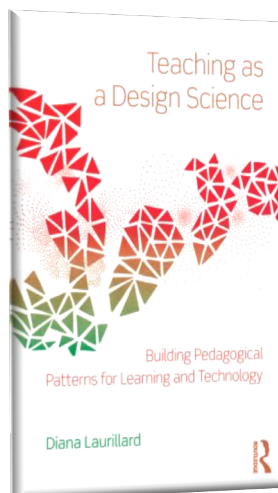


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Laurillard, D. (2012). *Teaching as a Design Science. Building pedagogical patterns for learning and technology*. New York & London: Routledge. 258 págs.



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In short time *Teaching as a Design Science* by Diana Laurillard has become a spearhead for the recent and growing field of Learning Design. The articulate and convincing argument for treating teaching as a design science has provided educators worldwide with a new frame of reference for thinking about their practice. Diana explains:

What it takes to teach cannot be determined directly from what it takes to learn, which means that teachers must be willing to treat the process as essentially problematic, iterative, and always improvable; we must stop assuming that teaching can be theorized like a natural science, and treat it like a design science. (p. 82)

The book begins by deeply interrogating the underlying contextual factors and concepts that influence technology-enhanced learning – for instance, what students bring to learning, what it takes to learn, and what it takes to teach – drawing upon recent insightful and scholarly research. The coverage is broad and synergistic, drawing together a wide variety of literature to imbue the reader with a holistic understanding of educational research as it relates to practice. The sharply analytical approach to synthesizing the research leaves the reader with a clear vision of what is important, as well as the tools to achieve that vision. For instance, the five principles for teaching – constructive alignment, monitoring alternative conceptions, scaffolding theory based practice, fostering conceptual knowledge development, and encouraging metacognition – each come with evidence-based guidelines for teacher's roles and actions.

While *Teaching as a Design Science* draws upon the popular Conversational Framework from her previous book, *Rethinking University Teaching*, this latest book adds new in-depth examination of different approaches to learning. The chapters on learning through acquisition, inquiry, discussion, practice, and collaboration (respectively), unpack the variety of ways that each approach can be applied, and the corresponding research findings that inform their application. This leaves the reader

with a deep and nuanced understanding of the key pedagogical influences that they should consider when helping their students to learn using the various pedagogical approaches. In each case, Diana provides practical examples of how digital technologies can help, as well as the evidence that informs how they should be applied.

One of the reasons that the book is so engrossing to read is because Diana has the depth of field knowledge to unravel the evolution of the field, providing us with a historical walkthrough to the current prevailing theories and practices. The uniquely lucid and persuasive narrative serves to on-side the reader and engage them with the arguments being presented.

Importantly, *Teaching as a Design Science* also interconnects with the Learning Design field by emphasising the value of pedagogical patterns and sharing our knowledge as a community. The book concludes by helping readers to understand teaching as developing pedagogical patterns, and outline various approaches to formalizing pattern descriptions. Of course, Diana has been helping us with forming and describing pedagogical patterns all the way along, through her consistent approach to structuring chapters with pedagogical and technological links, as well as by representing designs in each chapter using the Conversational Framework.

Diana also provides us with support beyond the book, through her Learning Designer platform (<http://learningdesigner.org>). The Learning Designer provides the learning design community with online tools to describe, analyse and share their designs, using the concepts outlined in the book. In doing so, the field is provided with further foundations necessary to advance educational research and practice, and the motivation to collectively explore what teaching as a design science will mean in a future of new and emerging technologies.

*Teaching as a Design Science* stands as an impressive life work, that most academics only ever aspire to achieve. Of course, for Diana, this is her second such work, with *Rethinking University Teaching* having exercised more influence on the field of technology-enhanced learning than possibly any other. With its uniquely insightful lens into education and its eloquent argumentation, *Teaching as a Design Science* is already a seminal work. One can only hope that there are many more to come.