

We know a lot about how expertise works

Working Memory and Long-Term Memory

Audio —

Visual —

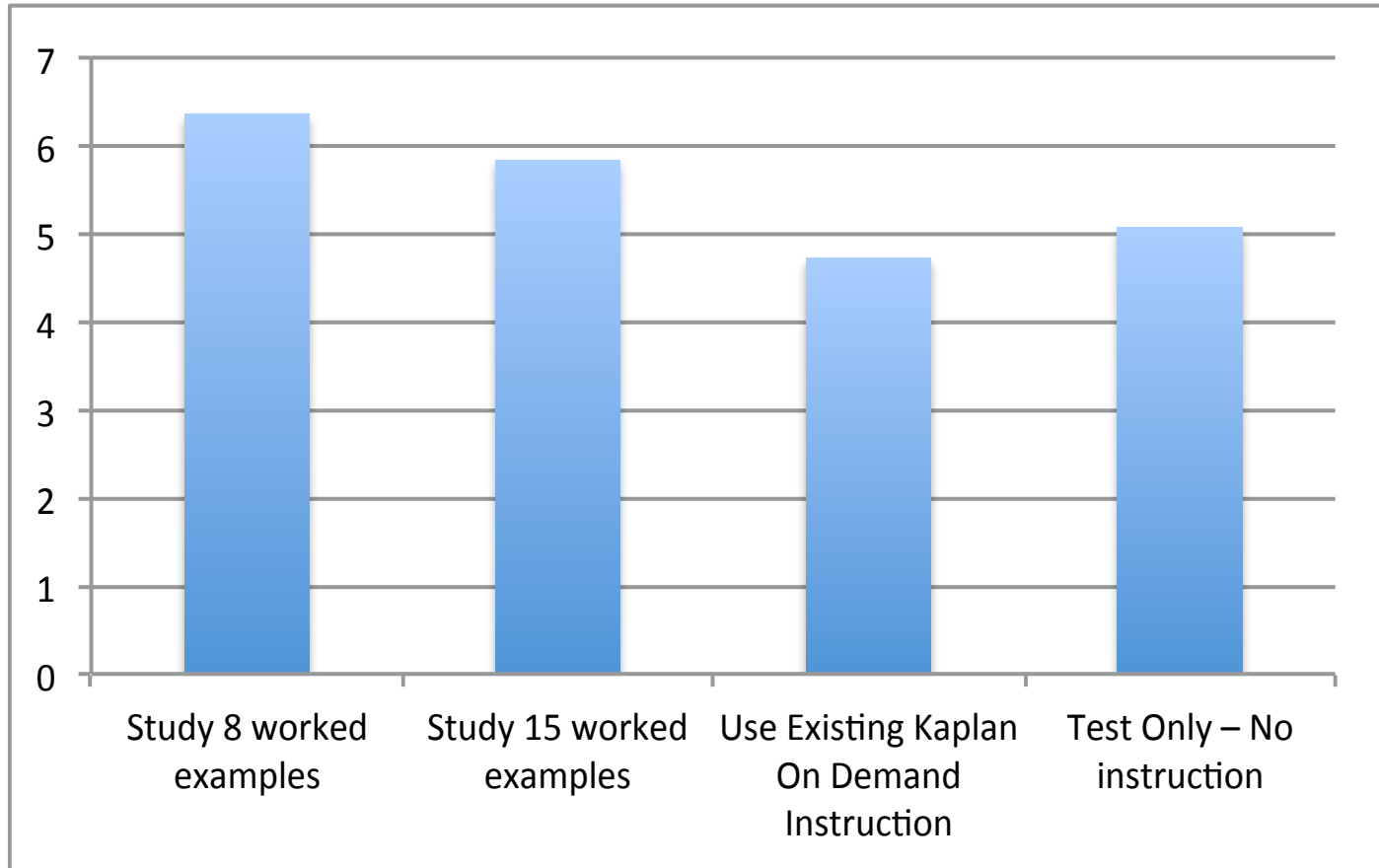
We also know a fair bit about motivation*



* Based on a research synthesis by Richard Clark at USC

The evidence also shows our intuitions aren't the best guides

LSAT Logical Reasoning example



N

153*

148*

107

84

Time (mins)

8.15

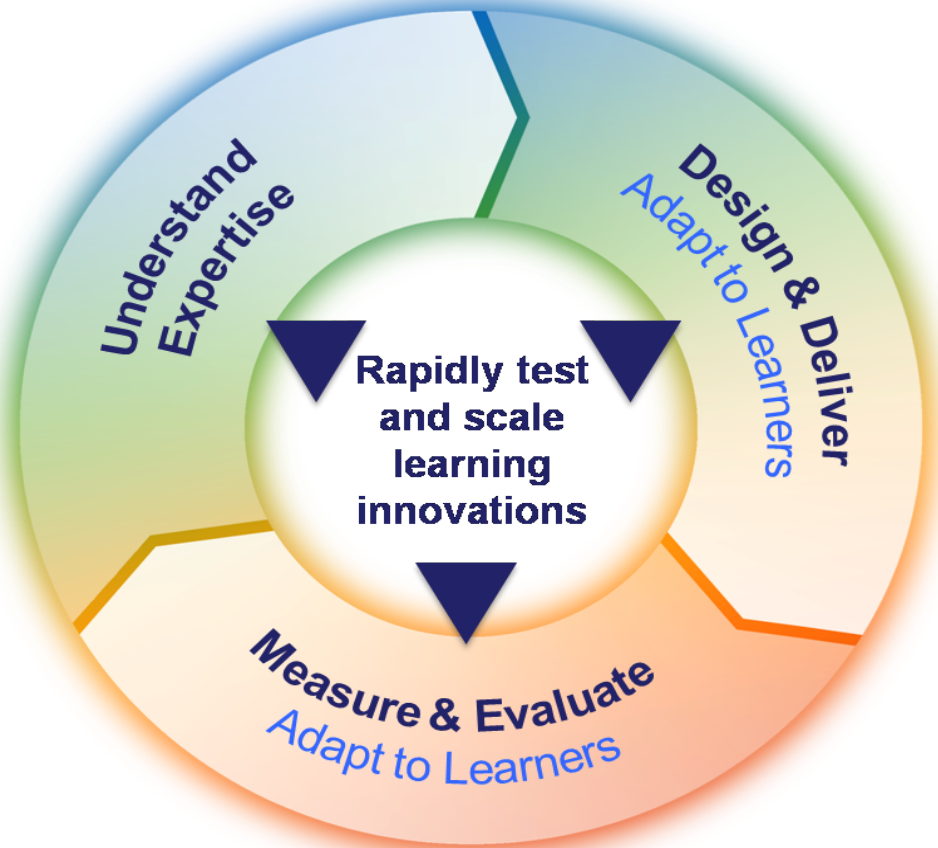
12.8

99.32

NA

* Significant difference from "No Instruction"

A “learning engineering” approach can help



See also Saxberg, B., [“Why We Need Learning Engineers,”](#) *Chronicle of Higher Education*, April 20, 2015