

ACSME 2021 Special Issue – Editorial

Special Issue Guest Editors:

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Two years of lock-downs and uncertainty brought on by the COVID-19 pandemic has forced everyone in the education sector to experiment with new ways of teaching and assessing online. This has led to the development of improved online pedagogies. Conversely, certain learning activities – those relying on student-student and student-instructor interactions – were shown to be less effective online compared to the face-to-face mode. Many in the higher education sector, both academics and students, have been left exhausted by the pace of change. There is a general acknowledgement within the sector that wellbeing of students and staff needs to be considered in teaching practice moving forwards. With the hope that the disruption from COVID-19 is now reducing, the theme of The Australian Conference on Science and Mathematics Education (ACSME) 2021 was forward looking: “Sustainable transformation of science education”.

The four submissions we received reflect this theme in different ways. A couple, one in biology (by Amy H. Chan, Ethan Y.Y. Kok, Muhammad Asyraf M. Razali, Gwendolyn A. Lawrie, and Jack T.H. Wang) and one in physics (by Michael J. Gladys, Lachlan Rogers, Galiya Sharafutdinova, Nicholas Barnham, Patrick Nichols, and Paul C. Dastoor), investigated how students interacted with online resources, predominantly videos. These papers were considering the strategic use of online resources alongside face-to-face experiences for students. The authors made recommendations about the types of videos that were found to work best for their students. Chan et al. raised an important point about the need for academics to be supported in upskilling their digital competencies in order to create digital resources for students. Reva Ramiah, Lisa Godinho, and Chanelle Wilson, considered how we can support students from underrepresented cohorts in STEM. The authors pointed out the need for academics to consider the biases inherent in their own practice in order to better support all students. The submission by Christine Lindstrøm, Dino Spagnoli, Matthew Pye, Juliey Beckman, and Andrew Kepert, which originated from the ACSME 2021 panel discussion on the place of large lectures, evolved into a review article on the place of local mission statements in higher education.

We hope that you find these articles interesting and thought provoking. Papers by Chan et al. and Gladys et al. provide an example of how to collect and analyse evidence about the effectiveness of different teaching practices, useful for those new to the scholarship of teaching and learning. The other two papers, by Ramiah et al. and Lindstrøm et al., offer a larger picture overview of different aspects of the higher education landscape that we can all benefit from considering.

References

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