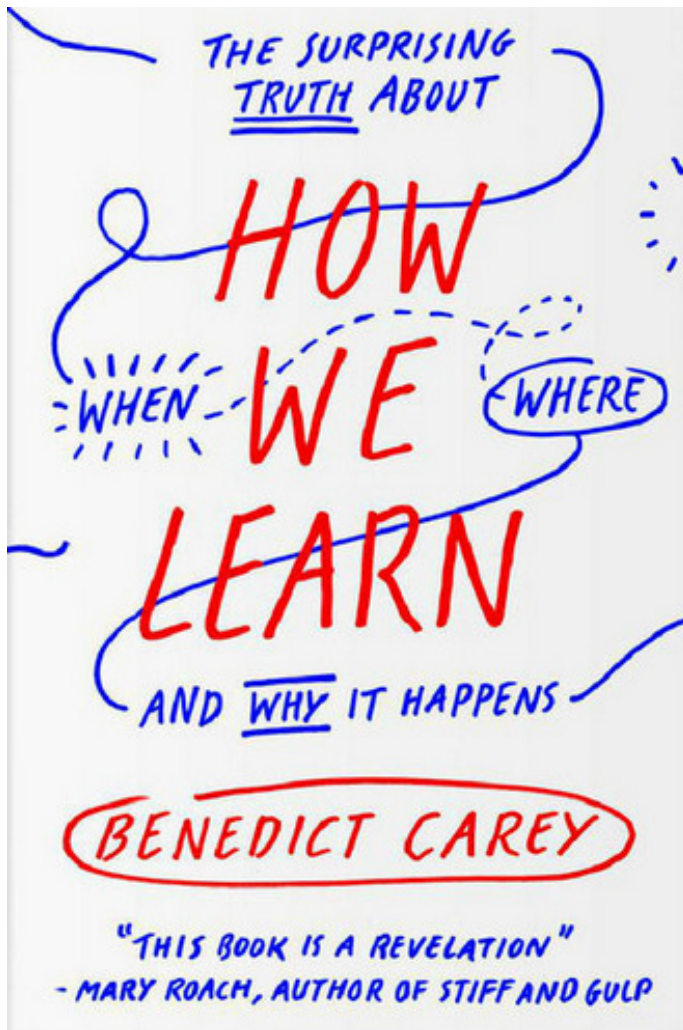


Reviewer sold on 'How We Learn'

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"How We Learn: The Surprising Truth About When, Where and Why It Happens," by Benedict Carey. New York: Random House Trade Paperbacks, 2015, 272 pages, \$16.



"In the past few decades, researchers have uncovered and road-tested a host of techniques that deepen learning – techniques that remain largely unknown outside scientific circles," Benedict Carey explains near the beginning of "How We Learn: The Surprising Truth About When, Where and Why It Happens," his new primer on the applications of cognitive science to the learning process. "These approaches aren't get-smarter schemes that require computer software, gadgets or medication. On the contrary, they are all small alterations, alterations in how we study or practice that we can apply individually, in our own lives, right now."

"The hardest part in doing so may be trusting that they work," he continues. "That requires some suspension of disbelief because this research defies everything we've been told about how best to learn. The science of learning – to take just one implication – casts a different light on the growing alarm over distraction and our addiction to digital media."

If your initial reaction to those first couple of paragraphs is one of skepticism, then join the club. That was my response to the author's bold assertions in this intriguing foray into a subject most educators feel they know

intimately. Years ago, I studied educational psychology at the University of Tennessee; I took several graduate courses in learning theory and its application to pedagogy. As such, I thought I had a good grasp of the process by which human beings employ the reasoning abilities we have at our almost constant disposal.

Apparently, I deserve a rather substantial refund of the tuition I spent to acquire a credential that, at least based on the insights Carey brings to the table, is essentially worthless by today's standards. The more I read and reflected on the evidence presented by this versatile and resourceful scholar, the more I came to recognize the profound implications of his primary thesis. "How We Learn" has the potential to be a game-changer. By the time I got to the third chapter, "Breaking Good Habits: The Effects of Context on Learning," I was a true believer.

The volume consists of 10 chapters arranged in four major sections: “Basic Theory,” “Retention,” “Problem Solving” and “Tapping the Subconscious.” The research from which Carey draws his conclusions is solid and meticulous, with 14 pages of source notes at the conclusion of the main text. A somewhat quirky feature of the book I found particularly appealing was “Eleven Essential Questions,” an appendix wherein the author addresses such queries as “Is there an optimal amount of time to study or practice?” and “Is there any effective strategy for improving performance on longer-term creative projects?”

Carey explores his subject matter from a variety of vantage points. He spends the first few chapters dissecting the psychobiological mechanics of the learning process in a fairly straightforward manner. I enjoyed this description of the corporal structures that make learning possible, and I was amazed by how accessible the material is in the hands of a gifted instructor. I was somewhat familiar with the basic brain architecture he describes, although a lot has been added to the lexicon over the last four decades. As I delved deeper into his explanations and arguments, however, I found myself speculating about how much better my undergraduate experience would have been if more of my professors had possessed the ability to articulate such complex ideas and relationships in such an uncomplicated style.

Part of his uncanny ability to explain things no doubt comes from Carey’s relatively diverse intellectual background and experience. He is a medical and science writer for *The New York Times*. He has a degree in mathematics from the University of Colorado and completed a one-year program in journalism at Northwestern University. He has worked for both *The Los Angeles Times* and *Science Times*. The recipient of a University of Missouri Lifestyle Journalism Award, Carey’s previous books include “Poison Most Vial” and “Island of the Unknowns,” both aimed at a middle school audience. His greatest asset may be the distance he purposefully maintains between himself and the mainstream academic establishment.

A more defined and comprehensive understanding of how the brain “learns” – which is essentially what Carey provides – has implications for a variety of endeavors. One of the most palpable applications involves an institution near and dear to my heart: education. This being the case, I was excited to discover that Carey devotes a significant portion of the book to discussing how much of the prevailing orthodoxy regarding how we actually acquire new information and assimilate it with existing knowledge may have its origins more in tradition than empirical data.

“Take ‘concentration,’ for example, that most basic educational necessity, that mental flow we’re told is so previous to learning,” Carey writes in “The Foraging Brain,” the concluding chapter. “What is concentration, exactly? We all have an idea of what it means. We know it when we see it, and we’d like more of it. Yet it’s an ideal, a mirage, a word that blurs the reality of what the brain actually does while learning. The point is not that concentration doesn’t exist, or isn’t important. It’s that it doesn’t look or feel like we’ve been told it does. Concentration may, in fact, include any number of breaks, diversions and random thoughts. We’re still in foraging mode to a larger extent than we know. The brain has not yet adapted to ‘fit’ the vocabulary of modern education, and the assumptions built into that vocabulary mask its true nature as a learning organ.”

“It doesn’t take orders so well, either, as we all know,” he adds, “forgetting precious facts needed for an exam while somehow remembering entire scenes from ‘The Godfather’ or the lineup of the 1986 Boston Red Sox. If the brain is a learning machine, then it’s an eccentric one. And it performs best when its quirks are exploited.”

I’m sold. My sense is that you will be, too, if you decide to investigate “How We Learn.” I obviously recommend it highly.

— *Reviewed by Aaron W. Hughey, Department of Counseling and Student Affairs, Western Kentucky University.*