Review of: "Can Twitter be used to improve learning outcomes in undergraduate medical education? A pilot study"

Robert Carnahan[1]

1 Vanderbilt University Medical Center

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This reviewer largely agrees with the conclusions of the other reviewers. The title and content of the article focus on Twitter. Though noted in the article, it needs to be clarified that the actual delivery platform has yet to be extensively studied. This interesting yet preliminary study suggests that "anytime-anyplace and just-in-time spaced learning experience" may reinforce traditional learning modalities. As noted by other reviewers and the authors, group selection may have influenced the results. This is particularly true with the simple use of a historical comparison. There may have also been an evolution in the course materials towards more effectiveness or changes in the exams themselves. These limitations do not entirely undermine the implications of the data, but they must be viewed as incompletely substantiated. Refocusing the overall theme around the just-in-time spaced learning will improve the clarity and impact of the article. The future research goals should not only focus on expanding the size and study sites. It should be directed at an improved study design. The ideal would be a random assignment of students at the same site to groups with and without the intervention. If this is not possible, a comparison of parallel student groups at similar institutions may be possible. The current study has too many variables of unknown impact to assign causality to the primary intervention. Reducing the potentially confounding variables and increasing group sizes would be the basis of a high-quality follow-up study. This could all be clarified in the discussion and conclusions.