

## EDITORIAL

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Welcome to the second of two special issues of *MSOR Connections* containing papers from presentations at the CETL-MSOR 2021 conference held at Coventry University on 2<sup>nd</sup>-3<sup>rd</sup> September 2021. The first special issue focused on matters arising from the COVID-19 pandemic in maths, stats and operational research teaching, learning, assessment and support. A collection of ten papers on this theme can be viewed on the journal website at <https://doi.org/10.21100/msor.v20i1>. This second special issue moves away from the direct effects of the pandemic to look at broader innovative practice that continues to develop and emerge despite the changes to our lives brought by COVID-19.

The first paper is taken from the Keynote address by Tony Croft at the conference. Tony was one of the main founders of the **sigma** Network in the UK and provides a detailed description of the timeline of mathematics support in the UK in this piece. It is hoped it will provide some insight for younger practitioners into the development of maths support services whilst also giving more established practitioners a chance to reminisce!

The next two papers that follow discuss various aspects of the SPIRIT Maths project in Ireland. The first paper by Lishchynska et al. provide information on a survey on students' expectations of mathematics at university. They report that around 52% of those surveyed found mathematics difficult but there was a distinct shift away from this when they were interviewed again later in the semester. Remote learning and blended learning were also discussed and came out as something that needs to be considered for the future. The second SPIRIT Maths paper by Palmer et al. discusses student views on digital resources and their development having been informed by the work in the Lishchynska et al. paper. The use of H5P and Numbas to develop videos and related questions were shown to be effective in early feedback.

Following from this there are two interesting papers on assessment. Ketnor et al. discuss the Peerwise system for assessment where questions are created by students, for students, and feedback can be given by those assessing the questions. The paper provides recommendations for the use of Peerwise from evaluating its use in the UK and Australia. Students in the UK found it to be a useful platform for revision whereas Australian students found it more useful for writing questions, showing a distinct difference in the way a single assessment system can be utilised. Martin Greenhow then provides an update on the "Maths e.g." platform, a form of assessment that has been around since 2000. The paper presents how the questions can be embedded into many learning scenarios, drawing upon experiences during the pandemic and the restrictions that were placed on our lives.

An important current topic is making documents accessible, particularly those with mathematical texts. The paper by Wouters describes how to do this using GNU TeXmacs. As many mathematical documents are made in LaTeX, GNU TeXmacs provides a solution to make LaTeX documents accessible. In the paper there is a description of how to do this with your documents and how to incorporate it into lecture notes.

The development of blended and online teaching and support is something that we have all experienced over the past few years. Potter and Blundell discuss the barriers and opportunities from using blended tutorials that support distance learning, providing perspectives from the practitioner, outside experts, and students. They show that, overall, blended tutorials were seen as positive, offering opportunities to all to have more learning, but the educator needs to focus on pedagogy and

accessibility rather than technical issues; students are more resilient to technological issues than first thought. The Open University have used online delivery for longer than most so, given their experience with online teaching and support, Sue Pawley considers instead whether the “traditional times” of study support delivery are still optimal. Her case study shows that offering support at traditional times do attract the highest attendance but engagement is significantly increased when offering support outside of these times.

The pandemic has been shown to cause anxiety and stress in students, more-so than in “normal times”. The papers by Gokhool et al. and Marshall et al. consider maths and stats anxiety respectively, giving an insight into some ways into how these can be lowered. Gokhool et al. analyse engagement with maths support based upon anxiety and resilience, along with demographic and cohort factors. They show that those courses with no A level entry requirement were less resilient and more anxious about mathematics. Female and mature students were also shown to be significantly less mathematically resilient than other groups. Entry requirement, engagement with maths support and maths anxiety score all impacted mathematical resilience score, suggesting these students need to be targeted for more tailored approaches. Marshall et al. developed a series of stats anxiety workshops to help students understand what stats anxiety actually is. Although students with high stats anxiety were more likely to attend, those with help-seeking anxiety were less likely. The paper suggests some strategies to normalise help-seeking would be useful and beneficial.

The final paper by McGonigal reports on ongoing research into the role of language and discourse in the teaching and learning of statistics in a business setting. The short update provides information on proposed methods to consider the differences between two consecutive first year business school courses to see how their understanding develops.

Once again, we are grateful to our cohort of authors and peer reviewers for this larger-than-usual issue of *MSOR Connections*. 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.

*MSOR Connections* continues to be a venue for our community to share its innovative practice, and submissions are always welcome via the journal website: <https://journals.gre.ac.uk/>. The journal is also always keen to attract reviewers and we have some experience of supporting those new to reviewing (including in these special issues), so please sign up via the website if you are interested in reviewing articles.