

**TRANSLANGUAGING MOVES IN ELEMENTARY MATHEMATICS CLASSROOM  
NUMBER TALKS: UNDERSTANDING LINGUISTIC REPERTOIRES**

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Mathematics education research advocates for practices that celebrate all students' mathematical reasoning and ways of knowing (Turner & Drake, 2016). For multilingual teachers, translanguaging theory opens up how mathematical knowledge is shared and understood in multilingual mathematics classrooms. Translanguaging, a dynamic view of language acquisition, posits that instead of viewing multilinguals as having separate language registers, we instead view their access to multiple linguistic repertoires in specific contexts (García & Kleifgen, 2010). Number Talks are a structured series of computation problems selected and sequenced and presented to elementary students in order to build mental computation and relational thinking (Bray & Maldonado, 2018; Parrish, 2010; Humphreys & Parker, 2015). This study investigated the translanguaging moves that revealed the mathematical thinking of multilingual elementary students while engaging in number talks.

We conceptualize a translanguaging stance in the mathematics classroom as the deliberate choice by teachers to create a space in which children's mathematical thinking and language practices are positioned as powerful resources during mathematics instruction (García, Ibarra Johnson & Seltzer, 2017). Further, we posit that Number Talks are a beneficial activity for mathematics instruction in multilingual contexts due to the open-ended nature of the activity. Students may share their thinking, unencumbered by language separation requests, as they share their mental computation, all while the teacher facilitates a discussion of ongoing analysis of the mathematical relationships that are revealed in students' strategies (Bray & Maldonado, 2018).

Six number talks that occurred in a 3rd grade two-way dual language classroom at a Southwest school were analyzed for this study. Of 23 students, 22 identified as Latinx (with families from Mexico, El Salvador, Honduras and Puerto Rico), and one student identified as both Black and White. Number Talks were video recorded and transcribed, and focused on multidigit subtraction, multiplication and division, and unit fraction multiplication. We used multimodal analysis (Jewitt, 2009) because it is particularly helpful to identify how bilingual learners use semiotic resources other than spoken language to participate (Domínguez, 2005).

Two themes emerged from analysis of the Number Talks: translanguaging teacher moves to facilitate the mathematical flow of ideas, and ongoing community mathematical knowledge building moves. Translanguaging teacher moves emerged at various points in the Number Talk, both to invite students into conversation, to scribe students' oral strategies, and to ask for further reflection and discussion. Community mathematical knowledge building occurred between students, and often began with a mathematical question or puzzlement. Our study highlights the need for opening up the ways in which multilingual students draw upon their linguistic repertoires to build community and individual mathematical knowledge.

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