

Editorial

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Welcome to the first issue of Volume 24 of *MSOR Connections*. This issue contains a generous mix of articles. A theme throughout the papers is student success, whether that be prior to university, during university or subsequently within careers. The authors of the papers have taken different approaches, which includes both the use of physical resources (escape rooms and Tarsia puzzles) and the incorporation of technology (such as AI and statistical software).

We lead with an analysis of the use of generative AI in mathematics higher education by Grove. Although this article exceeds our usual word-length expectations, we have decided to publish it in full because of the importance of the topic. The author's position and experience mean that this important paper is an exceptionally valuable contribution to the current discussion of the topic, which is particularly current within higher education at the moment. The paper contains many useful points to consider, such as programme-level planning, and asks lots of fundamental questions. Truly embracing AI, the author presents a range of useful examples that readers can take inspiration from.

The transition to higher education is a topic of importance to many of our readers, and the paper by Burns, Young and Kelly provides analysis of the Scottish Advanced Higher Mathematics qualification and its value for those who progress STEM subjects in higher education. The authors explore important questions and highlight how students may be less likely to succeed on some courses without the advanced qualification in Mathematics.

Haddley and Haddley, in their paper, challenge the use of traditional teaching approaches, discuss the use of tablet PCs in mathematics teaching, and present student preferences for modes of teaching, recommending that educators "consider the value of different tools and their individual advantages when planning teaching activities, rather than being led by a strong discipline culture".

The use of data is increasingly a vital component of mathematics graduate careers. Mimmagh shows how the pioneering work of John Snow in the middle of the nineteenth century can be used in the training of statisticians in the twenty-first century. Mimmagh creates a powerful educational experience by using technology to give visual clues to enable students to undertake real-world problem solving, building upon the motivating historical example by making links with modern topics.

The paper by Mimmagh isn't the only paper to contain a historical example. Wooley uses Bletchley Park as the context of an escape room by utilising physical resources instead of digital ones. Duah and Tasic also present innovative ways to engage and motivate students using paper-based Tarsia puzzles.

The issue concludes with three workshop reports by Chongchitnan et al, Hoolash and Rout-Hoolash, and Shaker et al. As presented by Chongchitnan et al, many initiatives and challenges were explored within the diversity and decolonisation workshop, and there is demand for more work in this area. Hoolash and Rout-Hoolash present information on a number of workshops for international students, which were created by careful consideration of the student group and the circumstances. Shaker et al present details of their workshop that contained a variety of topics, many of which also feature in other papers in this edition. This includes active learning, AI, outreach, preparedness, statistics visualisation and real-world problem solving.

We hope that you will find much to interest you in this issue.

MSOR Connections can only function if the community it serves continues to provide content, so we strongly encourage you to consider writing research articles or case studies about your practice, accounts of your research into teaching, learning, assessment and support, and your opinions on issues you face in your work.

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