

# Pathways to learning mathematics for students in French-immersion and English-instruction programs

Xu, C., Di Lonardo Burr, S. M., Skwarchuk, S-L., Douglas, H., Lafay, A., Osana, H. P., Simms, V., Wylie, J., Maloney, E. A., LeFevre, J-A.

## WHAT DID WE ASK?

**How** are language skills related to mathematics development for students in French-immersion or English-instruction programs?

**Do** students in French-immersion rely on their vocabulary skills in their home-language or language of instruction?



## HOW DID WE TEST IT?

Students (7 to 10 years of age) enrolled in either **English-instruction** (n = 92) or **French-immersion** (n = 144).

We examined the relations between **vocabulary** in grade 2 and the **change in mathematics achievement** from grade 2 to 3.

## WHAT DID WE FIND?

Students in French-immersion and English-instruction programs had **similar** math achievement.

### High Language Demands

For mathematics tasks that required oral language processes, French-immersion students' English-vocabulary skills, not their French-vocabulary skills, predicted the change in mathematics achievement from grades 2 to 3.

### Minimal Language Demands

For tasks with minimal oral language processing demands, vocabulary skills did not predict the change in mathematics achievement for either English-instruction or French-immersion students.

## WHY IS THIS IMPORTANT?



### For Educators

Some immersion students are possibly translating or switching between two languages when solving math problems with oral language processing demands.

### To Support students



Educators can ensure that students develop proficiency in mathematics in their first language to support learning mathematical content in an additional language.