

LANGUAGE CHOICE AND MEANING IN PREDICTION

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There is a reciprocal relationship between language and conceptualization: language repertoires are necessary to convey an idea, and the language used to describe an idea shapes the way people conceptualize it. This reciprocity motivated our cross-sectional longitudinal study to investigate children's language repertoires, focusing on language for conjecture and prediction in English-medium and French Immersion instructional contexts in an Anglophone region in Canada. The English-medium classrooms included students for whom English is an additional language. Students worked in groups in class and we interviewed the groups shortly thereafter to extend the group work. At the end of each interview, we asked participants about the meaning of things they said in their group work and in the interview. We were guided by our desire to see language as a resource; we attend to the language repertoires of the students to understand their perspectives on prediction, not to identify deficits in their knowledge but rather to afford us new perspectives on situations involving prediction. Our primary analytical approach was to map language strategies for prediction. In the presentation we will describe the tasks used for the group work in the research and some brief excerpts of student interaction to set the context for the major findings.

First, though not a goal of the research we found that non-trivial narrative contexts for mathematical tasks, along with pair and group structure, seeded considerable talk amongst students. Second, context-grounded language allows students (and ourselves) to talk about uncertainty without technical language. Third, we identified differences among prediction situations—students did not see these situations in the way we had expected. Fourth, refuting a claim from Rowland (2000), we found the students in our study avoiding uncertainty language for conjecture. They stated their conjectures with simple assertions (e.g., 'it will be six'). Then, when testing their conjectures, they said no or yes (or similar words). Fifth, participants across the grade spectrum in our research (starting at Grade 3) and even operating in a new language had language repertoire for making distinctions about levels of certainty. Sixth, participants tended to rely on their most familiar language patterns (especially patterns resembling their first language) to make such distinctions. (This research was supported by a Social Sciences and Humanities Research Council of Canada grant entitled "Students' language repertoires for investigating mathematics," PI: Wagner.)

References

Rowland, T. (2000). *The pragmatics of mathematics education: Vagueness in mathematical discourse*. London: Falmer.