From Instructor to Facilitator of Learning: Shifting the Practices of Secondary Mathematics Teachers

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For students to thrive in a rapidly evolving, data and technology-driven world, student-centred learning must become an essential component of a teacher's repertoire of practice. Policy, curriculum and industry demands support the need for fostering STEM and 21st century capabilities in students, however, traditional, teacher-centred practices continue to dominate as the most regularly used practice in secondary mathematics classrooms.

Mathematics education is a dynamic, complex and multi-dimensional system, shaped by internal and external pressures, including political, cultural and societal. Despite consensus that mathematics education must support student proficiency, the emphasis on procedural knowledge acquisition remains common place in many mathematics classrooms. Contemporary numeracy demands require computational thinking and critical AI literacy (Whitney-Smith, 2023). To address declining dispositions and mirror processes used beyond the classroom, mathematics teaching needs to shift from instructor models, often associated with a heavy reliance on textbooks, independent practice and routine tasks (Schmidt et al., 2022), to facilitator models that incorporate student-centred, collaborative, integrated and technology-enhanced practices (Hanifah et al., 2025).

In this round table, I will present findings from a study exploring the extent to which essential STEM and 21st-century capabilities are supported by school mathematics in Years 7-10, and invite members of the audience to contribute to a discussion on how to instigate system-level change, sharing any insights, research or ideas on ways to support this necessary system-wide shift in practice. I am particularly interested in gaining insight into how we can best support secondary mathematics teachers to become facilitators of learning. The focus questions for this session include:

- What are the leveraging points to instigate a change?
- What is required to support secondary teachers to confidently act as a facilitator?
- How do assessment and reporting practices need to change?

References

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