IECONF

2nd International Education Conference

09 - 11 August 2024 Berlin, Germany

Adaptation and Academic Performance: Analyzing the Impact of Hybrid Laboratory Teaching on Student Outcomes in a Physiology Course

Nohjin Kee and Christopher Perumalla

Institution: University of Toronto, Department of Physiology

Abstract

The "hands-on" laboratory course in physiology at the University of Toronto plays a pivotal role in the educational experience of students in the pre-health sciences program. This study examines the pedagogical impact of transitioning from traditional in-person labs to a hybrid format during the COVID-19 pandemic. We analyzed student performance data spanning six academic years (2018-2023), categorizing them into pre-pandemic (2018-2019), pandemic (2020-2021), and post-pandemic (2022-2023) periods. This stratification allows for a comparative analysis of lab report scores, final exam grades, and overall course grades across different teaching modalities. Data from student performances in the lab reports and final exams, as well as student satisfaction from the surveys, were examined. The data suggest that the hybrid lab format and online final exams did not adversely affect the overall student performance in the physiology lab course. These findings underscore the potential for flexible learning environments to maintain academic standards and support student success in the face of unprecedented challenges. Future work should explore the longitudinal effects of hybrid learning modalities on student engagement and knowledge retention.

Keywords: Hybrid format; Student performance data; COVID-19 pandemic; Comparative analysis; Academic standards