

## Supporting EAL/D Learners in Mathematics

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Mathematics is sometimes referred to as a ‘universal language’, implying anybody with mathematical understanding can solve mathematical problems regardless of the language they speak (Adoniou, 2014). Teachers are required to be adaptive experts in the teaching of mathematics as they cater for the differing needs of learners in their class. In addition to this, they need to also consider the diversity of learners, in particular students whose first language is a language other than Standard Australian English (EAL/D learners).

Teachers play a critical role in supporting EAL/D Learners and their acquisition and use of mathematical language. Each teacher is responsible to know each learner, including their phase of English language acquisition, to give them the opportunity to learn, understand and develop the disposition to use mathematics. The challenge for EAL/D students is that they need to concurrently learn English, learn through (or in) English and learn about English (Australian Curriculum, Assessment and Reporting Authority [ACARA], 2015). These students require support to engage in the mathematical ideas and to communicate their thinking using mathematical language. Moschkovich (1999) found that rather than focussing on the acquisition of technical language in isolation it was more beneficial for EAL/D students to participate in both verbal and written practices, such as explaining solution processes, describing conjectures, proving conclusions, and presenting arguments (Moschkovich, 1999).

When supporting a school in the Catholic Schools Parramatta Diocese with 76% of students identified as EAL/D, the focus of the work was intentional planning to scaffold language for students in mathematics to improve reasoning and communication processes of Working Mathematically. The teachers engaged in collaborative planning facilitated by the numeracy leaders. The focus was on anticipating possible strategies, students’ misconceptions that may arise and carefully consider the mathematics they want students to know, and the language students may need. They planned specific teaching strategies to scaffold mathematical language and engage students in more purposeful classroom talk. Teachers are now more intentional in their planning and have seen an improvement in the level of purposeful talk about mathematics.

There is little research on which specific language features impact greatest on EAL/D students’ performance in mathematics. This opens the opportunity for future research concerning this and the support these students require to access challenging tasks and progressing mathematical reasoning and communication in mathematics.

### References

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(2024). In J. Višňovská, E. Ross, & S. Getenet (Eds.), *Surfing the waves of mathematics education. Proceedings of the 46th annual conference of the Mathematics Education Research Group of Australasia* (pp. 575). Gold Coast: MERGA.