


Response to: Coronavirus Disease 2019 (COVID-19) Learning Online: A Flipped Classroom Based on Micro-Learning Combined with Case-Based Learning in Undergraduate Medical Students [Letter]

Elizabeth Vacher
Paulina Bruessel 

UCL Medical School, London, WC1E
6DE, UK

Dear editor

We read with great interest the findings of Qian et al¹ on how different online teaching styles may facilitate improved COVID 19 knowledge acquisition and commend the authors on their exploration of flipped classroom and case-based learning.

The COVID19 pandemic demanded a new approach to teaching be adopted and propelled forward the use of online teaching platforms and technology to make up for a lack of clinical teaching. As fifth-year medical students at a UK medical school, who have recently completed a year of COVID19 teaching, we would like to add insights into which teaching models were most effective.

The findings by Qian et al suggest that a flipped classroom model with micro-learning and case-based learning may lead to greater knowledge gain and higher scores on knowledge tests compared to traditional teaching methods. There is already good evidence to support the use of flipped classrooms. Analysis of 28 comparative studies by Hew and Lo found flipped classroom models lead to a significant improvement in student learning compared to traditional classrooms² and our experience echoes this.

However, in this study, case-based discussions were still teacher led. We suggest that greater improvement in learning may be achieved by having students present cases and prepare questions for their peers and teachers to respond to. This approach would facilitate consolidation of the cases students were exposed to throughout the pandemic in a constructive and safe classroom environment. A systematic review by Tai et al suggests that the use of peer assisted learning holds benefits for students, including development of communication and professional skills⁴. Therefore, future studies may benefit from incorporating the role of peer teaching into the flipped classroom model.

In addition, the study design chosen by Qian et al introduces three teaching models but does not allow the individual effect of each teaching style to be explored. Therefore, it is not possible to ascertain if the benefits in knowledge acquisition are due to the flipped classroom model, micro-learning or case-based learning. This is important because although case-based learning is enjoyed by students, Thistlethwaite et al found it to have inconclusive efficacy.³

Correspondence: Elizabeth Vacher
Email Elizabeth.Vacher.14@ucl.ac.uk

Finally, in order to assess improvement in student knowledge a multiple-choice test paper may be of limited use. Online platforms could be better utilised to allow students to write long answers to set questions which are subsequently reviewed by teachers. This approach may negate the effects of memorisation and better delineate students' confidence in their knowledge.

Disclosure

The authors report no conflicts of interest in this communication.

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