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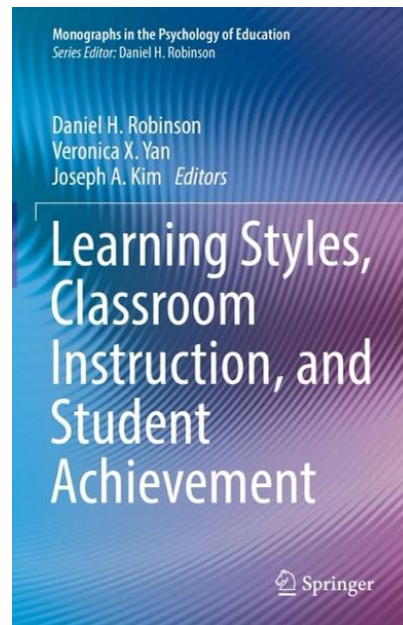
Robinson, D. H., Yan, V. X., & Kim, J. A. (Eds.). (2022).
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Instruction based on individual learning styles has been a popular approach used by teachers to support students with processing and collecting new information (Pashler et al., 2008). However, recent research has questioned if differentiation based on student personal learning styles is in fact research-based, or if it is a widely adopted, yet unsubstantiated practice. The theory and implementation of learning styles is summarized, defined, and critiqued in the book *Learning Styles, Classroom Instruction, and Student Achievement*. Co-edited by Daniel H. Robinson, Joseph A. Kim, and Veronica X. Yan, the volume's editors and other contributors present a critical, questioning perspective on the topic.



Learning Styles is the first book in the Springer series, *Monographs in the Psychology of Education*, edited by Robinson. This series provides critical reviews of educational research methods in assessment and intervention, specifically in the areas of behavior, cognition, and academics. Books in this series are meant to serve as resource guides for professionals and researchers working in psychology, education, social work, and related fields.

Spurlock, K. R. (2023, April 19). Review of *Learning styles, classroom instruction, and student achievement* by D. H. Robinson, V. X. Yan, & J. A. Kim (Eds.). *Education Review*, 30. <https://doi.org/10.14507/er.v30.3713>

Robinson is Associate Dean of Research at University of Texas at Arlington where his most recent work focuses on educational psychology. His previous work has addressed other accusations of misinformation, including the book *Misinformation and Fake News in Education* (2019). Co-editors Kim and Yan are also professors in the education field. Kim is an associate professor in the Department of Psychology, Neuroscience, and Behavior at McMaster University in Ontario. Yan is an assistant professor of Educational Psychology at University of Texas at Austin.

The idea of learning styles as a strategy to increase achievement and engagement was first introduced in the 1970s (Dunn & Dunn, 1974) and has been embraced by many students, teachers, parents, and researchers. The premise of learning styles is simple—people learn better when taught information in a modality that is biologically or preferentially appealing to them. Modalities can be visual, auditory, kinesthetic, etc. Teachers can vary modalities by student, by lesson, or both. For example, a teacher may have an auditory learner listen to a podcast on a topic, while a visual learner might be presented with a graph or chart.

Despite this simple premise, one of the critiques of learning styles theory is that it lacks a clear and common definition. A study by Coffield et al. (2004) found 71 different learning styles models. While often confused with Howard Gardner's theory of multiple intelligences, learning styles theory is not the same thing. Gardner himself makes this distinction, as noted in the *Washington Post* article, "Multiple Intelligences Are Not Learning Styles" (Strauss, 2013).

Learning Styles begins with an image from the satirical news source, *The Onion* (2000). The cartoon depicts a "nasal learner" struggling with an "odorless textbook." Here, the authors are poking fun at the concept of learning styles by exaggerating the theory, indicating that the student cannot learn because he cannot smell the book. In the introduction, the editors state, "The idea that education must fit a person's learning style will continue to stick around as long as there are gullible people. In the meantime, educational researchers should continue to call out its ridiculousness" (p. 7). The authors' skepticism about learning styles remains the main focus of the book.

The book effectively summarizes the appeal of learning styles and how the approach has been propagated despite a lack of evidence supporting its effectiveness. According to chapter authors Den Dekker and Kim, many sources have contributed to the spread of learning styles, including peer-reviewed journals, companies that produce curriculum or education aids, teacher's colleges, and textbooks. Additionally, Den Dekker and Kim credit the public's "enthusiasm for neuroscience combined with lack of neuroscientific knowledge" (p. 31) as a significant contributing factor in the widespread misapplication of learning styles. Because most teacher training programs do not include coursework on neuroscience, teachers may be

excited to implement programming that claims a neuroscientific basis, without having the skill set to critically assess the validity of these programs.

Following the introduction and chapters defining the concept of learning styles, Chapter 3 outlines each stakeholder group's belief in learning styles, including students, parents, pre-service teachers, in-service teachers, researchers, and larger educational organizations. Den Dekker and Kim explain, "learning styles theories appeal to people because of the underlying assumption that all children can succeed, if only taught in their preferred learning style" (p. 34). This well-meaning but naive belief oversimplifies the art and science of teaching into a series of easily replicable experiences, despite the lack of studies supporting learning styles.

Although the authors spend much of the book critiquing the theory and problematizing its use in the classroom, they offer very little concrete evidence for their counter-claims. While a full systematic literature review is provided in Chapter 5, the review focuses on where and when learning styles literature was published, how many articles were published, and how the styles are referred to in the literature. Specifically, the review classifies articles as questioning, opposing, or promoting learning styles. It does not provide a meta-analysis of learning styles research, outcomes discussed in the articles, or much other than general commentary on its ineffectiveness.

The book's authors do make references to a few prior reviews that demonstrated a lack of evidence for learning styles, most often citing Pashler et al. (2008). According to this reviewer's cursory review of Pashler et al. (2008), the authors found studies assessing learning styles lacked "experimental methodology capable of testing the validity of learning styles applied to education. Moreover, of those that did use an appropriate method, several found results that flatly contradict the popular meshing hypothesis" (p. 105). The authors of *Learning Styles* would have more support for their argument if they dove a little deeper into these studies. Peer-reviewed literature published the same year as this book (2022) showed varied treatment of learning styles, including supportive articles, critical articles, and neutral articles. Additionally, literature promoting learning styles was published across a variety of fields, such as dentistry, engineering, and computing.

Ultimately, the authors concede that while the implementation of learning styles may not be harmful, researchers and practitioners are responsible for utilizing and promoting evidence-based practices. They reference their own unpublished survey research (Yan & Fralick, n.d.) which demonstrated that "the more a student endorses the individual learning styles myth, the more likely they are to hold the belief that intelligence cannot be changed" (n.p.). This belief can negatively impact the student's mindset around learning. Other harmful effects mentioned are impacts on teacher beliefs, incorrect metacognition processes for students, and less time spent on more effective practices. As such, the authors argue that the effort and

cost currently being directed into learning styles should be redirected into practices supported by research.

The structure of *Learning Styles* is very readable, with clearly defined chapters and sections that each discuss a different component of learning styles. The book is written in a conversational tone with limited jargon, making it approachable for parents, practitioners, and researchers alike. This book could be used in higher education coursework related to student engagement, differentiation, or pedagogical approaches. Additionally, it may be helpful in framing professional development sessions with in-service teachers about instructional strategies they currently employ in their classrooms.

The length of the book (about 75 pages) allows for a quick read, while still providing a deep and thoughtful treatment of the topic. Despite some stretches where statistical terminology is employed, it does not detract from comprehension of the text if the reader is not familiar with statistics. I would recommend this book for anyone interested in the history or application of learning styles, with the caveat that while it provides a wealth of information, not all of it is substantiated by the authors.

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About the Reviewer

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