

# The Doer Effect



## IMS Global: Learning Impact On-Demand Virtual Series, Solutions for Highly Effective Digital Teaching and Learning

Thank you for viewing the VitalSource webinar, “How data can be used to improve student outcomes with a spotlight on the Doer Effect.” We are pleased to share the research discussed during the session.

### KEY TAKEAWAYS

The Doer Effect is the learning science principle that proves students who engage with the practice questions while reading new content have higher learning gains than those who simply read. This is a design approach called Learn by Doing, which integrates practice opportunities into learning materials at frequent intervals. Engaging with these practice opportunities creates the Doer Effect.

### THE RESEARCH

Studies of interactive courseware from Carnegie Mellon’s Open Learning Initiative show that students who do more interactive activities have a learning benefit approximately six times that of reading text and three times that of watching video<sup>1</sup>. Follow-up analysis showed this relationship wasn’t merely a correlation: **doing caused learning.**<sup>2</sup>



Acrobatiq by VitalSource has since replicated these findings in a research study with a major online institution by analyzing courseware engagement data with final exam scores. Results showed the same causal relationship that doing practice causes learning.<sup>3</sup>

## WHAT IS THE IMPORTANCE OF THE DOER EFFECT?

Many struggling students instinctively tend to reread the material over and over when that study time would be better spent doing practice.

Instructors can encourage—or better yet, require—students to do the embedded practice provided in a Learn by Doing design, knowing that this evidence-based practice will improve learning.

When we understand the science behind why and how students learn most effectively and efficiently, regardless of subject matter, we can design better learning experiences for them.

### SESSION PRESENTERS:

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Benny Johnson, Director of Research and Development, Acrobatiq by VitalSource

<sup>1</sup> Koedinger, K., Kim, J., Jia, J., McLaughlin, E., Bier, N. (2015). Learning is not a spectator sport: doing is better than watching for learning from a MOOC. In: Learning at Scale, pp. 111–120. Vancouver, Canada. <http://dx.doi.org/10.1145/2724660.2724681>

<sup>2</sup> Koedinger, K., McLaughlin, E., Jia, J., Bier, N. (2016). Is the doer effect a causal relationship? How can we tell and why it's important? Learning Analytics and Knowledge. Edinburgh, United Kingdom. <http://dx.doi.org/10.1145/2883851.2883957>

<sup>3</sup> Olsen, J., Johnson, B.G. (2019). Deeper collaborations: a finding that may have gone unnoticed. Paper Presented at the IMS Global Learning Impact Leadership Institute, San Diego, CA

To learn more about Acrobatiq by VitalSource, visit <https://get.vitalsource.com/acrobatiq>