

FLIPPING AFTER A PANDEMIC: A CASE STUDY

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The idea of 'flipping' a course, i.e., delivering all content before class time and instead focusing on active learning opportunities, is not a new one. Studies have shown that these classrooms can increase student engagement and performance, while decreasing the required number of face-to-face hours (Karabulut-Ilgü et al., 2018). However, it has also been shown that students state a lowered preference for these activities, believing they learn better in passive environments (Deslauriers et al., 2019).

This mismatch of student preference and actual performance is particularly important as the COVID-19 pandemic has seen extremely low attendance rates across most science lectures and tutorials worldwide. In this study, the method of content delivery was flipped in a single unit from 3 lectures and one tutorial a week to 1 workshop a week and all content delivered before class time. The laboratory content remained the same. In particular, we used:

- lightboard videos made with Mayer's Multimedia principles (Mayer, 2002) in mind,
- a blended online delivery platform with interactive H5P embedded questions,
- and full contextualised problem sets with weekly in-class quizzes.

Using a range of questionnaires and student/staff interviews, alongside marks analysis of the cohort, we have found:

- 1) High attendance rates.
- 2) Students preferred the new mode.
- 3) Tutors stated an increase in the 'level' of student questions.
- 4) Marks surprisingly remained the same!

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