aguilar, a tenured associate professor of educational psychology who is passionate about fostering and promoting growth, learning, and transformation, this platform empowers graduate students and early career researchers to reach their academic goals. From tackling the hurdles of graduate school to unraveling the intricacies of the publication process, Aguilar provides invaluable advice and practical strategies to help one thrive in academia. Although all views expressed are his personal opinions and do not reflect the official perspectives of his affiliated institution, Aguilar shares views that could help all aspiring academics willing to serve in culturally self-regulated and diverse professional communities.

Motivation Secrets Every Grad Student Needs

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"I'll discuss how to avoid getting burnt out."

"I'll describe authorship and when you should be the first author."

"I'll discuss networking and why you should do it."

"I'll describe five strategies that might help you work through the impostor syndrome."

Stephen J. Aguilar, PhD, is an associate professor of education with a concentration in educational psychology at the University of Southern California (USC) Rossier School of Education. He has served as Program Chair of the AERA Studying and Self-Regulated Learning SIG. His research investigates how educational technologies—both emerging and established—influence teaching, learning, and motivation. Aguilar studies the impact of generative AI in educational settings, the digital equity gap, and learning analytics applications. Currently, he is co-leading USC's new Center for Generative AI and society's efforts to understand when and how generative AI is used by students and instructors in post-secondary settings.

His honors and awards include winning both the Wilbert J. McKeachie Early Career Award for Motivation in Education Research, and the AERA Division C Early Career Award. His work has been funded by the National Science Foundation, the American Educational Research Association (AERA), the National Institutes of Health, and the U.S. Army Research Office. Aguilar has also given televised interviews on the digital equity gap in both English and Spanish, has been a guest on NPR's AirTalk, and has been interviewed by the Los Angeles Times, USA Today, Bloomberg, and The Washington Post. His digital equity work during the pandemic also informed California Assembly Bill No. 1176, which provided much-needed subsidies for families needing broadband internet. The Affordable Connectivity Program has helped over 1 million families afford reliable high-speed internet during the pandemic and beyond.

Aguilar received a B.A. from Georgetown University, an M.A. from the University of Chicago, and a Ph.D. in Education and Psychology from the University of Michigan. He previously taught sixth and seventh grades in East Palo Alto, California and served as the Director of Institute Technology for Teach For America-Los Angeles's summer institute. (aguilars@usc.edu)

The Evolution of Race-Focused and Race-Reimaged Approaches in Educational Psychology: Future Directions for the Field
Jessica T. DeCuir-Gunby & Paul A. Schutz

A decade ago, DeCuir-Gunby and Schutz authored an article titled "Researching Race Within Educational Psychology Contexts" in *Educational Psychologist* (DeCuir-Gunby & Schutz, 2014) to address the glaring absence of discussions on race and racism in the field. This lack of attention resulted in minimal race-related research being published in educational psychology journals. Now, ten years later, they reflect on the evolution of their ideas and the broader adoption of race-focused and race-reimagined approaches. In this revisitation, they explore how these approaches have grown, how they have influenced ongoing scholarship, and whether centering race remains crucial in educational psychology research.

The Challenges in Using Race-Focused and Race-Reimaged Constructs

DeCuir-Gunby & Schutz discussed that the concept of race presents several challenges that require careful consideration:

⇒ Distinguishing race from ethnicity is critical, as race refers to the categorization of individuals based on shared physical traits that influence societal power dynamics, whereas ethnicity pertains to shared regional heritage and cultural background. These are distinct yet often conflated concepts.

⇒ Clarifying the components of metatheory and defining what constitutes race-focused versus race-reimaged constructs, ensuring precision in their application.

⇒ The most complex issue, however, is the process of race-reimaging, which demands a rethinking of traditional frameworks to address systemic inequities while fostering inclusivity.

⇒ Understanding the interplay between race-focused and race-reimaged constructs is essential for developing cohesive and impactful approaches.

Where Do We Go From Here?

1. Race-Focusing
Racialized emotions, tied to racial identity and experiences, significantly shape teaching and learning but remain underexamined in educational psychology. Meanwhile, race-neutral beliefs, often seen as unbiased, can reinforce White supremacist ideologies by disregarding systemic inequities in education. These beliefs amplify racialized emotions and undermine effective coping. To create equitable learning spaces, it is crucial to challenge race-neutral assumptions and explore how these factors impact educational experiences and outcomes.

2. Race-Reimaging
Treating race or ethnicity merely as demographic data or for group comparisons often disregards the intricate social, historical, and structural factors shaping these experiences. Going beyond simplistic categorizations enables researchers to critically explore how these constructs drive systemic inequities, identity, and lived realities. This approach promotes methodologies that challenge reductive models and deepen our understanding of race and ethnicity across disciplines.

3. Teaching Courses in Educational Psychology
Educational psychologists must move beyond race-focused research and actively apply re-imaged principles to teaching. Diversity has historically been an afterthought, limited to brief mentions in textbooks and syllabi, which risks sidelining critical perspectives. To build inclusive learning environments, educators should embed diversity as a core element in curricula, encouraging students to explore cultural, racial, and social complexities. This approach not only enhances academic discourse but also equips learners to engage thoughtfully with an interconnected world.

Conclusion
DeCuir-Gunby and Schutz concluded the article by observing that educational psychology is undergoing a profound shift, driven by a need to rethink traditional research methods and adopt race-centered perspectives. This challenges the "business as usual" approach, urging scholars to critically address race and equity. While it may have been easier to stick with familiar frameworks, a growing community has embraced this call for change. They observed that initial conversations have progressed into special journal issues and conference sessions, highlighting the field's commitment to inclusivity and social responsibility. They thank those contributing to this transformative work and advancing meaningful progress in educational psychology.

Abstract
"In this article, we discuss using race-focusing and reimaging as a metatheoretical approach to be used during the process of theory building, expansion, and adaptation. To do so, we demonstrate how, over the last decade, the use of race-focusing and reimaging approaches has advanced our understanding of the racialized nature of research in education psychology (DeCuir-Gunby & Schutz, 2024). In addition, we provide a discussion of areas where educational psychologists have yet to theoretically explicate or should further explore in current educational psychology theories."

Jessica T. DeCuir-Gunby, PhD, is the Robert H. Naslund Chair in Curriculum and Teaching and Professor of Educational Psychology at the University of Southern California Rossier School of Education. Her research interests include the impact of race and racism on the educational experiences of African Americans, racial identity development, emotions and coping related to racism, critical race theory and mixed methods research. She is an associate editor for *Review of Educational Research* and serves on the editorial boards for *Contemporary Educational Psychology* and *Educational Psychologist.* She is currently president of Division 15 (Educational Psychology) of the American Psychological Association (APA). (decuirgu@usc.edu)

Jessica T. DeCuir-Gunby

Paul A. Schutz, PhD, is Professor Emeritus at the University of Texas at San Antonio, and an affiliated member of the Department of Educational Psychology at the University of Arizona. His research interests include emotions in education, teacher identity development, race and ethnicity in educational contexts, and research methods and methodologies. He is a past president of the American Psychological Association Division 15: Educational Psychology, a former co-editor of the *Educational Researcher: Research News and Comments*, and he is a co-editor of the *Handbook of Educational Psychology*, Volume 4. Recent publications include *Teachers' goals, beliefs, emotions, and identity development* (Schutz, Hong, & Cross Francis, 2020) and *Why Talk About Qualitative and Mixed Methods in Educational Psychology? Introduction to Special Issue* (Meyer, & Schutz, 2020). (pschutz@arizona.edu)
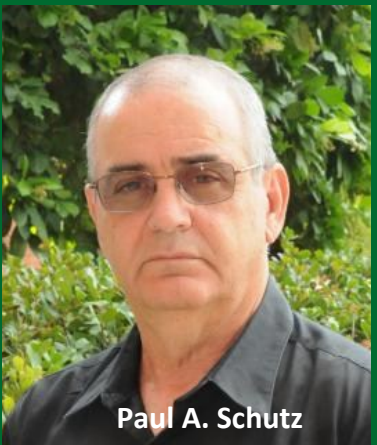
Paul A. Schutz

The Past, Present, and Future of the Cognitive Theory of Multimedia Learning

Richard E. Mayer

Mayer's Cognitive Theory of Multimedia Learning (CTML) seeks to explain the processes underlying meaningful learning. This theory emphasizes the importance of engaging learners in appropriate cognitive activities to foster understanding.

Meaningful learning involves three key processes: selecting relevant information from the instructional material, organizing this information into a logical and coherent mental framework, and integrating it with prior knowledge retrieved from long-term memory. By focusing on these steps, CTML aims to optimize the design of multimedia learning environments to support deeper comprehension and retention.

In this article, Mayer reviewed key insights from decades of theory-building, with a focus on the CTML. He presented seven insights that illuminate effective multimedia learning and explored CTML's current state, practical applications, and future directions:

1. Theory Building Depends on Intellectual Curiosity
2. Theory Building Is Grounded in Old Ideas
3. Theory Building Is Not a Straight, Planned-Out Path
4. Theory Building Is an Engineering Problem
5. Theory Building Is an Iterative Process Involving the Persistent Interplay Between Research and Theory
6. Theory Building Depends on Persistence in Collecting New Research Evidence
7. Theory Building Is a Team Activity

The Past of the Cognitive Theory of Multimedia Learning

Mayer outlined the development of CTML, from discovering its name and visual identity to building a strong conceptual framework grounded in theory and practice. Over time, the model has advanced, supported by growing research and refined design guidelines, solidifying its role as a key tool in learning science and multimedia education.

The Present State of the Cognitive Theory of Multimedia Learning

Mayer summarized the CTML, explaining its core assumptions, memory structures, cognitive processes, and learning demands. He identified three key instructional goals to optimize learning and introduced 15 evidence-based principles grounded in CTML (e.g., Coherence principle, Signaling principle, Redundancy principle). These principles aim to improve multimedia learning by tailoring instructional strategies to human cognitive processes.

The Future of the Cognitive Theory of Multimedia Learning

Mayer envisions the evolution of the CTML through the incorporation of advanced components that extend beyond fundamental cognitive processes. These include the integration of social, affective, motivational, and metacognitive dimensions to enhance learning outcomes.

He anticipates a significant expansion in the research foundation supporting CTML, accompanied by the development of a greater number of evidence-based design principles.

Future advancements are expected to provide a more precise delineation of the boundary conditions under which these design principles are most effective. This forward-looking approach aims to refine multimedia learning frameworks, ensuring they remain robust, adaptable, and aligned with the complexities of human learning in diverse contexts.

Abstract

"The cognitive theory of multimedia learning (Mayer, 2021, 2022), which seeks to explain how people learn academic material from words and graphics, has developed over the past four decades. Although the name and graphical representation of the theory have evolved over the years, the core ideas have been constant—dual channels (i.e., humans have separate information processing channels for verbal and visual information), limited capacity (i.e., processing capacity is severely limited), and active processing (i.e., meaningful learning involves selecting relevant material to be processed in working memory, mentally organizing the material into coherent verbal and visual structures, and integrating them with each other and with relevant knowledge activated from long-term memory). This review describes how the theory has developed (i.e., the past), the current state of the theory (i.e., the present), and new directions for future development (i.e., the future). In addition, the review includes examples of the events and findings that led to changes in the theory. Implications for educational psychology are discussed, including 15 evidence-based principles of multimedia design."

Conclusion

The CTML reflects Mayer and his colleagues' efforts to explore the mechanisms behind meaningful learning of academic content and to enhance instructional design to support such learning effectively.

The development of CTML serves as a notable example of how psychological research can inform educational practices, offering insights into optimizing the presentation of multimedia materials to align with cognitive processes.

This framework underscores the importance of designing instructional content that facilitates the integration of new knowledge in ways that promote deeper comprehension and long-term retention.

Richard E. Mayer, PhD, is Distinguished Professor of Psychology at the University of California, Santa Barbara. His research interests are in applying the science of learning to education, with current projects on multimedia learning, computer-supported learning, and computer games for learning. His research is at the intersection of cognition, instruction, and technology, with a focus on how to help people learn in ways so they can transfer what they have learned to new situations. He served as President of Division 15 (Educational Psychology) of the American Psychological Association and Vice President of the American Educational Research Association for Division C (Learning and Instruction). He is the winner of the Thorndike Award for career achievement in educational psychology, the Scribner Award for outstanding research in learning and instruction, and the American Psychological Association's Distinguished Contribution of Applications of Psychology to Education and Training Award. He is ranked #1 as the most productive educational psychologist in the world in *Contemporary Educational Psychology.* He has served as Principal Investigator or co-PI on more than 30 grants. He is former editor of the *Educational Psychologist* and former co-editor of *Instructional Science*, and he serves on the editorial boards of 12 journals mainly in educational psychology. He is the author of more than 500 publications including 30 books. (rich.mayer@psych.ucsb.edu)

Richard E. Mayer

Typed Versus Handwritten Lecture Notes and College Student Achievement: A Meta-Analysis

Abraham E. Flanigan, Jordan Wheeler, Tiphaine Colliot, Junrong Lu, & Kenneth A. Kiewra

Abstract

"Many college students prefer to type their lecture notes rather than write them by hand. As a result, the number of experimental and quasi-experimental studies comparing these two note-taking mediums has flourished over the past decade. The present meta-analytic research sought to uncover trends in the existing studies comparing achievement and note-taking outcomes among college students. Results from 24 separate studies across 21 articles revealed that taking and reviewing handwritten notes leads to higher achievement (Hedges' g = 0.248; $p < 0.001$), even though typing notes benefits note-taking volume (Hedges' g = 0.919; $p < 0.001$), among college students. Furthermore, our binomial effect size display shows that taking handwritten lecture notes is expected to produce higher course grades than typing notes among college students. We conclude that handwritten notes are more useful for studying and committing to memory than typed notes, ultimately contributing to higher achievement for college students."

Flanigan and his associates argue that the process of taking lecture notes is a widely utilized learning strategy among college students, yet the question of whether typing or handwriting notes is more effective remains a topic of debate. Their current research seeks to clarify this issue by synthesizing existing studies and providing a more comprehensive understanding of the impact of note-taking methods on academic outcomes. To achieve this, they conducted two meta-analyses.

The first focused on the effects of the note-taking medium on student achievement, while the second examined its influence on the quality and effectiveness of the note-taking process itself.

These analyses aim to offer evidence-based insights into how the choice of medium—typing or writing—affects learning and performance in academic settings.

Meta-analysis 1: Handwritten Versus Typed Note-taking Achievement Effects

⇒ Research indicates that handwritten note-taking positively impacts academic achievement, with students who write their notes by hand generally performing better than those who type them. A key factor influencing this benefit is the opportunity to review notes before an assessment.

⇒ Providing a structured review period significantly enhances the effectiveness of handwritten notes in improving outcomes.

⇒ Interestingly, the type of assessment—whether it focuses on factual knowledge, conceptual understanding, or a mix of both—does not appear to alter the efficacy of handwritten note-taking.

Meta-analysis 2: Typed Versus Handwritten Note-taking Note Quantity Effects

Typed notes tend to encompass a greater volume of words and ideas compared to handwritten notes. This difference can be attributed to the speed and efficiency of typing, which allows individuals to capture more information in a shorter amount of time.

Conclusion

Flanigan and his associates concluded that while typed notes may be more detailed, handwritten notes offer distinct advantages in learning and retention. Handwriting notes often involve deeper cognitive processing due to their personalized and paraphrased nature, which helps students capture test-relevant ideas.

Despite the common perception among college students that typing notes facilitates learning, this belief is not supported by evidence. This meta-analysis of 24 studies indicates that students who record and review handwritten lecture notes achieve higher academic outcomes compared to those who rely on typed notes.

Abraham E. Flanigan, PhD, is an associate professor of educational psychology in the Department of Curriculum, Foundations, and Reading at Georgia Southern University. He was recently recognized internationally as one of the Top 50 Most Productive Educational Psychology Researchers. As the recipient of the Jack Miller Award for Research, Scholarship & Creative Activity, Flanigan demonstrates exceptional overall achievement in scholarship and creative activities. In the past two years, he has published one book, one book chapter and nine peer-reviewed articles. He has also given conference presentations at two national and three international meetings. Flanigan's research productivity has opened doors for leadership roles in his field. Since 2022, Flanigan has been one of the senior chairs for the American Educational Research Association's Studying and Self-Regulated Learning Special Interest Group. Members of this international organization include some of the most renowned scholars in the field of self-regulated learning research. Flanigan's scholarship looks at digital distraction, student-instructor rapport in face-to-face and online learning environments, note-taking processes (including laptop versus longhand), and lecture learning. (aflanigan@georgiasouthern.edu)
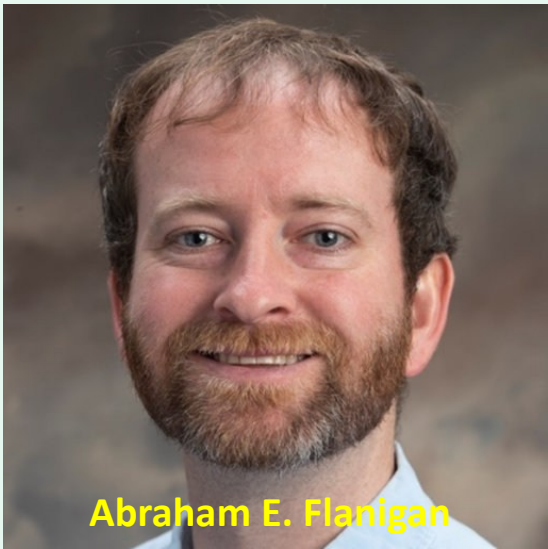
Abraham E. Flanigan

Harnessing Motivation, Self-Efficacy, and Self-Regulation: Dale H. Schunk's Enduring Influence

Héfer Bembenutty, Anastasia Kitsantas, Maria K. DiBenedetto, Allan Wigfield, Jeffrey A. Greene, Ellen L. Usher, Mimi Bong, Timothy J. Cleary, Ernesto Panadero, Carol A. Mullen, & Peggy P. Chen

Abstract
"This tribute celebrates the unwavering dedication and contributions of Dale H. Schunk to educational psychology. His research has fundamentally transformed how school-based practitioners support student learning. By pioneering effective teaching strategies and interventions, he has called educators to create dynamic learning environments that cultivate students' self-efficacy beliefs and self-regulated learning. Beyond his scholarly achievements, Schunk's commitment to mentoring students and faculty alike has impacted the academic community. His profound influence continues to reshape the landscape of educational psychology, igniting ongoing research and driving innovation to enhance teaching and learning practices among learners. This tribute is a testament to Schunk's enduring legacy and profound impact on educational psychology."

Dale H. Schunk, PhD, is a recipient of the AERA SSRL SIG's Barry J. Zimmerman Award for Outstanding Contributions. He is an educational psychologist, former Dean and emeritus professor in the School of Education at the University of North Carolina at Greensboro. He has researched the effects of social and instructional variables on cognition, learning, self-regulation and motivation. Schunk has served on the editorial boards of journals such as *Contemporary Educational Psychology* and *Educational Psychology Review*, and has authored many journal articles and book chapters on educational psychology. In addition to other books, he is author of the widely used textbook, *Learning Theories: An Educational Perspective*, and coauthor of *Motivation in Education: Theory, Research, and Applications*. Schunk received the Albert J. Harris Research Award from the International Reading Association (1989), an Early Contributions Award from Division 15 (Educational Psychology) of the American Psychological Association (1982), and the Fulbright Distinguished American Scholar Award (1997). Schunk taught educational psychology at the University of Houston, UNC-Chapel Hill, and Purdue University. He received his undergraduate education at the University of Illinois, and he earned an MEd degree from Boston University and a PhD from the Stanford Graduate School of Education. (dhschunk@uncg.edu)

Schunk's commitment to exploring teaching and learning within the framework of social cognitive theory underscores his profound influence in the field of educational psychology. By emphasizing the interplay between personal, behavioral, and environmental factors, his work highlights the dynamic nature of learning processes.

Schunk's approach not only deepens our understanding of how individuals acquire knowledge but also provides practical strategies for fostering motivation, self-regulation, and skill development in educational settings as is evident in the following tributes.

A Foundational Scholar in the Fields of Motivation and Self-Regulation
Allan Wigfield emphasized Schunk's significant impact on educational psychology through his empirical research and influential writings. Schunk's key articles synthesized studies on self-efficacy in education, solidifying it as essential to understanding student motivation and academic success.

Crafting Effective Theories and Writing with Impact
Jeffrey A. Greene noted that Schunk was instrumental in integrating key elements of Bandura's social cognitive theory, like self-efficacy and social learning's developmental aspects, into self-regulated learning research.

Advancing Social Cognitive Theory in Education
Ellen L. Usher stressed Schunk's pivotal contributions to educational psychology, particularly in advancing social cognitive theory. His work has greatly enhanced understanding of motivation and learning, equipping educators with practical frameworks to support knowledge acquisition and self-efficacy.

A Pioneer of Academic Self-Efficacy Research in Education
Mimi Bong asserted that while Albert Bandura introduced self-efficacy and its foundational framework, Schunk extended this concept to education, showing how self-efficacy profoundly influences teaching and learning.

Achieving Goals Through Technology and Culturally Self-Regulated Pedagogy
Héfer Bembenutty highlighted Schunk's emphasis on integrating self-regulated learning principles into diverse classroom settings. This approach encourages both teachers and students to cultivate culturally self-regulated pedagogy and learning.

From Theory to Research to Application
Anastasia Kitsantas and Maria K. DiBenedetto underlined Schunk's influential research on self-regulated learning, which illuminates the mechanisms that help students manage their learning, alongside the factors driving motivation and achievement.

The Importance and Evolution of Context-Specific SRL Assessments
Timothy J. Cleary emphasized Schunk's contributions to assessment methodologies, highlighting how situational and social factors shape self-regulated learning and motivation.

Assessment Feedback in Self-Regulated Learning and Motivation
Ernesto Panadero underscored Schunk's influential research on assessment feedback, highlighting its vital role in enhancing self-regulated learning and motivation.

Bridging Mentoring and Self-Regulation Research
Carol A. Mullen spotlighted Schunk's role as an applicator who bridges research and practice, particularly within K-12 education, and underscores his commitment to translating theoretical insights into practical, impactful educational applications.

Major Contributions to Mathematics Self-Efficacy Research in the Classroom
Peggy P. Chen accentuated Schunk's pioneering research on self-efficacy in education, particularly among lower-performing elementary students in math.