

EDITORIAL

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Welcome to the first of two special issues of *MSOR Connections* containing papers from presentations at the CETL-MSOR 2021 conference held at Coventry University on 2nd-3rd September 2021. The conference was special for many reasons, including that it was the first CETL-MSOR conference for two years, the first to take place since the COVID-19 pandemic began, and the first hybrid version of the conference. As pandemic effects continue to be felt, this first special issue focuses on matters arising from it in maths, stats and operational research.

The first paper is written specially for the issue by one of us, Mark Hodds, who acted as chair of the CETL-MSOR 2021 internal organising committee and guest editor of this edition of *MSOR Connections*. The article describes the processes of running a hybrid conference for the first time, offering advice, ideas, and support to anyone who plans to do something similar in the future.

The remainder of the issue contains a wide and interesting variety of papers based on excellent presentations at CETL-MSOR 2021 which discuss many issues surrounding pandemic learning.

First there are three papers that discuss the transition from school and college to university and the support that is then available. Price et al. describe the effects of the pandemic on A level learning showing that many topics were not covered adequately and there was an emphasis on pure knowledge at the expense of applied (statistics and mechanics) knowledge. Furthermore, they show there is evidence of an association between lockdown maths experience and mathematical confidence, suggesting that mathematics and statistics support services at universities maybe more crucial than ever. Indeed, mathematics and statistics support services had to quickly adjust to the working from home environment caused by the pandemic, and the paper by Smith discusses student preferences for online maths and stats support with anxiety factored in. Smith suggests that students have a preference for online over in-person support in their study, highlighting however that different centres will have different needs and facilities for their own students. Support should therefore be given according to the scenario as, for example, maths support is easier to do in-person than online when compared to statistics support. This is also shown in the paper by Gilbert et al. who reflect on how the views of mathematics and statistics support practitioners have changed from the start of the pandemic to the middle of 2021 when many measures were starting to be relaxed. The paper shows that initially 54% of practitioners in the study said online support was worse than in-person support but this had been replaced by acceptance in 2021 with 100% saying they would continue with online support after the pandemic. Flexibility and accessibility of online support were identified as key advantages for continuing with online support although this had waned when compared to the initial stages of the pandemic.

The next papers focus on the online teaching of mathematics with Russell discussing the use of “games” in remote active learning. To improve attendance in online synchronous activities, Russell encouraged students to take part in “games” and this resulted in 70% of students finding the sessions useful, as well as an increase in attendance. Alarfaj et al. discuss a survey conducted with lecturers in Calculus and Linear Algebra revealing some mixed views regarding the importance of offering on-campus classes once restrictions were lifted slightly. Many of the lecturers in the study preferred and

were enthusiastic about retaining what had been created and provided during the pandemic, suggesting online learning is perhaps here to stay.

The following two papers focus on collaborative online learning. Jones et al. discuss the use of iPads at Middlesex University, something that has been provided to students since before the pandemic. The paper shows that iPads can facilitate communication online, allow easier collaboration between staff and students, enable quicker feedback that is more relevant, and encourage equality of access so long as all students have fair and equal access to them. Carey et al. discuss some changes that were brought in around the pandemic, resulting in better collaborative teaching and learning that will remain once the “new normal” begins. These included induction seminars, different question types, new mark schemes and changed feedback procedures, all of which were shown to be beneficial to students’ learning.

The penultimate paper by Marshall et al. looks at statistics anxiety and the challenges faced when working online. The authors show that students are less likely to actively engage with material, ask for help, or work with peers in statistics scenarios when compared to in-person. Those with compulsory statistics modules felt it was less likely they could learn remotely but were more likely to ask for help when compared to students who did not have compulsory statistics modules. Statistics anxiety was however shown to be generally lower than in-person settings. Finally, Casey et al. present the development of a community of practice during the pandemic around staff-student partnerships. The paper gives two project case studies showing that shared experiences and communities of learning can be developed outside of traditional methods.

Producing an issue of *MSOR Connections* is always a big collective effort involving a host of authors and peer reviewers, and we are delighted to have had so many submissions – more than typical for an issue of *MSOR Connections* – due to the numbers of authors keen to write papers. We would like to thank all of the authors for their contribution to this special issue as well as all of the reviewers we invited to review these papers. It is brilliant to see such a vibrant community hard at work and willing to share its emerging practice. We would also acknowledge delays to production caused by ongoing pandemic effects and the UCU industrial action over ‘Four Fights’ and ‘Action for USS’, and we look forward to a day when our community can put the pandemic and the issues underlying the dispute behind us.

We will follow this issue with the second CETL-MSOR 2021 special issue on innovations in teaching, learning, assessment and support more broadly, and are hopeful of publishing this and a regular issue of *MSOR Connections* before the end of the academic year.

Don’t forget that you can submit a paper to *MSOR Connections* at any time or become a reviewer by visiting the journal website: <http://journals.gre.ac.uk>. The journal is always keen for writers and reviewers so please do consider making a contribution in the future.