

## The Apprenticeship Model for Surgical Training Is Inferior



**Abstract:** While the apprenticeship model for surgical training is a long-standing gold standard worldwide, proficiency-based progression (PBP) training proves significantly superior. The combination of a metrics tool describing procedural steps and errors with a simulator model or cadaveric training, results in a measurement tool that not only judges but serves to improve surgeon skill.

When Richard L. Angelo and AANA asked, “Is there a better way to train surgical skills?,” Dr. Angelo learned of proficiency-based progression (PBP) training. Bye-bye to the ancient apprenticeship model.

However, before the established gold standard model for arthroscopic and related training is abandoned, future research, as they say, is required. Pick a procedure. First, break it down into steps, errors, and sentinel errors, and get everyone to agree on the steps, like a brotherhood or panel of Delphi. It’s a pretty amazing effort to get a large group of surgeons to come to consensus.<sup>1,2</sup> Second, combine the metrics tool with a model simulator training tool, and prove that these, in combination, form a measurement tool to judge surgeon proficiency. (Too many errors and the judgment is, sadly, failure.<sup>3,4</sup>) Third, while simulator models and virtual reality represents the future, in 2015 the cadaveric model still reigns realistic, so once simulator model training is completed, a consequential combination of the metrics tool with a cadaveric model forms the ultimate testing tool to judge surgical skill.<sup>5</sup> Finally, this month, Angelo and an impressive list of et al.<sup>6</sup> prove that superior surgical skills results from PBP. Bye-bye apprenticeship model.

There’s not much else to say.

Except that...

An oddity of our medical literature is that we mitigate against mystery. We publish the conclusion of our research in the abstract, and sometimes in the title of an article. (Sometimes, well-meaning editors even spill the beans in an editorial.) Even though readers now know that PBP proves superior before a turn of the page, we assure our readers that “A proficiency-based progression training curriculum coupled with a model

simulator results in the acquisition of a superior arthroscopic Bankart skill set”<sup>6</sup> is a captivating page turner. It’s quite amazing research, and we find it fascinating to learn that the way that we’ve been teaching surgery could be significantly improved. The surgeon educational model continues to evolve and this study shows that we can use bona fide metrics to assess and then improve.

Not much else to say.

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