

Point-by-Point Response to Reviewer 1

We sincerely thank Reviewer 1 for the careful evaluation of our manuscript and for the constructive recommendation. We have revised the manuscript accordingly. The reviewer's comments are reproduced below, followed by our point-by-point responses. Changes made in the revised manuscript are indicated with the corresponding line numbers.

Comment: Thank you for submitting your work. The topic of the research is of significant interest to educators worldwide, particularly since the end of the pandemic. The impact of instructional delivery on learning outcomes has been discussed widely but with little empiricism to back assertions made by proponents and critics. Your study provides a useful contribution to the literature to guide instructors and organizations in assessing teaching delivery formats.

Response: We sincerely thank the reviewer for the positive assessment of our study and for recognizing its relevance to educators and institutions considering instructional delivery formats. We appreciate the reviewer's view that this work contributes empirical evidence to the ongoing discussion of face-to-face, online, and HyFlex education.

Comment: The study design, data analysis, and discussion are all well crafted and align with the study objectives. Conclusions made are proportionate to the data presented. I find no significant concerns with respect to statistical analyses used. Overall this is a well executed study examining an issue of timely importance.

Response: We thank the reviewer for the encouraging evaluation of the study design, statistical analysis, discussion, and conclusions. We are pleased that the reviewer considered the analyses appropriate and the conclusions proportionate to the data presented.

Comment: I have one (small) recommendation to consider: it appears as though students self-select into the cohort of their choice in this study. While this is acknowledged in the manuscript, this reality fundamentally clouds the findings of the study and raises questions as to causation and correlation. Is there something unique about those who self select into the F2F group that would mean they would be more likely to succeed on exams anyway? Is the instructional delivery format the actual variable that predicts performance, or is it the psychology/temperament of the learner who self-selects into the F2F group that is the more meaningful influence? Of course, this study cannot fully answer this question, but further reflection on this point would be useful to include in the discussion, with reference to existing literature that may help readers make sense of this.

Response: We agree that voluntary selection of attendance format is an important limitation and that learner characteristics may have influenced both attendance choice and learning outcomes. We therefore revised the Discussion to distinguish the potential effects of instructional format from the characteristics of learners selecting each format and added Athens (2023) as reference [22] to contextualize relevant self-regulatory, motivational, and practical factors (L324-345). The Limitations section now states concisely that the retrospective observational design and self-selected attendance format preclude causal inference and that the observed F2F advantage may partly reflect residual confounding (L359-370). We also added a brief qualification to the Abstract (L22-27). In the Conclusions, we retained the principal finding and its practical implication as the main emphasis: F2F attendance was associated with greater course-period learning gain and may be beneficial for supporting learning during the structured course period, while HyFlex support should remain responsive to individual learning needs and conditions. The qualification

regarding self-selection is presented briefly at the end, together with the need for prospective multicenter studies to confirm the association and clarify the independent contribution of attendance format (L372-382).

Comment: Beyond that, I have no other significant concerns. Some additional editing of the text to make the prose more concise and easier to read may be beneficial. Congratulations on this interesting piece of research!

Response: We thank the reviewer for this helpful suggestion and the encouraging closing comment. We carefully edited the manuscript throughout to improve concision, readability, and sentence flow, while preserving the intended meaning and the precision of the scientific statements.

Yukinori Nagakura

Corresponding Author