

# Maintaining student engagement during an abrupt instructional transition: Lessons learned from COVID-19

Siena Senn and Dr. David Wessner

### BACKGROUND

Many colleges and universities announced an abrupt transition to remote learning because of the COVID-19 pandemic. This study discusses the instructional changes that were implemented in an undergraduate microbiology course as a result of this transition.

### METHODS

At the end of the semester, student attitudes about instructional changes were assessed. Students responded to several questions related to specific interventions via both a Likert-type scale and open-ended responses.

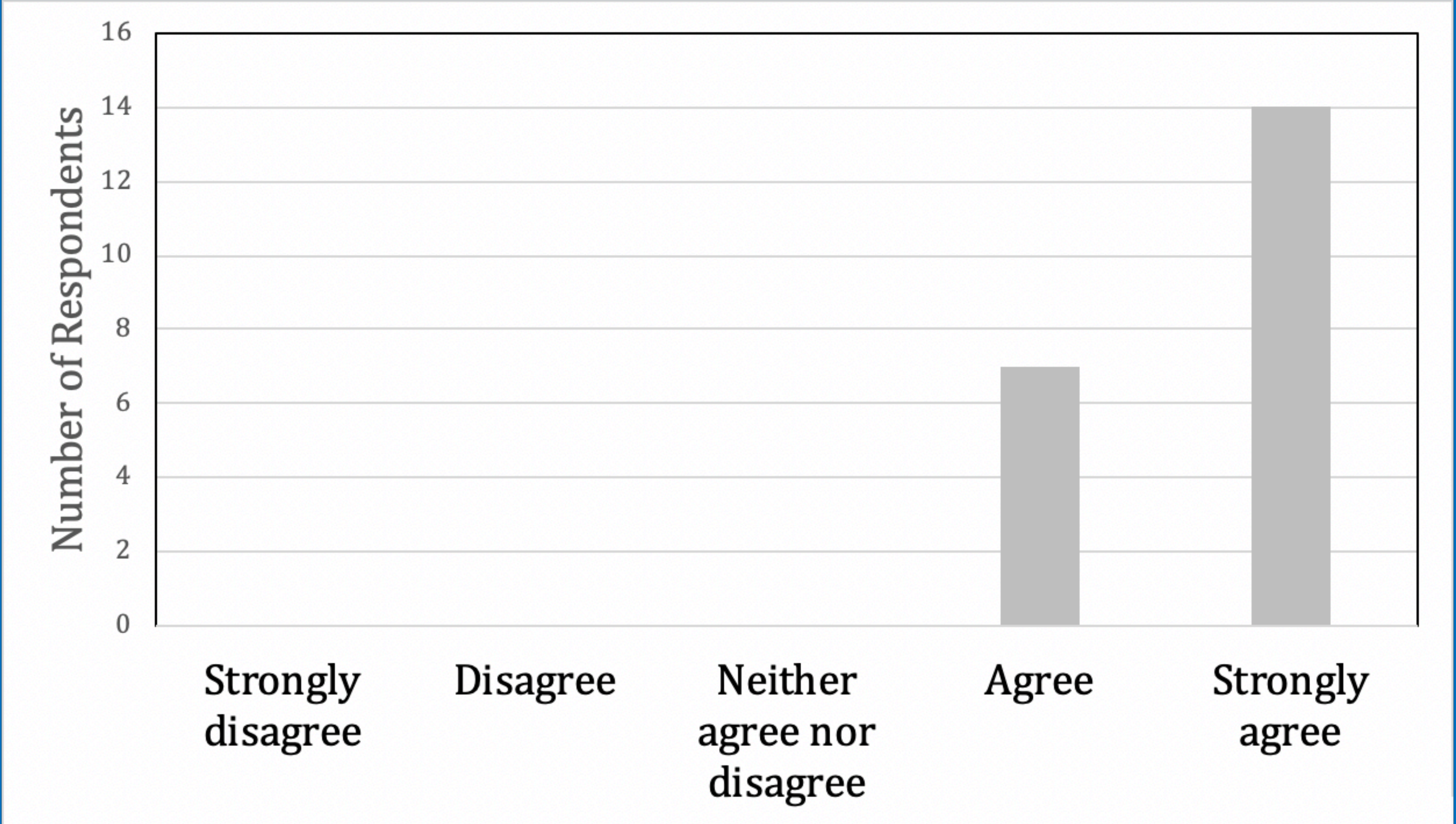
### RESULTS

All respondents (21/21; 100%) agreed or strongly agreed that the switch to thematic instruction enhanced the overall course. A majority of the respondents (17/21; 81%) agreed or strong agreed that pre-class introductory videos were useful. Most respondents (19/21; 90.5%) agreed or strongly agreed that forums were useful.

### DISCUSSION

Our results suggest that relatively simple instructional changes can positively affect student engagement in an online environment. We propose that these same changes also could be used to improve in-person classes.

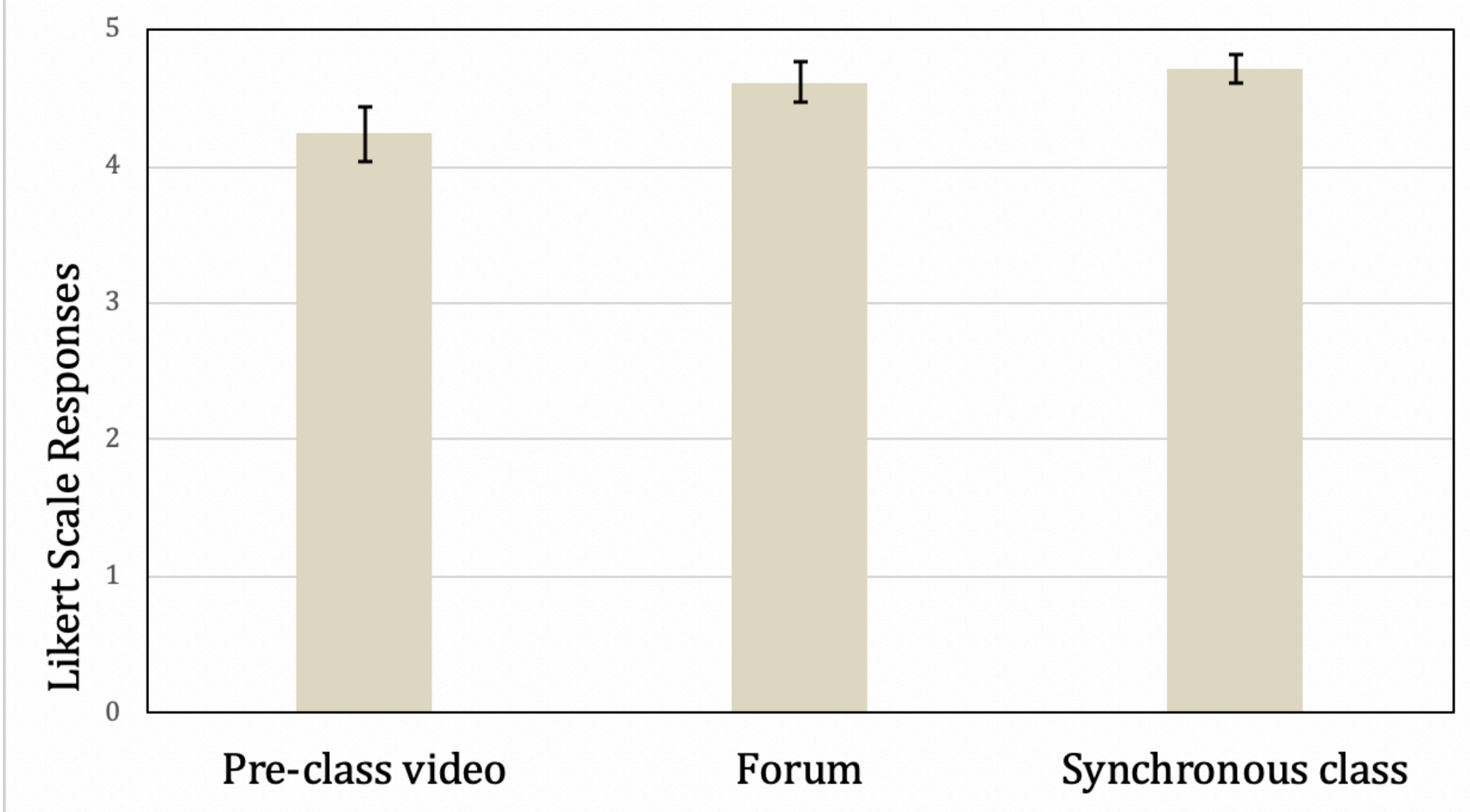
# A thematic focus and specific instructional changes enhanced course during switch from in-person to remote teaching.



**Figure 1. Student evaluation of the switch to a thematic focus.** At the end of the semester, students were asked if the mid-semester switch to focus almost entirely on SARS-CoV-2 and COVID-19 enhanced the course, using a Likert-type scale (1 = strongly disagree, 5 = strongly agree). Absolute numbers of respondents for each option are shown. Mean = 4.67. SEM = 0.105.

### ADDITIONAL TABLES AND FIGURES:

Table 1. Selected student comments about the switch to a thematic focus
I loved getting to see real-world applications of the material we had learned all semester.
[I]t...allowed us to see how the concepts we learned in class are applied.
[I]t...definitely made me a more informed individual.
I gained a much deeper understanding of the virus as well as public health measures.



**Figure 2. Student evaluation of specific instructional changes.** At the end of the semester, students were asked if three specific instructional changes (pre-class introductory videos, pre-class electronic forums, synchronous remote classes) were useful, using a Likert-type scale (1 = strongly disagree, 5 = strongly agree). Bars show mean (n = 21) ± SEM.