EDITORIAL

Special Issue:
The Scholarship of Teaching and Learning in Action

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"...the biggest effects on student learning occur when teachers become learners of their own teaching and students become their own teachers." John Hattie (2009)

Welcome to our Special Issue for 2020 with six new articles. What differentiates this Special Issue from others is not that it has yet another theme, but that all the papers are drawn from completed teaching and learning research grants aimed at improving student learning outcomes. In this sense, these papers represent the Scholarship of Teaching and Learning (SoTL) in its most essential form: they are hands-on examinations of learning and teaching problems leading to solutions that are designed to inform practice. While they have been funded by various sources, four of the six papers were funded by the Singapore Ministry of Education's Tertiary Research Fund (MOE-TRF).

There are no opinion pieces, theoretical papers, or reviews, as we usually have, because the focus is on SoTL in action. In addition, these papers are published with a feed forward intent to further encourage all those involved in teaching and learning project grants or research to consider submitting papers in the future. The underlying motivation for these papers illustrates Hattie's first point in the epigraph. These are teachers in the process of becoming learners of their own teaching through the systematic and scholarly investigation of their own effectiveness.

Each year, a significant number of teaching and learning research grants are awarded and completed at both national and institutional levels across Asia. Yet few have resulted in publications. The Editorial Board of AJSoTL therefore decided to devote this issue to teaching and learning projects. However, a moment's reflection on why it is necessary to have a special edition to achieve this alludes to an abiding difficulty in the realm of scholarly teaching. It is typical in disciplinary research for publications to be intrinsic to the research process. Unfortunately, this is not yet true when it comes to teaching and learning research projects coming out of institutions of higher education. They are still often regarded as secondary when placed alongside disciplinary research. The papers published in this Special Issue are from competitive grants, and they have been rigorously assessed for their viability and significance. Notwithstanding, publication remains as a desire rather than an essential outcome for many other teaching and learning projects. One of the aims of a journal like this is to provide both the forum and motivation for publication.

As the first article in this Special Issue shows, one of the great values of teaching and learning grants of this kind is that their focus on students leads to consideration of the local context. While Lau and Vijayan write about the outcomes of block teaching of tutorials and laboratories in the Singapore context for skills development, the findings can be applied widely in other contexts. This project attempts to bridge the gap between theory and practical by teaching students in intensive blocks of time that combine tutorials and laboratory work. One of the aims of this kind of block teaching is to give students more time for exploratory and investigative activities, and to better integrate theory and applied work.

Despite not having a theme for this issue, there are very clear concerns about the development of rubrics and feedback that emerged from four of the articles. In the second article, Cheah, Gan, Li, and Wadhwa explore the effects of structured and unstructured feedback given by company advisors to students participating in an innovation team project as "trainee consultants". As with some of the other projects here, this one draws on and tests the applicability of work undertaken by earlier research. In this case, the paper is informed by Hattie and Timperley's (2007) formulation of three levels of feedback: task, process and self-regulation.

Underlining the third article by Gan and Sapthaswaran is the question on how to promote good collaborative learning among students. Here, it is centred on Graduate Teaching Assistants (GTAs) undertaking the Teaching Assistants' Programme (TAP) at NUS, who are provided with scripts for explicit instruction in planning and structuring effective group interactions among students. The scripts are designed to encourage GTAs to pay more attention to the process of collaborative learning, rather than only the outcome, or product. The focus of the study is on an iteratively developed scoring rubric applied to the TAP's performance in a microteaching session.

What this article and the two following it explored is the process of developing rubrics that are meaningful in the context in which they are used. In other words, the rubrics are not applied in a detached, abstract way to performance, but increasingly aligned to the potentialities of performance in particular settings.

Yuen and Sawatdeenarunat's project explored how a development cycle in a science communication programme establish the quality of the rubrics. Again, we have a project where rubrics are actually modified over time according to their effectiveness in both measuring performance and communicating expectations to students. The students are required to contextualise scientific ideas for a non-specialist audience. How valid and reliable are the rubrics used to evaluate the students? What are the raters' perceptions of the efficacy of the rubric on grading, and what are students' perceptions on the use of the rubric in improving performance? This is a very carefully calibrated study that yielded results that indicated what worked and what needed refinement. The real value for the reader might be the adoption of the proposed rubric development cycle in their own teaching context.

The development of rubrics is also the focus of the fifth paper by Chua, Switzer, Hartman, Bhatia and Koh. At the beginning of the paper, there is an interesting analysis of the different demands made on courses to simultaneously satisfy course learning outcomes, programme learning outcomes and university graduate attributes. In this case, the rubrics are developed to assess students' progress over time in their field notebooks for three specialisations in Earth Sciences – Geoscience, Ecology and Earth and Society. The students took several overseas trips where the field notebooks were required. Field notebooks, as the authors suggest, capture 'snapshots' of student performance along multiple dimensions. The aim is to develop a generalisable rubric to cover the three specialisations, and not to be used as a final summative evaluation, while showing development of critical competencies over time. They deploy Biggs and Collis' (1989) SOLO Taxonomy, preserving the overall structure, but modifying level descriptions. The outcome of the study has the power to inform both students in making decisions about improving their learning, and instructors for redesigning fieldwork content and pedagogy.

The overarching question explored in our final paper by Chin, Phillips, Woo, Clemans, and Yeong, is, "What are the key components that contribute to professional identity?" This a systematic review of electronic databases on the development of professional identity. The question is focused on the pre-employment training of student interns in Singapore. As with our first article on block teaching chemistry, this article contextualises the need for professional identity development by Singapore's SkillsFuture development strategies. The study is based on the premise that strong professional identity influences purpose, self-worth, meaning and how we contribute to society. The components of professional identity development under discussion are reflection, mentoring, professional socialisation, self-efficacy and goal orientation, and critical thinking, and how these are seen to interact holistically. The takeaway for readers of this article is that professional identity should be an intentional outcome of student internship programmes, and this review provides a framework for achieving that.

Like disciplinary research, the papers here have undergone two levels of peer review, first to be selected for funding, and secondly to be published in this issue. It shows the growing strength of the scholarship in teaching and learning in Singapore and the region, and it is hoped that publications like these will, for those who have not yet ventured into the territory, give greater legitimacy and significance to scholarship in teaching and learning. We hope that highlighting the quality of these papers both as research projects and scholarly writing will promote the view that SoTL publication is an intrinsic part of teaching and learning in higher education.

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