

## Challenging times

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At the time of writing this editorial, there are devastating events impacting on the world. Sadly, the news of Japan with its earthquakes, tsunami and nuclear plant meltdowns is very disturbing. The absolute devastation caused by these events is unimaginable. 2011 has been the harbinger of some significant environmental events. Sadly in the first few months of this year there have been devastating floods in Australia; massive landslides in Brazil; earthquakes in New Zealand; and the three Japanese disasters. Living in Brisbane, I could observe the effects of the floods but their breadth and damage could not be relayed through the various media we have available. I can only imagine how devastating the Japanese situation can be, or that in Christchurch (New Zealand) or in cities in Brazil. The impact of the people cannot be under-estimated, nor can the time it takes to rebuild lives and buildings. The impact of these events cannot be measured on a human scale. To the families and friends of the international mathematics education communities affected by these events, our prayers and thoughts are with you.

This issue of *Mathematics Education Research Journal* is the first that comes from the Springer publishing house. The decision by the MERGA executive to transition across to Springer has been carefully thought through and has been part of considerations of previous MERGA Executives. Over a decade ago, the Executive discussed the possibility of transitioning to Springer but the time was not right and it was decided to remain with the status quo. However in the intervening time, things had changed considerably. As the publication world has changed dramatically since MERJ was commenced, it was timely to move to Springer. The capacity for on-line submissions and monitoring of papers was an asset to editors who undertake the role in a capacity outside their usual academic duties so being able to have a reliable system is essential. It is important to be in line with most other journals who offer on-line submissions so the need to move

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with the new processes of publication was critical. As with many countries, Australia has gone down the path of research evaluations so the profile of the journals is very important in ‘ranking’ the quality of research outputs. As Editors, we have been delighted to see MERJ ranked in the second tier of the Australian ranking system (with only ESM and JRME) ranked above us, and as the second highest mathematics education journal in the Asian ranking system. This indicates the esteem of the journal among the research community. Over the time of its publication, MERJ has moved from an Australian/New Zealand focus to a far greater international focus. Significant numbers of the authors are now from countries outside the traditional authorship of MERJ, making it a much more international journal. Collectively, these contexts were an important consideration in transitioning the journal from MERGA to Springer. Working with Springer not only enhances our profile as a top journal for mathematics education, but also makes the availability of the articles much more accessible to a far greater audience. We anticipate with the wider availability of the journal, not only will research be disseminated to a far greater audience, there will be greater international interest in the journal.

As Chief Editor, and on behalf of the editorial team, I would like to congratulate and thank all of those people involved in the transition. The team at Springer have been patient and thorough in their working with the team and the MERGA executive to transition MERJ to Springer. We would like to acknowledge their support of the team in this process. We are delighted that the on-site submission process will be active by the time this issue is published. We are looking forward to receiving papers through this forum. The MERGA executive has extended the editorial team’s tenure with the journal for at least another 2 years to support the transition to Springer. I would like to thank Dr Ray Brown who has worked with the team for the past 3 years and had assumed responsibility for the Voices from the Field. Ray will be replaced in the coming months with a new assistant editor. I would also like to thank Andy Kittila, our editorial assistant for her work in monitoring papers through the submission and review phases of the process. This role will be replaced by the on-line procedures. Andy’s attention to detail has enabled the journal to maintain a thorough reviewing process. However, Andy will remain with the journal to provide editorial assistance with papers once they have been accepted for publication. I would also thank the Faculty of Education at Griffith University and the Griffith Institute for Educational Research who have provided financial support to enable Andy to undertake these roles.

The collection of papers in this issue highlights the changes to MERJ from when it was first published. We have authors from Ireland, United States of America, and Australia. Within this international audience, the papers also reflect a diversity of focus areas—assessment, language, contexts, and mathematical task/pedagogy. There is also a diversity in the methodologies used by the authors in their research, as well as theoretical approaches. The shifts over the 23-year history of MERJ highlight the significant changes in the field of mathematics education. The traditional “scientific paradigm” has been replaced by other approaches that enhance our understanding of mathematics education.

The authors in this issue epitomise these shifts. In the first paper by Haja and Clarke, there is some hint of the traditional empirical study but it is greatly enhanced by their extension of traditional testing regimes of multiple choice questions, to incorporate extended justifications by the students. This extension allowed greater access to students' mathematical thinking that is denied by the multi-choice question format. In this paper, Haja and Clarke challenge the dominance of questions found in national testing regimes and have offered a richer understanding of students' thinking. The possibilities offered by this research are considerable to both practitioners and policy makers. In a similar vein, McDonald and Lowrie offer some challenges to the orthodoxies around teaching the length concept. Their work highlights young children's thinking about length, and they show how many length concepts are developed quite young and that the teaching sequences found in many documents may be ill-placed when a true curriculum is developed around the knowledges that young children bring to the school context. Drawing on young children's representations of length, these authors have a strong, albeit small, sample to challenge assumptions around the teaching of length. This type of work illustrates the power of small, deep studies where such results are not likely to be found in the large-scale testing regimes. In his paper, Choppin highlights the importance of the teacher in student learning. His research, draws on a sample of one—an innovative teacher who is able to elicit responses from students in ways that draw out their understandings. This process is stark contrast to the testing processes used by Haja and Clarke, or the children's drawing process used by MacDonald and Lowrie. However, it highlights again how different approaches are used to draw out responses in innovative ways. Choppin's selection of an exemplary teacher not only shows the ways in which the teacher organised (and enhanced) student learning, but acknowledges the strength of good teachers to bring about learning. His research again offers a challenge to dominant approaches which he notes as being "shallow teaching". By highlighting the ways in which good teachers can bring about quality learning in mathematics, Choppin challenges the orthodoxy epitomised as "shallow teaching" which is a feature of many classrooms. Finally, I draw attention to the paper by Ríordáin and Donoghue where they draw on bilingual education. This paper highlights the importance of language in learning mathematics. Unlike other papers on bilingualism, such as those from South Africa, where students enter the mathematics classroom with a home language that is different from the language of instruction, the paper by Ríordáin and Donoghue is unique as it occurs in a context where the nation (Ireland) is seeking to reclaim its home language and move away from the dominant language (English). Only some students are taking this option and the authors seek to ascertain the impact on these two cohorts. The test results that were produced from their study and supplemented with open ended questions, show that tests in English disadvantage the home language learner to greater or lesser extent depending on the level of transition. There were, however, contradictions noted in the study that indicate the possibility of how language shapes thinking in particular ways, that may, ultimate be more or less enabling in the study of mathematics. The authors propose that the key to enabling students to successfully transition from one language to another is not in the language per se, but through the skills of the teachers to enable students to build new mathematical understandings in the new language.