5th National Conference for School Leaders in Primary Mathematics Education

Friday 26th July 2019
8:50am – 3:30pm

ACU (Melbourne Campus) 115 Victoria Pde, Fitzroy

Cost $330 (incl. GST) – includes lunch, afternoon tea, certificate of participation and all session notes.

Our national conference focuses on those people whose major role is leading mathematics education in primary schools – mathematics coordinators, school mathematics leaders, mathematics coaches, and mathematics specialists. Our conference, now in its fifth year, meets a major untapped need for leaders. A wide variety of workshop sessions will be presented, addressing topics in broad areas that relate to aspects of the mathematics leader's role, and their important work in schools.

ACU
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MTLC
Mathematics Teaching and Learning Centre

This is an activity of the Mathematics Teaching and Learning Centre (MTLC) at Australian Catholic University (Melbourne Campus)

Features of the day

- High-quality presenters
- Choose one workshop in each session block from a rich array of options
- Insights from research will be complemented by the practical experience of workshop presenters
- Handouts, certificate, lunch, and afternoon tea provided. Tea and coffee available from 8:15am
- Handy location close to city, easy access by public transport (115 Victoria Parade, Fitzroy)

We are delighted that Dr Aylie Davidson will be presenting the keynote at our 5th National Conference for School Leaders in Primary Mathematics Education. Aylie's research interests stems from her own experiences as a classroom teacher and school leader. Her PhD thesis explored mathematics planning processes for student-centred learning and teaching. Through her research, Aylie has generated rich insights into the critical issues impacting teachers' planning decisions and identified approaches that support primary teachers in navigating the demands of planning for student-centred learning in mathematics. Aylie has worked as a lecturer at both Monash University and Deakin University. She has also collaborated on research projects including the Encouraging Persistence, Maintaining Challenge Project and developing teacher resource materials for reSolve: Mathematics by Inquiry. Aylie is currently investigating the role of reasoning champions in schools.

"Wonderful speakers to inspire maths leaders and in turn change what's happening with maths for students in our schools."

"Informative, energising, well organised, great opportunity to connect with others around leading maths."

"Great day! Presenters were very interesting, and content linked to leadership. Looking forward to using ideas with my staff!"

THE PROGRAM

Session	Presenter	Topic
Keynote: 8:50am – 10:00am		
Keynote	Aylie Davidson	**Planning for student-centred learning in mathematics: Challenges, insights, and recommendations** Planning is a critical part of the teaching process and studies have emphasised the complexities and varied approaches teachers use to develop their plans for mathematics teaching. Further to this, research shows that the decisions teachers make when planning have the power to directly impact student engagement and learning in mathematics. Despite the widespread call for student-centred approaches to mathematics learning and teaching, there is limited advice for teachers about how to plan such learning sequences and experiences. In this keynote, Aylie will share research about effective mathematics planning and explore the critical factors that influence teachers' planning decisions, particularly around collaborative planning. Aylie will also explore a model for student-centred mathematics planning that school leaders can use to encourage teachers to make high-quality mathematics planning decisions that ultimately improve student engagement and learning.
Session A: 10:10am – 11:30am		
A1	Doug Clarke	**What's all this about productive struggle?** In recent years, we have heard a lot about the importance of productive struggle. Drawing on the research and classroom experience of the *Encouraging Persistence Maintaining Challenge Project*, we will work through the rationale for productive struggle, some of the factors which might make the struggle productive and not demoralising, and the kinds of tasks which lend themselves to this approach. We will also explore insights and tasks that you might use in your leadership of professional learning back in your school with your teachers.
A2	Philip Clarkson	**Language: It's always there** If students cannot use all their languages, their everyday language, their home language, their school language, and their mathematical language insightfully, then their ability to be creative and pursue deep mathematical learning can be compromised. This workshop begins by considering the context of students who do not have English as their home language. Participants will then be introduced to some crucial research ideas and a "language use model" that can be used in planning and implementing lessons that highlight important aspects of language for all students. Issues such as questioning and using students' everyday languages are also briefly explored.
A3	Ann Downton	**Leading teachers to focus on "tools, tasks, and talk" in maths lessons** Enacting the teaching tripod of "tools, tasks, and talk" effectively in mathematics lessons can be challenging for teachers. A key to this is planning and selecting appropriate tasks that challenge all students. Teachers also need to know the mathematics, anticipate student actions, and use effective strategies to stimulate student-led discussions in mathematics lessons. Within this workshop, Ann will explore this tripod using practical situations, and she will offer some strategies that mathematics leaders/numeracy coordinators can use in their professional learning sessions with their teachers back in their schools.
A4	Andrea McDonough	**Maths trails: Engaging students, teachers, and parents with mathematics in the world around us** Maths is all around us, is relevant, and can be exciting for exploration, problem solving, and problem posing. Could these perspectives be given more emphasis in your school community? Maths trails provide one opportunity to focus on exploring ideas, problem solving, working creatively, and celebrating mathematics. The development and use of maths trails can involve teachers, students, and potentially parents (and grandparents), too. In this workshop, examples of maths trails will be shared as will guidelines considered important for their development and use in schools. Time will be given to developing some maths trail items for inspiration to take this active maths learning opportunity back to your school community.
A5	Claire McMahon	**Dyscalculia: Implementing whole school practice to assist students with individual learning needs in numeracy** Individual differences in mathematics must be considered to help students find success. This workshop will review research, particularly looking at the perception and understanding of dyscalculia. Assessment options, effective teaching strategies in the classroom, and hands-on practical activities will be shared. This workshop is best suited for mathematics leaders, maths co-ordinators, educational consultants, and individual learning needs leaders who are interested in knowing more about dyscalculia.
A6	James Russo	**Breathing life into the Australian Curriculum** Teachers typically take the curriculum as a given, rather than something they are responsible for reconstructing. This session will present two distinct approaches for breathing life into the Australian Curriculum, empowering teachers to make sense of it on their terms. *Going deeper* involves reconsidering the content descriptions through the lens of the four proficiencies. It is a top-down approach, taking the curriculum as the starting point for instruction. A *network approach* involves beginning with great tasks and activities and viewing the curriculum as an interrelated web of concepts and competencies. During the presentation, five step-processes for implementing these approaches will be workshopped and supporting pedagogies will also be explored.
Lunch: 11:30am – 12:10pm		
Session B: 12:15pm – 1:35pm		
B1	Ann Downton	**The 'summarise phase' of a lesson: What might it look like?** The 'summarise' phase of the *Launch-Explore-Summarise* lesson structure using challenging tasks is an aspect of teaching that teachers find difficult to enact. A particular challenging aspect is how to orchestrate discussions that use students' responses to tasks in ways that advance mathematical learning for the whole class. In this workshop, Ann will explore the pedagogical practices associated with the *summarise* phase of the maths lesson. Ann will share strategies with mathematics leaders/numeracy coordinators that they can use with their teachers to consider how they might make greater connections to the 'learning intention' of the mathematics lesson.
B2	Judy Gregg	**Leadership for challenging task use in schools** Challenging tasks help to engage and deepen students' understanding of mathematical concepts. Challenging tasks require persistence which helps build strong connections, enabling students to transfer learning to practical real-life situations. But what makes a task challenging, and how do we introduce these tasks for teachers' use? In this workshop, aimed at teaching across the primary years, Judy will explore a variety of challenging tasks and reasons for using them. Workshop ideas could then be used by you in the professional learning opportunities that you lead for your teachers in your school.

B3	Marj Horne	**Three pillars of mathematical reasoning: Visualisation, language and representations** Marj will share data from the *Reframing Mathematical Futures II (RMFII) Project* about three pillars (big picture ideas) that are connected and central to the development of mathematical reasoning: visualisation, language, and representations. Marj will present activities from different levels of the learning framework in geometric reasoning (which includes measurement) for the middle years of schooling with a particular focus on using those three pillars. She will offer ideas that you can use back in your school when leading professional learning for classroom teachers that can help them in their teaching of reasoning focusing on visualisation, language, and representations.
B4	Andrea McDonough	**Developing rich curriculum materials with F-2 teachers: Mass measurement** Encouraging students to explore and investigate, determine strategies to solve problems, explain their thinking, and connect mathematical ideas are reflective of research findings on effective teaching of mathematics. But what are the features of tasks that might foster such behaviours with F-2 students? In this workshop, we will examine a sequence of lessons, in this case on the teaching of mass measurement in the early years (F-2), consider some of the insights gained, and use the sequence as a support for planning further units. During this workshop, ways in which mathematics leaders/numeracy coordinators might work with teachers in their schools with the workshop material will be explored.
B5	Mel O'Reilly	**Number fluency: Introducing a whole school approach including games and daily routines** Mel will share her school's journey to improve number fluency through a whole school approach. While students' number fluency improved, there were additional benefits that enhanced teaching and learning across other areas of the curriculum. In this workshop, Mel will share that journey including obvious and more subtle benefits of the whole school approach. Two games used from F - 6 that are engaging for all students, easily differentiated, time efficient, and have been linked to student goals will be explored. These games and their implementation will be shared in the workshop as well as ideas for implementing them back in your school.
B6	Matt Sexton	**"It's what we do around here when it comes to maths": Creating a mathematics teaching and learning statement** Maths leaders are often charged with the responsibility of creating mathematics teaching and learning statements for their schools. It can be quite the task to write a document that captures the mathematics education practices in your school. Matt will share an approach for the creation of a mathematics teaching and learning statement where the responsibility for its construction includes the teachers and other staff in your school. This is a workshop for any maths leader/numeracy coordinator who is new to writing this type of document and who is seeking a way to create one with their staff.
Afternoon Tea: 1:35pm – 1:55pm		
Session C: 2:00pm – 3:20pm		
C1	Aylie Davidson	**The role of a critical friend in supporting collaborative mathematics planning** There is much evidence to show that a critical friend who is passionate and knowledgeable about mathematics education can enhance a team's planning for student-centred learning in mathematics. Critical friends are often *middle leaders* such as leading teachers, learning specialists, as well as mathematics consultants. In this workshop, we will explore what the role of a critical friend entails and practical approaches you can take back to your school to encourage teachers to examine and reflect on their teaching and explore alternate, student-centred pedagogies.
C2	Marj Horne	**Seeing the big picture** Developing mathematical reasoning engages all four of the Proficiencies from the Australian Curriculum. *The Reframing Mathematical Futures II (RMFII) Project* has developed evidence-based "learning frameworks" focused on big picture ideas in algebraic reasoning, geometric reasoning, and statistical reasoning in the middle years of schooling (Yrs 5 – 8). The learning frameworks are based on data from classroom tasks which Marj will share in the workshop. Marj will also use examples from the RMFII project's teaching advice in the algebraic reasoning domain, and discuss with leaders how this could be used back in their schools to support teachers.
C3	Russell McCartney	**Numeracy Learning Specialists: Building excellence in teaching and learning** How do we build the capacity of teachers to maximise their impact and deepen students' mathematical understandings? This workshop explores how mathematics leaders can lead purposeful, data-informed, collaborative inquiries focused on improving student learning outcomes. We will use learning logs (based on the Numeracy Learning Progressions) to plot students' current level of understandings through work sample analysis. After plotting, we will then use the learning log to determine the students' next area of learning. You will leave this workshop with professional learning leadership ideas that you can take back to your school.
C4	Linda Parish	**Good at maths, or mathematically gifted: What's the difference and does it matter?** This workshop provides insights on how schools can best support successful on-going learning of their students, with an emphasis on students who show "above average" mathematical ability. Linda will focus on how to recognise mathematically gifted traits in learners, explore the difference between "high achievers" and "gifted" learners, and why this differentiation matters. Linda will also highlight mathematically gifted learners' unique needs and how these can be addressed within regular maths lessons.
C5	Gaye Williams	**Building resilient schools using mathematical problem solving as the vehicle** In "resilient schools", students think deeply, and teachers respond "on the run" to elicit student ideas. How do we "build" resilient students and teachers though? How can we recognise resilience or lack thereof? In what ways can school leaders contribute to building resilient schools? In this workshop, Gaye will share her experiences implementing whole-school resilience building professional learning programs focused around learning mathematics through unfamiliar challenging problems. She highlights characteristics of school leaders and teachers that progress school learning, identifies appropriate tasks and models their implementation.
C6	Matt Sexton	**Planning for leadership success through a Mathematics Leadership Activity Plan** Leadership of the mathematics curriculum in primary schools is complex due to the many facets of the role. Mathematics leaders need to distinguish between "leadership work" and "managerial work" and know how best to undertake that work in balanced ways. A *Mathematics Leadership Activity Plan* (MLAP) has the potential to be a powerful tool in guiding "leadership work" that focuses on influencing teacher knowledge, practices, and dispositions for mathematics education. In this workshop, you will explore the nature and the function of an MLAP and start the process of planning one for your own leadership. This workshop is suited for beginning or intermediate mathematics leaders/numeracy coordinators interested in using leadership plans to guide their leadership work.
Prize Draws and Conference Conclusion: 3:30pm		

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TAX INVOICE

5th National Conference for School Leaders in Primary Mathematics Education Friday 26th July 2019

Australian Catholic University 115 Victoria Parade, Fitzroy VIC 3065 ABN 15 050 192 660

Date of Issue: 22nd April 2019

School _____ Phone Number _____

School Address _____ Postcode _____

Description of service	Quantity of participants	Cost p.p. (excl GST)	GST p.p.	Total GST	Total cost
Participant registration to attend 5th National Conference for School Leaders in Primary Mathematics Education on Friday 26th of July 2019		$300	$30		

The above information will form a TAX INVOICE upon payment for this conference. Individual invoices will not be issued for total amounts under $1000. Please note fees are non-refundable but are transferrable to another person.

Please fill in this registration form and send to: Michelle Fabris, Australian Catholic University, Locked Bag 4115, Fitzroy VIC 3065
OR scan and email to michelle.fabris@acu.edu.au

PAYMENT METHOD (please tick)

CREDIT CARD (PREFERRED METHOD) ☐	EFT ☐
Step 1: Please pay online at: www.acu.edu.au/mathsconference (Tax receipt available immediately and place confirmed)	**Step 1:** Direct transfer to our account: *Name: ACU General Account / BSB: 082 451 Acc No: 506 966 793 / Ref: 901731MTLC "School Name"*
Step 2: Send this page (tax invoice and registration form) and a copy of the Remittance to Michelle Fabris via post or email as above.	**Step 2:** Send this page (tax invoice and registration form) and a copy of the Remittance to Michelle Fabris via post or email as above.

REGISTRATION FORM

5th National Conference for School Leaders in Primary Mathematics Education Friday 26th July 2019

Participant's name	Email address	Year level	SESSION PREFERENCES		
			Session A	Session B	Session C
			1st	1st	1st
			2nd	2nd	2nd
			3rd	3rd	3rd
			1st	1st	1st
			2nd	2nd	2nd
			3rd	3rd	3rd
			1st	1st	1st
			2nd	2nd	2nd
			3rd	3rd	3rd

- **It is essential that you receive confirmation of your enrolment by email prior to attending.** If you have not received confirmation within one week of making payment please contact Michelle Fabris. **DO NOT ATTEND WITHOUT CONFIRMATION.**
- **Attendance at the conference is only confirmed when payment is received.**
- Please contact Michelle Fabris if there are any Medical Dietary Requirements for catering. Owing to catering supplier limitations, we can no longer provide Kosher meals.
- Numbers are strictly limited. The sooner you register and pay, the better your chances of receiving your preferred workshops.

Registration closes on Wednesday 17th July 2019 or when sessions are full

Please call Michelle Fabris on (03) 9230 8433 or email michelle.fabris@acu.edu.au for any queries. Places are strictly limited.
Registrations will close when capacity is reached. Please refer to www.acu.edu.au/mathsconference for updated information.