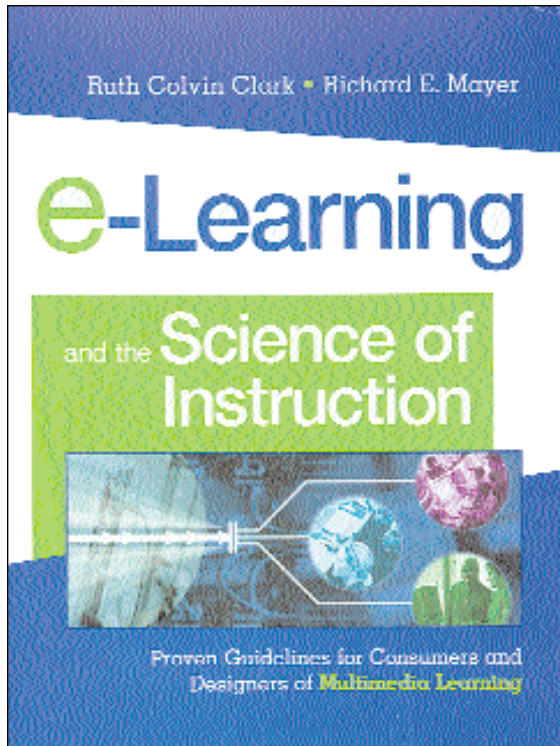


BOOKS



E-Learning and the Science of Instruction

By Ruth Colvin Clark and
Richard E. Mayer

Reviewed by Laura M. Francis

In recent years, e-learning practitioners have been attempting to set standards for evaluating e-learning products. Yet, too often these standards were based on subjective opinions, creating a guessing game to decide what standards to use in e-learning. But now there's light on what makes e-learning work, thanks to Ruth Colvin Clark and Richard E. Mayer.

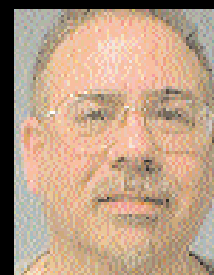
In their book *E-Learning and the Science of Instruction*, Clark and Mayer explore and identify standards for e-learning design by examining and applying research on how people learn. They use psychology as a basis for their conclusions, educating readers on how

the human brain processes information. Because they base their conclusions on research and data-gathering techniques, the work and the standards they identify draw credibility and value.

Written primarily for e-learning designers, the book explores many topics—from using multimedia elements in an e-learning design to exploring the frequency and placement of questions in e-learning programs. The authors address the best ways to use text, graphics, and audio to maximize learning. They also point out when an interesting story hurts learning and how collaborative Internet facilities can be used to maximize

ON THE NIGHT STAND

By Robert C. Fratini



I've always been an enthusiastic bookstore browser, and having Amazon.com and Half.com just one click away has proven to be more temptation than I can resist.

What has clawed its way to the top of my nightstand queue? *Michael Allen's Guide to E-Learning*, for one. Although based in sound science and bottom-line business results, this book strikes me as being more about the art of e-learning than the science. Allen challenges designers to motivate learners within the tight budgets and timeframes all of us face.

Some years ago I attended a presentation by John Seely Brown, in which he shared research on the informal learning that occurs through "war stories" exchanged by copier repair technicians. Brown and Paul Duguid's *The Social Life of Information* presents a compelling case for designing learning environments (live and electronic) around the human relationships.

Because e-learning evolves incrementally and not always in book-size leaps, my nightstand also accumulates Internet-based articles printed for more convenient reading. Some reliable sites for current developments in the field are www.elearningguild.com, www.e-learningguru.com, and www.work-learning.com.

Last, but far from least, there's *The Message* by Eugene H. Peterson. This industry bible demonstrates how the most challenging content isn't diluted or diminished by learner-centered design.

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learning. No matter what question they answer, Clark and Mayer always focus their attention on the learner and highlight techniques that will best help him or her succeed. That makes the authors' suggestions more powerful because it exhibits their concern for learners rather than promoting the latest and coolest e-learning trend.

Novice designers will benefit most because the book provides a thorough study of components that make up quality e-learning. Experienced designers can use this book as a reference, looking at the guidelines when needed. Because of the book's focus it's less useful to e-learning buyers.

Overall, *E-Learning and the Science of Instruction* maintains an approachable feel through use of simple conversational language, many visual examples, short and comprehensible sections, and examples of how the principles can be applied to e-learning. A downfall of the book is the Design Dilemma sections that appear at the beginning of each chapter. Intended to show readers a design problem that the chapter will resolve, these examples prove more distracting than helpful. The chapters can be easily understood without the oversimplified examples or hokey solutions, which often have the designer with the problem spouting research findings and principles that the authors have created—all of which appears forced. Clark and Mayer try too hard to prove the worthiness of their material by placing their findings in factitious scenarios. They would be better off allowing readers to place the principles and research in the context of their own work settings.

Even with these distracting Design Dilemmas, *E-Learning and the Science of*

Instruction is easy to read and comprehend. The chapters are well organized; each contains a preview that helps a reader know whether the chapter will be beneficial to him or her. The last chapter has a summary of all of the guidelines.

Another refreshing aspect is that Clark and Mayer acknowledge that their guidelines don't apply to every situation and will change over time. They expect the guidelines to be a starting point for future principles. That idea of growth and evolution resonates with the realities of e-learning, an ever-changing field.

Mayer conducted most of the research that serves as a basis for the guidelines. For the sake of impartiality, I'd like to have seen supporting research by someone other than one of the authors. I'm also curious to know the age of Mayer's subjects. If they were children, as it seems in the examples, how does that affect the results and the suggestions for adult learners?

E-Learning and the Science of Instruction is still an excellent resource for e-learning designers and a great place to start learning about the field and what it can offer.

E-Learning and the Science of Instruction by Ruth Colvin Clark and Richard E. Mayer. San Francisco: Jossey-Bass/Pfeiffer. 322 pp. US\$40

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