

Review of *How Learning Works: 8 Research-Based Principles for Smart Teaching* (2nd Ed.)

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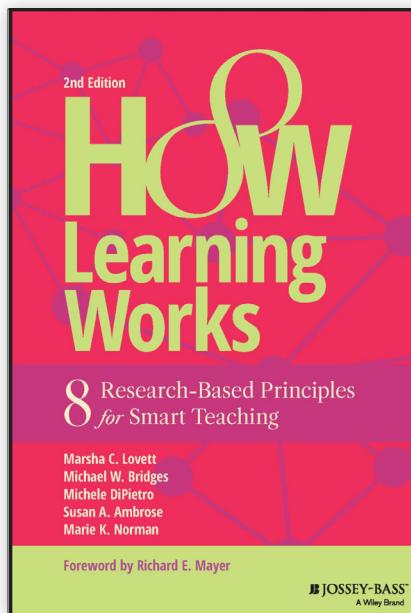
The purpose of this text is to summarize research relevant to teaching in varied settings with diverse learners. To achieve this objective, the authors, who have impressive instructional experience, condense their learning science research into eight principles. Originally (i.e., in the first edition; Ambrose et al., 2010), the authors outlined seven principles using research conducted with a predominantly English-speaking, Western lens on college students. However, Lovett et al. (2023) explain that an update was necessary to better address evidence of heterogeneity in the profile of participants in higher education. Hence, their second edition contains a newly added principle that emphasizes paying attention to how students vary, as it impacts how they experience the world, and this, in turn, impacts their learning. The authors use timely and culturally relevant real-world scenarios to discuss the eight principles, which address the impact of student differences, prior knowledge, knowledge organizations, motivation, mastery, practice and feedback, classroom environment, and self-directedness on student learning and performance.

Although not written specifically for adult literacy teachers, the eight principles have great relevance for how to foster essential aspects of learning in the

adult learner classroom. Easy to read, each of the eight primary chapters follow the same pattern: presentation of two different but similar scenarios; an introduction of a principle; and a discussion of relevant research with visuals, implications, and strategies. The appendix contains several resources to facilitate integration of the principles into readers' instructional practice, including details regarding instructor and student self-assessment, concept map creation, classroom ground rules, rubrics, learner checklists, exam wrappers, active learning, and peer-review applications.

Lovett and her coauthors explain that the learning process for each student is typically non-linear with a unique path due to individual strengths and potential barriers. Effective instruction involves responding to who the learners are in the classroom, and each class has a new group of students with unique personal and educational histories. Learner individuality can

be an intimidating obstacle as many teachers find it difficult to teach a classroom of diverse learners. Thus, this resource is particularly useful because it condenses learning research that addresses this variability into actionable teaching techniques, which are congruent with andragogical principles (e.g., Knowles et al., 2020) and are therefore extremely helpful for adult educators who often



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teach classes that consist of very diverse learners.

The very topical topic of misinformation is explained by describing prominent social psychological theories such as sensemaking theory (Weick, 1995), cognitive dissonance theory (Festinger, 1957), and confirmation bias (Wason, 1960). To help teachers become aware of their students' knowledge gaps and misconceptions, Lovett et al. (2023) suggest strategies to gauge the extent of learners' prior knowledge, such as conducting brainstorming activities and drawing concept maps. Similarly, to navigate insufficient or inaccurate knowledge within the classroom, teachers can use techniques, such as epistemology discussions, consideration of opposing views, and justifications of reasoning, to challenge misinformation and facilitate the formation of new understandings. The authors also recommended that teachers intentionally activate accurate prior knowledge with analogies, everyday examples, and explicit connections to previous lessons.

Especially relevant for adult learners, goals are promoted as the guiding force pulling learners toward engagement in academic tasks. Lovett et al. specifically discuss self-determination theory (Ryan & Deci, 2000) and expectancy-value theory (Wigfield & Eccles, 2000) to define the subjective value of goals and outcome expectancies as integral aspects of motivation. Additionally, the authors emphasize how learner

motivation is impacted by perceptions of ability and attributions. It is important to consider what learners think will happen (Bandura, 1997) and whether learners think that their success/failure is attributed to external or internal factors (Weiner, 1986). When applying this to adult education, teachers can facilitate learner motivation by providing early success opportunities, outlining clear expectations for assignments, and making explicit connections between controllable behaviors and successful outcomes.

I highly recommend this book for any teacher teaching any population in any context. The book is an excellent synthesis of learning theories and research, and all scenario applications reflect modern classroom experiences. What I find especially interesting is that Lovett et al. advise teachers to apply the eight principles of learning to themselves to be explicitly aware of their own learning processes and to be reflective of their teaching practices. In fact, they describe instructors as learners in constant flux, explaining how the zeitgeist bleeds into the classroom environment, and teachers must adapt to stay current with world events that impact their and their students' lives. Finally, the book is very engaging, and I believe it should be in the hands of all educators, whether seasoned or new, and should be included as required reading in professional development workshops.

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