
Is Engagement Alone Sufficient to Ensure “Active Learning”?

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INTRODUCTION

“Active Learning” is commonly defined as any instructional method that engages students in the learning process. However, active learning encompasses a broad range of educational methods and its impact on learning outcomes has been variable. In 2015, our IM clerkship redesigned its half-day learning sessions from a largely passive didactic style of lecturing to more active learning approaches. We further revised the curriculum in 2016 to further convert the sessions to primarily case based learning led by a faculty or resident. The goal of our intervention was to increase the Self-Reported Engagement Measure (STOBE) of each didactic session and improve educational outcomes.

MATERIAL AND METHODS

Weekly quizzes on assigned reading were administered prior to the didactic session to ensure students were prepared to engage. The clerkship director guided each subspecialist lecturer on ways to engage students. This included integrating case based learning and board style test questions throughout the lecture that would be answered together in small groups. In 2016 60% of the didactic sessions were converted to small group case based learning.

RESULTS

In a quasi-experimental design using historical controls, STROBE data and National

Board of Medical Examiners (NBME) subject exam scores from the 2016 and 2017 cohorts were compared. STROBE results demonstrated a significant increase in student engagement (from 59% to 71%, $p < 0.001$). However there was no statistical difference in the NBME end of rotation mean shelf exams scores (from 55 to 56 percentile, $p = 0.724$). Comparing the class of 2017 cohort of 96 students to class of 2018 cohort of 91 students, there was no statistical difference in the mean shelf exam scores (from 74.19% +/- 9.0% to 73.14% +/- 7.1%), however, the fail rate dropped from 4.0% to 1.1% respectively ($p=0.06$). Comparison was analyzed with the Pearson’s chi-squared test.

CONCLUSION

Integrating case based learning, small group interaction and test questions to check for understanding throughout lectures did significantly improve student engagement. However, this may not be sufficient to ensure student learning has occurred. Active learning should include not only intentional engagement, but also purposeful observations, and critical reflections. Other important learning outcomes such as higher order critical thinking and reasoning were not measured in this initial step, which may have contributed to the results.

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