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Book review:
Small teaching: everyday lessons from the science of learning
(Lang, J.M., 2016, Jossey-Bass)

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Small Teaching presents research-based, relatively easy to implement teaching practices and course design principles that should help improve student learning. The author offers a mixture of stories about teaching, summaries of research, and practical ideas for applying evidence-based teaching approaches. He lays out a set of chapters that each focus on a different approach or technique that has had a demonstrable research-based positive impact (primarily in higher education), and that he as a teacher has used or observed in practice. Small teaching approaches are by-design quick to employ for teachers in almost any subject. They are either brief activities that might take 5-10 minutes of a class, or perhaps up to one full class period. They also might be simple modifications to course design or communication styles that would not require a significant altering of a course and might be thought of more as a tweak or a fine-tuning that could often be applied the next time you step into a classroom.

The author arranges the main content of the book in three primary sections: *Knowledge*, *Understanding* and *Inspiration*. Each section then has three different chapters that introduce specific concepts. Each chapter of the book follows the same structure. First, they include an introduction to the idea, usually through a story or an everyday example, followed by a brief overview of the theory and critical research findings behind it. Chapters then develop a description of model examples showing how a teacher incorporates and applies the ideas in their teaching, followed by a summary of the principle with guidance on how to use it in different contexts. Each chapter finishes with a concise summary that is easy to refer back to, and a reflection on the idea presented in the chapter.

In the *Knowledge* section, the first two chapters focus on the opening and closing moments of class times. First, in the chapter *Retrieving*, Lang encourages the frequent and intentional use of questions and quizzing as retrieval practice to promote student retention of information. He also includes a discussion around reluctance to incorporate this approach, particularly in higher education, and some practical and research-based reasons why he has changed his mind. Following next is the chapter called *Predicting*, which is also useful in the same opening and closing moments of class. The idea is asking students to guess the answer to questions that they are unprepared to answer yet. This technique is to help prepare students to make connections to the material that will be presented afterwards. Essentially by guiding students to search their minds for an answer to a question they don't know the answer to, faculty are intentionally activating any prior knowledge they might have which is related to the topic. This predicting ought to be helpful for students to build connections to the new information, and ultimately being able to recall it later on. The final chapter in the section introduces the more complex idea of *interleaving* as a method of studying to help with long-term retention and transfer of ideas. Perhaps the easiest way to describe interleaving is to look at its opposite: blocked practice. An example of blocked practice would be working through many of the same types of math problems one after the other until mastery is achieved. In an interleaved approach, you are intentionally mixing up the order in which you practice or cover related skills, doing some of one type of problem followed by some of another kind. The author argues it might feel like you are achieving solid learning results to spend

blocked practice sessions working on one type of math problem at a time. However, by jumbling up – interleaving – the practice over time, and moving back and forth between related but different types of problems, the immediate short-term mastery results may be lower, but the learning should endure longer and transfer better to new contexts. Looking for opportunities for students to return over and over to crucial course material in different settings over the semester is the primary application of interleaving.

In the first section, *Knowledge*, the focus is on faculty methods to support students to remember and recall the foundational course content. Throughout the *Understanding* section of the book, this recall is pushed further and into how to build the ‘mental networks’ of information that is required of students in university. First, in the chapter *Connecting*, Lang presents a collection of ideas on how to help students build associations about your course material. Working from the compelling notion that as an expert in their discipline, faculty have a dense set of mental connections about their course materials, but students are novices in the field and as such need support to combine the discrete facts into meaningful relationships. Providing organizing frameworks for lectures, using concept maps, and a unique activity called the Minute Thesis (different to the commonly used minute paper, Minute Thesis has students build short thesis statements by linking two different course themes/topics together in new ways) are some of the suggested methods. The *Practice* chapter starts with a problem that many faculty members can relate to: watching students give disappointing, unorganized presentations. He then focuses on building in intentional in-class opportunities for students to practice, and get feedback on, a prioritized list of the cognitive skills that you expect in your assessments. The final chapter of the section, *Self-Explaining*, describes the idea of using self-explanations to support learning. In the research, this tends to be a behavior students are taught to do while they are studying. However, the author encourages bringing the technique into the classroom by for example using peer-learning approaches, and think aloud reasoning exercises to increase active engagement with material. Overall, the section focuses on adding depth and complexity to student understanding.

The final section, *Inspiration*, touches on the emotional and attitudinal factors that impact learning, beyond understanding and knowledge. In *Motivating*, the research summaries focus on emotions and motivation, but the models speak more to small ways to actively create positive learning environments led with enthusiasm. *Growing* is a chapter that focuses on bringing growth-mindsets into your communications with students. The final chapter, *Expanding*, is a call to teachers to push further into more large-scale pedagogical change.

The author, James M. Lang, is a professor of English as well as the Director of a Teaching and Learning Center at an American university. He is unquestionably passionate about improving teaching and has significant experience in a university classroom which he draws on throughout the book. He has written four other books related to teaching and working in academia, and writes a monthly column for the Chronicle of Higher Education. He is writing to an audience of university academics without a background in the field of education, but with interest in improving student learning.

As for applicability to the Gulf classroom, while no direct links are made to the context by the author, the book is potentially very useful. In the UAE environment, many students are learning in a second language, and classrooms often have students with varied levels of academic preparation for university study. Teaching in the Gulf context can put an extra burden on the instructor to move well beyond transmission-based models and approaches to support students, and this is a text that offers evidence-based ideas for helping students learn and remember content. The direct connection of each of the methods to research that improves learning makes this a valuable place to go to for ideas, and a basic overview of the theoretical basis for them. It also offers a useful read, as the notions put forward can be

put into place in many cases immediately, and in almost any course. A teacher would not need to redesign the syllabus, get approval for a new approach, or take substantial risks to implement some of the ideas; it's quite likely they could apply concepts the next time they step into a classroom face-to-face or online.

The tone of the book is casual despite it often referring to research. It is one faculty member speaking to another with a frankness and honesty about how enjoyable teaching can be when it is working well, and how frustrating it can be when it is not. The author's discipline is teaching English literature, but the examples are transferable to most different disciplines. The author has a deep interest and passion for teaching.

Perhaps one of the main weaknesses of the work is related to its strengths: it is a book about teaching written by a very experienced English professor. It can be a risk for an author to write outside their academic discipline, and that could be considered a limitation. Throughout the author draws fairly liberally on several similar works written in the same genre: texts about learning written for non-specialists that are in teaching roles. I'm certain that if a reader has an extensive background in, for example, cognitive psychology, they would not be the target audience and they would be unlikely to find new ideas presented here. Further, they may even disagree with some of his representations or generalizations. Also, depending on the interest and experimentation level with varied pedagogical approaches that a faculty member may have undertaken, the ideas presented in this book may seem too simplistic.

The primary strength of this book is it is written in a way that makes learning science research accessible to faculty who teach but are not education experts. It includes many examples immediately applicable to the day-to-day teaching of a university faculty member. Even if many of the concepts are familiar, there are practical applications and good reminders of how to integrate them into teaching. Experienced faculty members may find it interesting to understand the theoretical underpinnings of why some approaches that they have intuitively tried in the past were either successful or lacking. In a broad sense, this book may offer the most pertinent advice to faculty teaching courses that require students to acquire and apply a lot of content (a primary focus of many of the techniques), although given the straightforwardness of the ideas, most teaching university classes would find some practical advice.