

Highest Common Factor

August 2017



Newsletter of the Australian Association of Mathematics Teachers (AAMT) Inc.

From the President



Esther Singh—who was part of the AAMT administration team—resigned on 11 August to take up a new position as a contract manager for 160 outsourced legal transcribers. She will be missed by the Councillors as she played an active role in organising and taking the minutes of the Council meetings. Zoe Ager will be replacing her.

Will Morony will be retiring in mid-2018 and we are now searching for a new CEO. The Council has commenced the search for his replacement and hopes to have our next CEO identified by the end of the year. As Rom Cirillo, MAWA President, is now the AAMT Treasurer, we welcome Paula McMahon to the Council as the MAWA representative.

August is the month for the release of the NAPLAN data. For Queensland and Western Australia, the average achievement in 2017 for Years 3 and 9 students in numeracy is above and significantly different from that of 2008. For the 2017 Year 5 students, Queensland's results are substantially above and significantly different to the 2008 cohort,

and the results are above and significantly different for Australian students. The Year 7 2017 average achievement is above and significantly different for Western Australian students. As schools will be trialling an online adaptive NAPLAN test in 2018 we hope to get a better and more timely insight into how students are performing. You can visit the reports section at the NAP website, read the news item and see a short video on the ACARA website.

On 2 July 2017, Australia's Chief Scientist Dr Alan Finkel gave the keynote address entitled *Measuring Up* at the Mathematics Education Research Group of Australasia (MERGA) 40th Anniversary Conference. He focussed on four lessons: maths is critical, learning maths is hard, compulsion is not enough, and using evidence to make a difference. If you would like to read more, the transcript can be found at www.chiefscientist.gov.au/2017/07/speech-measuring-up and the YouTube video at <https://tinyurl.com/The-M-in-STEM>.

Another feature of this enjoyable conference was the Beth Southwell Practical Implications Award which

is proudly sponsored by AAMT. It is for the MERGA conference paper with the greatest practical implications. This year it was awarded to Margaret Thomas, Doug Clarke, Andrea McDonough and Philip Clarkson for their paper on *Framing, Assessing and Developing Children's Understanding of Time*. The paper reports on classroom experiences and pedagogies that assisted children's development in Years 3 and 4 when learning about time (awareness of time, succession, duration and measurement) and describes results from an interview with students, an eight-lesson intervention and subsequent improvements in performance.

It was great to see so many people at the AAMT biennial conference



Recipients of the Beth Southwell Practical Implications Award: Doug Clarke, Margaret Thomas and Andrea McDonough (absent: Philip Clarkson).

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Capital Maths in Canberra in July. The conference was opened by the Honourable Yvette Berry, ACT Labor member for Ginninderra, Deputy Chief Minister and Minister for Education and Early Childhood Development. The keynote addresses were all well received: Rhonda Faragher from the University of Queensland spoke about 'functional' mathematics in an electronic age; Chris Wetherell from Radford College in Canberra made numbers come alive with colour; and Chris Franklin from the USA described her journey with the teaching of statistics. We were honoured to have this year's Hannah Neumann Memorial Lecture delivered by her son Peter Neumann. You can watch or download videos of the keynote presentations from the AAMT website. Make sure you plan for the 2019 biennial conference in Brisbane.

With Leon Poladian from the University of Sydney stepping down as Director of the National Mathematics Summer School (NMSS) after many years of service, we welcome Terry Gagen as the Acting Director for the 2018 school. A Board of Directors will be set up for the school to make sure its future is in good hands for its next 50 years.

I am looking forward to some upcoming events: the AMSI Choose Maths Awards in Melbourne on 31 August, the MANSW conference *Adjusting Your Altitude* at the Fairmont Resort, Leura NSW, on 15–17 September, and the Leading reSolve Champions' workshop at my workplace, Trinity Grammar School, in Kew, Vic. on 6 October.

Allason McNamara

President

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reSolve: Mathematics by Inquiry Project

Access to lesson sequences

AAMT is working with the Australian Academy of Science (AAS) on the reSolve: Mathematics by Inquiry Project. Teachers of mathematics are welcome to register with the reSolve website via the Members' tab at www.resolve.edu.au. Allow 2–3 days for your registration to be approved by staff from AAS.

From the Members' tab, you can find draft lesson sequences for Foundation to Year 4 and Years 9 to 10, along with draft versions of the Special Topics. Feedback from teachers is welcomed via a quick survey link on the lesson's notes, and more extensive reflections and photos of student work samples can be sent via email to mbi@science.org.au.

Lesson sequences for Years 5 to 8 have been well trialled,

with teachers' feedback incorporated into the notes available via the Explore Resources tab.

The writing team from the AAS encourages you to trial the reSolve lessons, and values your feedback with the aim of strengthening the way the lessons amplify the reSolve Protocol:

- reSolve mathematics is purposeful
- reSolve tasks are challenging yet accessible
- reSolve classrooms have a knowledge-building culture.



reSolve website

reSolve Champions

After aiming for a target of 240, more than 290 people have already signed up to become reSolve Champions! These educators—both

primary and secondary and in all sectors—from all over Australia are undertaking a program to equip them to facilitate the professional

learning of colleagues and the widespread uptake of reSolve project materials and approaches. Applications to become a reSolve Champion will still be accepted: go to www.aamt.edu.au/resolve for more information.

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From the CEO



As indicated in the President's column, I will be stepping down as CEO of AAMT in the middle of next year. I describe it as 'retiring from full-time paid work', as I will be looking to maintain some engagement in the field while I am still able and wanted!

I have not retired before so I do not really know how I should behave. One thing I do want to resist is becoming sentimental or, worse, self-indulgent as the day approaches. Besides, there is so much going on at AAMT that there is precious little time for other than 'getting on with it.'

One thing we are getting on with at the moment is the program to prepare the Champions in the reSolve: Mathematics by Inquiry project. These are the people who will take the messages and approaches of the project—and the associated bank of high quality resources—forward in their work with colleagues once the development phase of the project concludes in mid-2018.

Back in late 2015, the project was required to prepare these Champions as part of the contract with the Australian Government. It was a good move by the Government. There are many instances of projects in mathematics producing good teaching resources; however, without a strategy for sustained effort to promote the work, many of the resources languished, 'gathering dust on the shelf', once the project finished. The design of

the reSolve project addresses this through the Champions.

The requirement was for there to be 240 Champions at the end of the project. At the time, this seemed a very large number. What was clear from the outset was that the project simply could not be in the business of providing teacher release for the Champions. Our 'back of the envelope calculation' was that to provide all of them with one day release from school would cost well over \$100 000. Hence the professional learning program to prepare them to act as Champions had to be designed without teacher release. We have webinars after school time and on weekends. The two workshops are in school holiday breaks. Undertaking online professional learning and networking will need to fit in around already busy lives.

Given all that, our next anxiety was whether we could attract people to sign up for the program. Why would anyone volunteer for this program and all it entails? Well, we need not have worried as something in what we are offering has captured many people's attention. We now have over 290 people who have signed up as reSolve Champions! They are spread all over the country, in all the government and non-government sectors, and are spread between primary and secondary. Some are experienced educators; others are less so. The vast majority are classroom teachers or mathematics leaders in schools, but we have some principals, some people who have mathematics leadership roles in education authorities,

and some teacher educators in universities.

Reading their expressions of interest highlighted some common themes: a passion for mathematics and students' learning, a commitment to being a better teacher, and a willingness to work with and lead colleagues in professional learning programs. It is great to have such a talented and committed group. But it does make us determined to make sure the Leading reSolve professional learning program for the Champions really engages, informs and inspires.

The Leading reSolve program has just commenced and will run until June 2018. It will involve Champions learning through *events* (webinars, face-to-face workshops, online learning modules), through *experiences* (trailing and using reSolve resources with their students, and in professional learning with their colleagues) and through *networking* (using opportunities to connect with and learn from like-minded colleagues all over the country). It is great to now have the 'show on the road', having just finished a series of introductory webinars in the first two weeks of August. Next are workshops in each capital in the September–October break.

This is an exciting program that will set our Champions up to help teachers and schools capitalise on the great resources being developed by the reSolve project. Welcome to you all, and thank you again for your professional commitment.

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AAMT special awards

At its June meeting, the AAMT Council conferred life membership on Judy Anderson (NSW), Kim Beswick (Tas.) and Will Morony (SA) for their long-standing service to the association and to mathematics education. A Distinguished Service Award was conferred on Leon Poladian (NSW) for his long-time work for the National Mathematics Summer School.

These awards were formally presented to the recipients at the AAMT conference in Canberra by the Hon. Yvette Berry, ACT Labor Member for Ginninderra, Deputy Chief Minister and Minister for Education and Early Childhood Development.

The citations for these awards can be found at www.aamt.edu.au/About-AAMT/Special-honours.



New Life Members Kim Beswick, Judy Anderson, Will Morony; Distinguished Service Award recipient Leon Poladian; Hon. Yvette Berry, ACT Minister for Education and Early Childhood Development; AAMT President Allason McNamara.

AAMT conference

Over 350 delegates attended AAMT's biennial conference *Capital Maths* at the National Convention Centre in Canberra in July. Keynote speakers Rhonda Faragher, Peter Neumann, Chris Wetherell and Christine Franklin provided very personal insights into their respective fields, and delegates were then able to choose from a program of around 130 concurrent seminar and workshops!

Special mention must be made of the Hanna Neumann Memorial Lecture which was delivered by Peter Neumann (Hanna's son) from the University of Oxford. Peter also delivered a second lecture as part of the concurrent program which looked at the life and work of Hanna Neumann. This video along with videos of the four keynote speakers are

available on the AAMT website at www.aamt.edu.au/Library/Videos.



Peter Neumann

AAMT would like to thank the sponsors of the conference—the Australian Government Department of Education and Training, Education Perfect, MathSpace, Casio Education, Hutton Consulting and the Australian Mathematics Trust—for their valuable support, as well the many companies who made up the trade display. Thanks also go to the volunteers from the Canberra Mathematical Association, especially Valerie Barker for her work on the proceedings and CMA President Bruce Ferrington. Finally, thanks to all the AAMT office staff who programmed and managed the entire conference.

AAMT's next biennial conference will be held in Brisbane in July 2019—watch out for details!



Delegates mingling at the President's Reception.

The Australian Association of Mathematics Teachers (AAMT) Inc. is a federation of:

Canberra Mathematical Association (CMA)
Mathematical Association of New South Wales (MANSW)
Mathematical Association of South Australia (MASA)
Mathematical Association of Tasmania (MAT)

Mathematical Association of Western Australia (MAWA)
Mathematical Association of Victoria (MAV)
Mathematics Teachers Association of the Northern Territory (MTANT)
Queensland Association of Mathematics Teachers (QAMT)