



Challenging One -Size-Fits-All Contexts : Primary Teachers Experiencing Culturally Responsive Mathematics Teaching as Learners

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Contextualisation is intended to make school mathematics meaningful, yet classroom tasks often draw on situations assumed to be universally familiar, even though what counts as “everyday” is itself culturally situated. Culturally Responsive Mathematics Teaching (CRMT), by contrast, positions students’ cultural and lived experiences as central resources for learning mathematics (Aguirre & Zavala, 2013). This study examines how engaging teachers as learners in a CRMT-designed professional development (PD) workshop reshapes their understanding of mathematical context and meaning. Twenty-five upper-primary teachers (Grades 4–6) from 12 Indonesian public schools participated in five CRMT workshops. This paper focuses on Workshop 2, in which teachers were positioned as students in a culturally responsive mathematics classroom and engaged with whole numbers and place value. Data were drawn from written reflections, task artefacts, and facilitator field notes.

Teachers reframed the meaning of whole numbers as grounded in their own language and lived experiences. In one activity, teachers introduced themselves using whole numbers and were asked to distinguish between the cardinal and ordinal meanings of numbers, particularly in representing “the third.” Most initially constructed a podium of three objects, conflating ordinality with cardinality. The distinction became clearer when they contrasted a mother whose three children came home together with a mother who called only her third child. This comparison prompted a shift towards understanding ordinality as position relative to a starting point.

In learning about place value, teachers engaged in a packaging task in which they chose their own grouping base (3, 4, or 19) for 15 buttons and developed informal language before being introduced to formal terminology. This made place value visible as an agreed-upon convention rather than an intrinsic property of numbers. More than two-thirds of the written reflections recorded a comparable shift in representation: “I used to think students had to learn mathematical terms first. Now I realise their everyday stories are actually the doorway to understanding the concept.”

Finally, positioning teachers as learners thus made contextual diversity not an extension added after mathematical content, but the vehicle through which mathematical meaning itself was constructed.

References

- Aguirre, J., & Zavala, M. D. (2013). Making culturally responsive mathematics teaching explicit: A lesson analysis tool. *Pedagogies: An International Journal*, 8(2), 163–190.
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For more information, please refer to the following paper presented at the 48th Annual Conference of MERGA in July 2026.
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