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Erin Shadowens

CRITICAL THINKING IN THE ELEMENTARY CLASSROOM

Engaging Young Minds
with Meaningful Content



2800 Shirlington Road, Suite 1001 • Arlington, VA 22206 USA
Phone: 800-933-2723 or 703-578-9600 • Fax: 703-575-5400
Website: www.ascd.org • Email: member@ascd.org
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PAPERBACK ISBN: 978-1-4166-3243-6 ASCD product #123012 n10/23

PDF EBOOK ISBN: 978-1-4166-3244-3; see Books in Print for other formats.

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Library of Congress Cataloging-in-Publication Data

Names: Shadowens, Erin, author.

Title: Critical thinking in the elementary classroom : engaging young minds with meaningful content / Erin Shadowens.

Description: Arlington, Virginia USA : ASCD, [2024] | Includes bibliographical references and index.

Identifiers: LCCN 2023022899 (print) | LCCN 2023022900 (ebook) | ISBN 9781416632436 (paperback) | ISBN 9781416632443 (pdf)

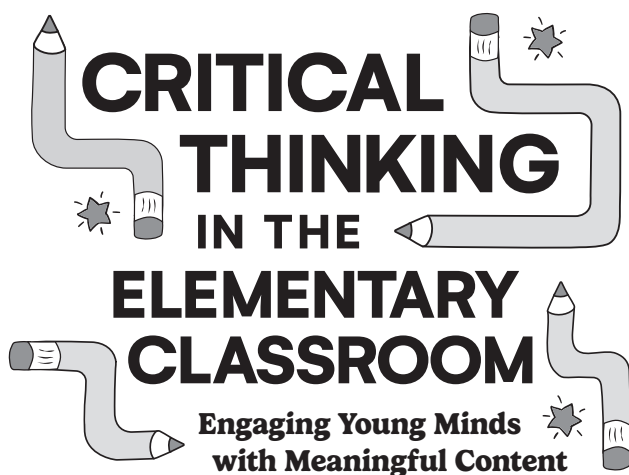
Subjects: LCSH: Critical thinking—Study and teaching (Elementary) | Problem solving—Study and teaching (Elementary)

Classification: LCC LB1590.3 .S4153 2024 (print) | LCC LB1590.3 (ebook) | DDC 370.15/2—dc23/eng/20230606

LC record available at <https://lccn.loc.gov/2023022899>

LC ebook record available at <https://lccn.loc.gov/2023022900>

33 32 31 30 29 28 27 26 25 24 1 2 3 4 5 6 7 8 9 10 11 12



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INTRODUCTION

In 2010, the National Governors Association and the Council of Chief State School Officers finalized and released the Common Core State Standards—a breakdown of grade-level learning expectations in English language arts (ELA) and math for grades K–12. Many states rapidly moved to adopt these standards, seeking to raise the achievement of all students across the United States.

These sets of standards appeared in an environment concerned with developing “21st century skills.” Incorporated in the mission statements of countless educational institutions, the term *21st century skills* suggests a change from education’s status quo, implying that the evolution of technology and industry in the new millennium demands an updated vision for what and how students learn in school. When we search “21st century skills” online, the first few results link to webpages listing skills such as critical thinking, creativity, collaboration, and problem solving—and critical thinking nearly always tops the list.

Popular arguments for the Common Core standards still resonate today. Proponents appreciate their nationwide consistency and clear guidance for schools and teachers. Yet their rollout championed an even more compelling argument: that the shift to these standards would set America’s children on a path toward the grand prize of education—they would learn not only *what* to

think but *how* to think; through mastery of the standards, they could become critical thinkers (*Los Angeles Daily News*, 2017). While no one in education, including the Common Core developers, ever purported to find a panacea for all of the field's ills, the standards certainly inspired a great deal of optimism. Teachers reported seeing a shift in the depth of thinking in their class, even when they struggled with the new standards (An & Cardona, 2019).

Behind most comprehensive projects to improve education, such as the Common Core, are two aims: raise overall achievement and foster critical thinking in young people. The latter aim tends to overwhelm the first. Many—philosophers, politicians, principals, teachers, parents, community members—identify the ability to think critically as the ultimate objective of an education. Stakeholders hunger for a magical recipe with a few discrete ingredients that will lead to widespread, if not universal, critical thinking. The concept of critical thinking evokes a number of literary clichés—say, the Holy Grail or Melville's white whale—all with common characteristics: something fantastic but almost indefinable; hard-sought but elusive.

It's often easier to point out the absence of critical thinking than its presence. Consider one of the released questions from the 2018 international PISA assessment, taken by 15-year-olds around the world (Organisation for Economic Co-Operation and Development [OECD], 2019). Students first read the webpage of a business that sells dairy products, then an article from a health-focused website. The first article extolled the benefits of drinking cow milk, while the second article warned the reader that the benefits may be oversold if not incorrect.

PISA questions are ranked 1–6 based on their difficulty, with 1 representing the least difficult and 6 the most difficult. Based on students' responses, they are given a Level 1–6 score, which represents the types of questions they were able to answer. Level 1–3 questions may ask about the main idea and factual points in the article. As the levels increase, so does the question difficulty (OECD, 2016). A Level 5 question has students categorize statements from both texts as either "Fact" or "Opinion." What were some of the statements? "Drinking milk and other dairy products is the best way to lose weight," and "Several studies have questioned the bone-strengthening power of milk." The first clearly describes an opinion because it uses a subjective word like *best*.

The second statement states a fact about several studies but withholds any judgment on whether the studies are correct.

Only 13.5 percent of assessed students from the United States scored at a Level 5 or 6 in reading, the highest scores. A vast majority of test-takers struggled to answer questions like the fact and opinion ones described above.

What does this mean in practice? While it may not be necessary for many students to do well on the higher-difficulty questions, especially if the types of questions do not assess relevant knowledge or skills, the results should still give us pause. Individuals regularly consult information found from a wide variety of sources similar to the websites in the PISA questions. The ability to synthesize and critique that information matters, and it is concerning how many young people just a few years away from adulthood and voting struggle to do so. At a minimum, the inability to sort commonly encountered facts and opinions shows a decisive lack of critical thinking skills.

Since the widespread adoption of Common Core Standards more than a decade ago, the tenor of the standards discussion in the United States has changed, largely as a result of student performance on international and national standardized tests such as PISA and the National Assessment of Educational Progress (NAEP). The NAEP, known as “the Nation’s Report Card,” assesses 4th, 8th, and 12th graders across the country every two years. In 2019, approximately 600,000 students took the exam in English language arts and math. The NAEP results that year painted a bleak picture of student performance about a year before the COVID-19 pandemic caused lockdowns and major disruptions to the learning experiences of millions. Between 1992 and 2009, test scores in reading and math rose steadily; however, since 2009, test scores in reading and math have either stagnated or dipped. Math scores at the 25th percentile have particularly declined (Loveless, 2022), which means that the lowest performing students are falling further and further behind their peers. The most recent release of NAEP scores from spring 2022 showed the most severe decline in the performance of 9-year-olds since 1990 (NAEP, n.d.). For proponents of the Common Core, the correlation of underwhelming NAEP scores and the adoption of new standards is unsettling. While it would be easy to point fingers at school closures and remote learning, the downward trends predated the COVID-19 pandemic.

The question of how to develop critical thinkers is as pressing as ever. In fact, the concerns about critical thinking are arguably more pronounced today than they were two decades ago. Political polarization and the proliferation of news sources have led to concerns about misinformation, media literacy, and the degradation of civic discourse. So how can educators address critical thinking in schools and classrooms? Despite a decades-long effort to raise the achievement of all students and innumerable articles bemoaning the state of American education, claiming there is a simple response to the question seems foolhardy. In a world where American schools do not equitably teach reading and math, we are left wondering if it is even possible to develop critical thinking in school.



Those two words—*critical* and *thinking*—can lead us astray. *Critical* comprises many meanings, such as critique, deconstruction, analysis. The term *critical* leads some to think of critical thinking in the negative, as if it only works to pull things apart rather than put them together. In fact, both of these meanings matter a great deal. The word *thinking* can also mislead. *Thinking* acts as both a noun and a verb. It implies that thinking is one single thing—both a process and state of being, an entity that either is or is not *critical*.

But critical thinking is not one, or even a set of, stand-alone processes. What we call critical thinking is an emergent property of building knowledge and expertise. *The Stanford Encyclopedia of Philosophy* likens an emergent property to a tornado, which emerges from complex interactions among dust, debris, and cold fronts. The tornado becomes its own entity, both distinct from and dependent on all its parts (O'Connor, 2021). Much of what we call critical thinking similarly depends on the interaction of many elements.

To create the conditions where critical thinking can emerge, elementary educators need a mindset shift. Too often, assumptions about the capacities of young students act as barriers. Some educators use the terms *developmentally inappropriate* and *too advanced* to dismiss introducing students to rich novels, science, history, geography, and complex tasks at a young age. Standards are more often used as the ceiling for what students can do rather than the floor. This mindset wrings out everything that may be fascinating

and challenging about a topic. In the words of my student, who was describing a science video designed for young children, “They dumb everything down for kids to the point where you don’t even learn anything interesting.”

If we want to improve outcomes for our students, and if we want to see more kids engaged in what we call “critical thinking,” we have to start here: *expand our definition of possible*.

We must expand our definition of possible for the minds and intellectual lives of students in elementary school. This does not mean boring, mind-numbing learning experiences where teachers deliver lectures to students strapped to desks. It means opportunities for students to build knowledge across different subjects, grapple with interesting questions, and take on new challenges. Rather than dumb down what students learn, we need to level up instruction.

To engage in critical thinking, our students need real challenges and supportive learning environments that make those challenges accessible. The world is full of complexity, yet so often curricula for young children drain all the juicy idiosyncrasies and smooth out the finicky wrinkles that make learning an exhilarating experience. Some teachers outright skip standards or teach below-grade-level content. In the name of rigor, some schools batter young children with dull texts and tasks that are supposed to yield 21st century career-ready adults, but instead, they ossify the learning process. But introducing challenge and complexity should not condemn students to boredom. Rigor doesn’t mean constructing unsolvable mazes with our questions, rubrics, and exemplars. We shouldn’t give kids something hard for the sake of hardness. Our challenges to students must be purposeful tasks by which they can learn, grow, and thrive.

Moreover, expanding our definition of possible applies not just to students identified as advanced or gifted. Even teachers with the best of intentions sometimes reduce their expectations due to the deficits they perceive in children. Teachers sometimes think they are supporting children when they are actually creating additional barriers. When we expand our definition of possible, we do it for *all children*—even if they receive special education services, even if they qualify for free or reduced-price lunch, even if they experience challenges in their home life, even if they struggle with behavior,

even if there are a litany of factors telling us to write someone off. Our job as educators is to see the glowing possibilities in the children we work with.

We teachers need to believe from the outset in the capacity of children to learn—especially now. Two years of disrupted schooling during the pandemic demonstrated how too many institutions put children’s well-being aside. Our students deserve a vehement recommitment from adults to their potential.



This book is for educators—teachers, grade teams, instructional coaches, administrators—who want to raise the bar for their students. While engaging with the book, I ask readers to bring an ethos of open-mindedness as well as a critical eye. Most of the chapters describe integrated thinking processes that occur simultaneously in a teacher’s preparation and instruction. As you read the chapters, think of the practices you already have in place in your classrooms and schools and consider ways to refine and adapt them. Some of the practices and ideas in this book may be entirely new to you and may even conflict with information you have previously learned in a teacher preparation program or professional development session. Explore these new practices with an open mind. I encourage interested readers to research the references and further reading recommendations at the end of the chapters.

Chapter 1 focuses on defining critical thinking. A discussion of critical thinking cannot get off the ground without a working definition. I discuss common misunderstandings associated with critical thinking while exploring research into expertise and knowledge building in literacy.

Chapter 2 introduces the Critical Thinking Framework. The framework breaks down how teachers can nurture deeper thinking in the context of content-focused lessons. This chapter also includes three case studies to demonstrate what the framework looks like when implemented. It ends with a K–5 continuum describing how the framework progresses throughout elementary school.

Chapter 3 turns to creating and implementing an ambitious vision for academic achievement. I discuss the importance of investing in high-quality curriculum, analyzing student work exemplars, and preparing instruction that builds subject knowledge expertise.

Chapter 4 digs deeper into how the Critical Thinking Framework comes alive at the lesson and unit levels. I walk readers through common instructional pitfalls and offer specific suggestions for structuring lessons for deep thinking and processing.

Chapters 5 and 6 work in tandem to discuss the relationship between assessment and feedback. Assessment and feedback are the most powerful tools for revealing and nurturing student thinking, working together to create a virtuous cycle that propels academic achievement and deep thinking.

Chapter 7 steps away from academics to discuss the significance of school and classroom culture. The classroom environment needs the same meticulous attention as any curriculum or lesson plan. Teachers and school leaders need to build culture with intention, such as habits of risk taking and intellectual honesty. I discuss specific ways teachers can create and sustain a community where kids can take on challenges in and beyond the classroom.



I am a true idealist about children's capacity to think. I have learned, often the hard way, how difficult it is for teachers to create the environment required for rich conversations and deep thinking. For a long time, I assumed the ideals were the problem. Yet I now know execution matters as much, if not more, than the ideals themselves. We can make our classrooms a better world than the one beyond its four walls, but we need to focus on *how* we get there. It requires careful planning, patient execution, and a stomach for failure. The nitty-gritty details make or break what's possible.

This book is, above all else, about the *craft* of teaching. Throughout all these chapters, I aim to provide readers with practical knowledge that can be implemented with real students. I offer principles flexible enough to work in a variety of settings. This is not a book of platitudes; every chapter focuses on the nuts and bolts of instruction, particularly the type of instruction that supports the development of critical thinking. The work is complex, and it requires us to critically reflect on the practices currently used in our schools and districts. There are also no shortcuts—no computer program or scripted curriculum can do more than supplement the thoughtful planning of educators.

As we move forward, let us remember we are expanding the definition of possible not only for children but also for elementary educators. The work of elementary teachers matters, and this book will never apologize for taking the minds of young children and the adults who teach them seriously. As John Steinbeck (2002) says in his essay "... Like Captured Fireflies," teaching "might even be the greatest of the arts since the medium is the human mind and spirit" (p. 142). The minds and spirits of young children, to borrow Steinbeck's phrase, are a precious responsibility. The foundation children receive in the early grades sets the stage for later life. Teachers must engage in the necessary intellectual preparation to meet the demands of that responsibility. This book aspires to contribute to that preparation.

When we prepare for the unique rigors of teaching, we honor the special role we play in children's lives. Let's embark together, never forgetting the challenge, beauty, and thrill contained in our important work.

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ABOUT THE AUTHOR



Erin Shadowens believes in the power of school communities to provide children with rich and robust educational experiences. She spent 10 years teaching every grade from kindergarten to 3rd, discovering in that time that every child, no matter how young, is capable of taking on academic challenges. Her classroom work was recognized with the 2020 Excellence in Teaching Award from Learning for Justice (formerly Teaching Tolerance). After 10 years in the classroom, Erin moved into a school leadership role. She now serves as the Director of Lower School at Brooklyn Prospect Downtown Elementary. More of Erin's education-related writing is available at <https://preptime.substack.com>.