

Letter to the Editor

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“Flipped Learning” in Disaster Triage: Polarizing Medical Student Attainment?

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Abstract

“Flipped learning” has become increasingly popular in medical education as a means of developing independent learning skills in students. The article by Zheng et al. (2020) highlights the potential utility of this approach in disaster triage training. However, the article also highlights to us some concerns regarding how “flipped learning” may favor certain learners over others in the provision of disaster triage education. Specifically, the article demonstrates the necessity for increased preclassroom preparation when a “flipped classroom” model is used, which inevitably privileges those with a higher ability to engage with self-directed learning. Although such a skill is important to develop in medical education, we fear it may lead to polarized student attainment rather than ensuring a maximum number of students achieve the requisite standard required. More research is consequently needed to inform the most efficacious means of facilitating disaster triage training that supports all students sufficiently, while also helping to nurture their independent learning skills.

We read, with interest, the article by Zheng et al. (2020), specifically its focus on “flipped learning” environments in disaster triage training.¹ As final-year medical students at Imperial College London, we have been exposed to a range of teaching methods, including this “flipped” format. Although this approach certainly seems to have its place, this article highlights to us the possibility of it widening the range of attainment among medical students.

The “flipped learning” or “flipped classroom” approach has gained traction as a means of combatting poor student satisfaction with didactic live lecture provisions that constitute the mainstay of preclinical medical teaching. However, individual motivation inherently determines any benefit derived from “flipped learning,” because the associated prereading is done in students’ own time before compulsory teaching. This may make it incompatible with certain students. This notion is particularly pertinent given the increased uptake of this methodology to reduce face-to-face teaching during the coronavirus disease 2019 (COVID-19) pandemic, making its potential drawbacks even more significant.

Medical school requires substantial self-motivation; there is a large and sustained workload, meaning there is need for consistent, self-directed study. This so-called “self-regulated learning” (SRL) is deemed essential to students’ success in learning generally,² a finding mirrored in the context of “flipped learning” environments in nonmedical subjects.³ Zheng et al. report that students in the “flipped classroom” group spent significantly more time on preclass preparation, which inevitably relies heavily on SRL.¹ Although these data are self-reported, it is certainly feasible that transferring course content to a format requiring more self-discipline will suit some students more than others. This effect is compounded because those not engaging fully with precourse material will be less able to contribute in subsequent classroom teaching that applies this.

This trend raises an issue about the merits of “flipped learning.” There is an understandable move toward encouraging SRL in medical teaching, as being proactive and responsible are important characteristics of a doctor. Because SRL is an intrinsic feature of “flipped learning,” it can be seen as encouraging these traits early in medical training. However, there is a risk of polarizing student attainment if those with a better ability to engage with SRL become high achievers while others falter. It is true that any alteration made to teaching will likely favor some students over others. However, because other studies show no significant improvement in mean medical exam results when teaching is provided in a “flipped” versus lecture-based format,^{4,5} there may lack a solid basis for pursuing this pedagogical model. Surely medical education should focus on ensuring all students meet a requisite standard, rather than promoting certain types of learners to excel over others.

In conclusion, although SRL is unequivocally an important skill to develop in disaster triage training, attempting to do so through “flipped learning” may not be as efficacious as it appears. Perhaps striking a balance between traditional and “flipped” formats based on future research

findings on disaster triage education would be more effective in nurturing students' self-motivation. Furthermore, if universities want to persevere with this approach, they must ensure that there is adequate training on using SRL strategies, so all students have an equal chance of benefitting.

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