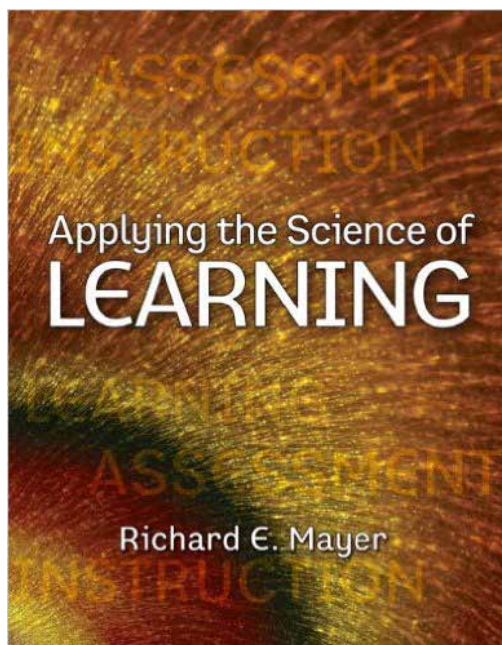


Prep Resources:

Recommendation for a Truly Research-Based Textbook on Learning, Instruction and Assessment

Applying the science of learning (Richard Mayer, Boston: Pearson/Allyn & Bacon, 2011) covers two of the six fundamental instructional strategies and mentions three more, with a particularly strong presentation of the strategy of pairing graphics with words. Moreover, nothing in Mayer's text contradicts the six strategies, and all of the content in Mayer's text (which includes topics in learning, instruction, and assessment) is genuinely research-based.



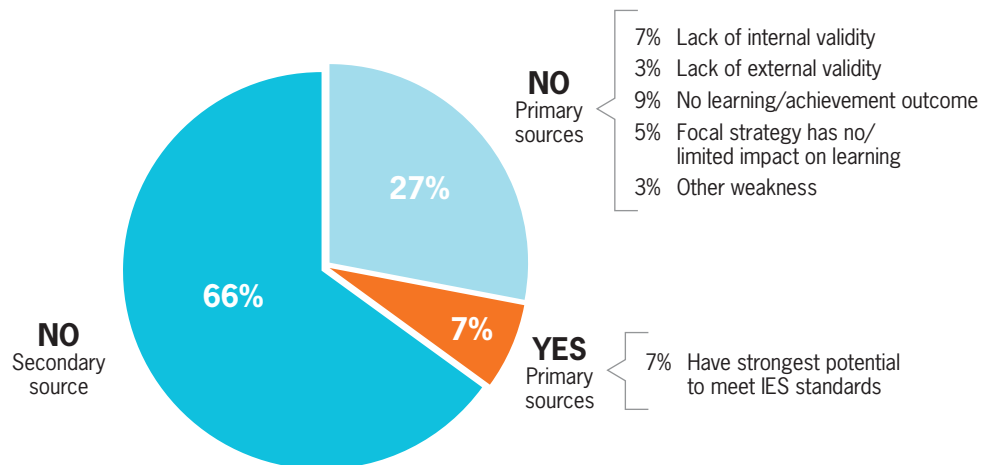
Why aren't other textbooks recommended?

NCTQ has found by examination of a representative sample of educational psychology and methods textbooks that the six fundamental instructional strategies are often missing or, if mentioned, resemble the garbling of a message in the child's game of telephone.

Why does this happen? First, many of the texts are too heavily reliant on secondary sources. Second, of the primary sources that are included by texts, more than half report on studies whose designs limit the general applicability of their findings, with flaws such as extremely small sample sizes, lack of a control group, or the use of a teaching strategy only on students with special characteristics (such as gifted students). Other primary sources are not really studies of the application of a teaching strategy at all, but are instead simply descriptions of the strategy.

The figure below shows that our evaluation found that only a small proportion (7 percent) of the sample of citations examined have much potential to satisfy the standards for research established by the federal Institute of Education Sciences (IES).

Figure 1. Scientific rigor behind textbook references



Almost all of a sample of references (n=58) used to support discussion of instructional methods in several representative textbooks examined would not meet IES standards for research.

While our evaluation of textbooks on which we make our textbook recommendation did not go beyond review of their coverage of the fundamental instructional strategies, there is no reason to believe that the weaknesses found would be restricted to coverage of those strategies. Rather, there is every reason to believe that the textbooks' weaknesses pervade their coverage of all instructional topics.



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