Teachers' conceptions of the term 'success' in mathematics classrooms

<u>Rebecca Burtenshaw</u> *University of the Sunshine Coast*

rebecca.burtenshaw@research.usc.edu.au

Merrilyn Goos
University of the Sunshine Coast
mgoos@usc.edu.au

Margaret Marshman
University of the Sunshine Coast
mmarshma@usc.edu.au

Although 'success' is claimed to be the ultimate goal of schooling, teachers receive many contradictory messages about the meaning of 'success' and how it can be determined. This paper draws on a broader national research project investigating conceptions of 'success' in mathematics education, focusing specifically on teachers' responses identifying an alternate word or phrase for 'success'. An online survey gathered responses from 139 Australian teachers of mathematics across all states and territories, from Prep to Year 12. Initial thematic analysis suggested alignment with the Australian Curriculum: Mathematics (v8.4) proficiency strands (Australian Curriculum, Assessment and Reporting Authority, n.d). However, as the curriculum descriptions did not provide adequate clarity for deductive coding, further clarification was sought from Kilpatrick et al.'s (2001) five proficiency strands, which directly informed the development of the four strands within the Australian Curriculum. Although entirely omitted from the Australian Curriculum, Productive Disposition – the unifying proficiency strand – was the most prominent category of responses (n=55), accounting for 40.1% of survey participant responses. Participant responses commonly referenced 'confidence', along with terms such as 'disposition', 'enjoyment', 'perseverance', 'growth mindset'. 'drive to have a go' and curiosity as alternative words or phrase for 'success'. Despite the increasingly intense focus on measurability and quantification structures in recent years, explicit references to scores, ranks, or performance metrics were notably absent.

This paper aims to support teachers in navigating the multiple – and often conflicting messages – surrounding 'success', encouraging reflection on the conditions and structures that might support progress towards the conceptions of 'success' strongly represented in teacher responses. A step towards this goal is the belated inclusion of *Productive Dispositions* alongside the other four proficiency strands in the Australian Curriculum (v9.0), to better reflect a more complete conceptualisation of mathematical 'success'. These findings also suggest that, despite an array of descriptions of 'success' in research literature and policy, teachers of mathematics converge on a consistent conception of 'success' in mathematics education independently of curriculum constraints or governmental mandates.

References

Australian Curriculum, Assessment and Reporting Authority (ACARA). (n.d). *Mathematics proficiencies*. The Australian Curriculum. https://www.australiancurriculum.edu.au/resources/mathematics-proficiencies/ Kilpatrick, J., Swafford, J., & Findell, B. (2001). *Adding it up: Helping children learn mathematics*. National Academy Press. https://doi.org/10.17226/9822.

For more information, please refer to the following paper presented at the 47th Annual Conference of MERGA in July 2025. Burtenshaw, R., Goos, M. & Marshman, M. (2025). Teachers' conceptions of the term 'success' in mathematics classrooms. In S. M. Patahuddin, L. Gaunt, D. Harris & K. Tripet (Eds.), Unlocking minds in mathematics education. Proceedings of the 47th annual conference of the Mathematics Education Research Group of Australasia (pp. 85-92). Canberra: MERGA.