STUDENTS' LEARNING EXPERIENCES OF LIGHTBOARD AND POWERPOINT INSTRUCTIONAL VIDEOS

Ryan E. Lopeza, Dino Spagnolia

Presenting Author: Ryan E. Lopez (ryan.lopez@uwa.edu.au)

aSchool of Molecular Sciences, The University of Western Australia, Perth, WA, 6009, Australia

KEYWORDS: Lightboard, pseudo experimental, instructional videos

Lightboard videos offer a unique approach to deliver information to students. Although widely used it is unclear what benefit, if any, lightboard style videos provide to students compared to a PowerPoint style video (Fiorella, Stull, Kuhlmann, & Mayer, 2018). The aim of this study was to compare the differences in student learning between a lightboard video and a PowerPoint video with the same content. Students were divided into two groups, one group of students received an online survey and lightboard video (n=13) and the second group received the same survey and PowerPoint video (n=12). As part of the survey, students were asked to complete a pre-test before watching the video to determine prior knowledge. After watching the video students were given a post-test with the same questions. Using a paired t-test we determined there was a significant difference between the pre-and post-test scores for both groups. However, there was little difference between a lightboard video and PowerPoint in pre- and post-test scores. Students were then asked to participate in a follow up interview where they were shown both videos. The qualitative thematic analysis of student responses to interview questions clearly showed a preference of the lightboard video based on engagement.

REFERENCE

Fiorella, L., Stull, A. T., Kuhlmann, S., & Mayer, R. E. (2018). Instructor Presence in Video Lectures: The Role of Dynamic Drawings, Eye Contact, and Instructor Visibility. *Journal of Educational Psychology*, 111(7), 1162-1171.

Proceedings of the Australian Conference on Science and Mathematics Education, 29 September - 1 October 2021, page 34, ISSN 2653-0481