

Book Review

***Small Teaching: Everyday Lessons from the Science of Learning*¹**

Reviewed by Beth Emily Sheppard², Escuela Normal Superior Oficial de Guanajuato, Guanajuato, GTO, Mexico

J. A. Lang (2016). *Small teaching: Everyday lessons from the science of learning*. San Francisco, CA: Jossey-Bass.

The field of learning research and proposed teaching innovations is vast, and at times the sheer number and variety of ideas suggested to teachers can feel overwhelming. James A. Lang's 2016 book *Small Teaching: Everyday Lessons from the Science of Learning* has the potential help counteract this overwhelmed feeling. The phrase "Small Teaching" in the book title refers to the idea of updating teaching practices in small and manageable ways that nonetheless can have a significant effect on outcomes, while the subtitle indicates that all the book's suggestions are firmly based on scientific findings about how humans can most effectively learn.

The author synthesizes insights from learning research into nine brief chapters, grouped into three parts titled *Knowledge*, *Understanding*, and *Inspiration*. Each chapter introduces one useful learning practice, presents an overview of the research supporting that practice, and describes several techniques to implement it in the classroom. Finally, the last few pages of each chapter distill the preceding discussion into a few key principles and a bulleted list of classroom quick tips. While this book is primarily aimed at teachers of all disciplines in the higher education context, the author's suggestions can be applied to language instruction at any level.

In Part 1 of *Small Teaching*, Lang focuses on the acquisition of basic *Knowledge*. He acknowledges that teachers often want their students to practice critical thinking and analysis but notes that critical thinking must be based on a firm foundation of knowledge. In order to usefully invoke the higher-order skills such as analysis and creativity, students need to have acquired some amount of basic knowledge, such as vocabulary in the case of language instruction. The problem is that most students (and many teachers) don't really know how best to learn and retain new information (Brown, Roediger, & McDaniels, 2014). In fact, students tend to prefer less-effective study techniques that seem easier, and often they do not put teachers' suggestions into practice. Based on cognitive science research, Lang discusses three approaches to gaining and retaining knowledge: *predicting*, *retrieving*, and *interleaving*. Many teachers are familiar with the benefits of having students *predict* before they learn. Lang explains that this practice is helpful because it helps prime networks of previous knowledge where new information can find a home. *Retrieval* is the practice of studying by quizzing oneself, actually retrieving the material from memory rather than just looking at it; *interleaving* refers to patterns of study in which learners practice a given item in several short sessions interspersed with other topics, rather than cramming all at once. These practices are well-supported for foreign language vocabulary learning (e.g. Makarachuk, 2015); blocked (non-interleaved) practice may, however, be more effective for early pronunciation learning (Carpenter & Mueller, 2013), a caveat acknowledged by Lang. Research on the application of blocked vs interleaved practice to grammar learning seems to be lacking, but since Lang explains that interleaved practice helps students recognize which rules to apply in which situations, this seems like a promising area for future research and practice.

Students with basic knowledge can use it to develop *Understanding* and build complex skills. Part 2 of *Small Teaching* focuses on techniques for helping students build complex skills (such as communication in a foreign language) by making *connections* between pieces of knowledge, *explaining to themselves* the links between principles (e.g. language rules) and examples or actions, and *practicing* the skills we want them to build. Lang explains that novices not only know less than experts, but their knowledge is less interconnected – they aren't always aware of the relationships between separate pieces of knowledge. He suggests helping students build *connections* by, for example, drawing concept maps to represent what they have learned. In the case of language instruction, a teacher could have students map connections between words or among possible structures to express similar functions. In addition, Lang suggests helping students monitor their

¹ Received: 18 January 2019. Accepted: 20 May 2019.

² bethemilysheppard@gmail.com

comprehension and learn more mindfully by regularly asking them to *explain to themselves* and peers how principals or rules are applied in specific situations. This kind of self-explanation is also referred to as elaboration in the cognitive science literature, and it has been shown to increase learning both in science (Chi, De Leeuw, Chiu, & Lavancher, 1994) and in foreign language, where it is sometimes referred to as “*linguaging*” and is usually carried out in the learners’ first language for example as Japanese learners write out explanations for corrections to their English writing (Suzuki, 2012), or as English-speaking students of French collaboratively verbalize their understanding of grammatical voice (Swain, Lapkin, Knouzi, Suzuki, & Brooks, 2009). In both of these studies, the self-explanations were associated with increased second language accuracy. Most importantly (though perhaps obviously in the case of language teaching) this section of Lang’s book reminds teachers to make sure students actually *practice* the skill they are teaching frequently in the classroom, since students can’t improve at a complex skill without practice.

The third part of *Small Teaching* focuses on *Inspiration*, or the emotional elements that help teachers and students do their best in any discipline. In the case of language teaching, affective factors such as motivation, identity, and anxiety are closely tied to students’ willingness to risk and communicate (e.g. MacIntyre, 2007). Small, research-backed activities and shifts in our practices can help students increase their motivation and build a growth mindset, helping them not to give up with the going gets tough. For example, research has found that students are more willing to persist through stretches of boring or challenging work if this effort can be connected to a self-transcendent purpose, a hope of helping others or improving the world (Yeager, Henderson, Paunesku, Walton, D’Mello, Spitzer, & Duckworth, 2014); this can help us choose effective ways to inspire student motivation. In another example, children praised for their ability have been found to give up more easily than children praised for their effort (Dweck, 2008), and findings on the importance of developing or maintaining a growth mindset were quickly extended to the context of language learning (e.g. Mercer & Ryan, 2010). *Small Teaching* offers simple suggestions for applying these and other insights to your teaching. In the final chapter of Part 3, Lang expands his focus beyond the small changes he has advocated in the first eight chapters to describe some more fundamental changes to instruction that also have research-backed benefits for learning, and shares resources for continued learning about instructional innovations and learning science.

This engaging and enjoyable book will be useful for language teachers, and especially for language teaching study groups. While it is written for teachers in general, not specifically language teachers, most of the ideas found in this book can be adopted to the language classroom, as described in the preceding paragraphs. It doesn’t take long to read the book from start to finish, with all the explanations, caveats, theoretical support, detailed suggestions, and occasional jokes that form the bulk of its contents. However, it is arranged so that teachers with less available time can go directly to the main ideas and suggestions, which are summarized in a few pages at the end of each chapter. It doesn’t have to be overwhelming to use scientific insights about learning to improve our classrooms. A great deal can be done with small adjustments to teaching practice, such as adding a new activity for ten minutes at the beginning or end of class, or changing the way feedback is framed, or asking one extra question, or planning assessments to provide more practice. It is helpful to know that the manageable actions proposed in this book are supported by scientific studies of learning in both laboratories and classrooms. Applying these ideas can help our teaching harness the functions of our students’ brains to learn more effectively – what more could we want?

References

- Brown, P. C., Roegider, H. L., & McDaniel, M. A. (2014). *Make it stick: The science of successful learning*. Cambridge, MA: The Belknap Press of Harvard University Press.
- Carpenter, S. K., & Mueller, F. E. (2013). The effects of interleaving versus blocking on foreign language pronunciation learning. *Memory & Cognition*, 41(5), 672-682. <https://doi.org/10.3758/s13421-012-0291-4>
- Chi, M. T. H., De Leeuw, N., Chiu, M.-H., & Lavancher, C. (1994). Eliciting self-explanations improves understanding. *Cognitive Science*, 18(3), 439-477. https://doi.org/10.1207/s15516709cog1803_3
- Dweck, C. S. (2008). *Mindset: The new psychology of success*. New York, NY: Ballantine Books.
- Macintyre, P.D. (2007). Willingness to communicate in a second language: Understanding the decision to speak as a volitional process. *The Modern Language Journal*, 91(4), 564-576. <https://doi.org/10.1111/j.1540-4781.2007.00623.x>
- Makarachuk, D. (2015). Interleaving in a foreign language learning context. *Korean Journal of Applied Linguistics*, 31(4), 129-152.
- Mercer, S. & Ryan, S. (2010). A mindset for EFL: learners’ beliefs about the role of natural talent. *ELT Journal*, 64(4), 436-444. <https://doi.org/10.1093/elt/ccp083>
- Suzuki, W. (2012). Written linguaging, direct correction, and second language writing revision. *Language Learning*, 62(4), 1110-1133. <https://doi.org/10.1111/j.1467-9922.2012.00720.x>

- Swain, M., Lapkin, S., Knouzi, I., Suzuki, W., & Brooks, L. (2009). Linguaging: University students learn the grammatical concept of voice in French. *The Modern Language Journal*, 93(1), 5-25. <https://doi.org/10.1111/j.1540-4781.2009.00825.x>
- Yeager, D. S., Henderson, M. D., Paunesku, D., Walton, G. M., D'Mello, S., Spitzer, B. J., & Duckworth, A. L. (2014). Boring but important: A self-transcendent purpose for learning fosters academic self-regulations. *Journal of Personality and Social Psychology*, 107(4), 559-580. <https://doi.org/10.1037/a0037637>