

Early Childhood Educators' and Teachers' Early Math Education Knowledge, Beliefs, and Pedagogy

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In the spring of 2017, an educational needs assessment of early math education in Ontario was conducted using an online survey completed by 130 early childhood educators, kindergarten teachers, and Grade 1 teachers

The Early Math Educator Survey asked educators to:

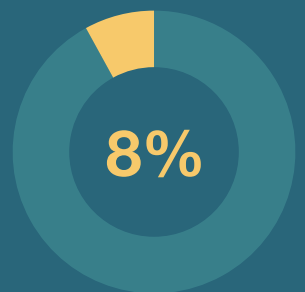
- identify their early math education training
- describe the areas of early math that they were most and least comfortable teaching
- communicate their early math education professional development needs

Given that the majority of kindergarten classrooms in Ontario include both an ECE and a teacher, the term "educator" will be used to refer to both ECEs and teachers.

Educators who learned about early math development and education during their educator training:



Educators who possessed any specific math-related qualifications:



Educators were **most** comfortable teaching:

5 **1** **8** **Number Sense and Numeration**

"...these are my strengths so I feel comfortable talking about ideas around these concepts."

-Early Childhood Educator

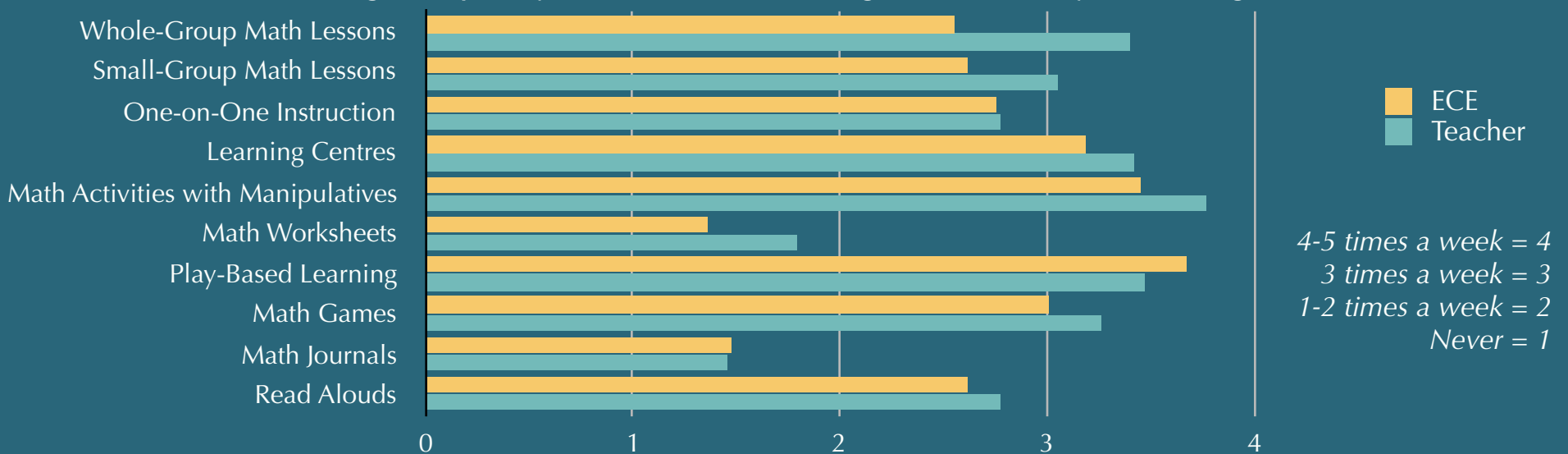
Educators were **least** comfortable teaching:

Geometry and Spatial Sense

"...because these are the areas I struggle with most as an adult!"

-Teacher

Average Frequency of Instructional Strategies within Early Math Programs



Educators' most frequent explanations for why students excel in various strands of math:

Frequency of Instruction or Exposure

Use of Manipulatives

The Area of Math is Interesting or Enjoyable

Professional development opportunities and topics educators would like to help improve their early math teaching:

Math-Based Training and Workshops

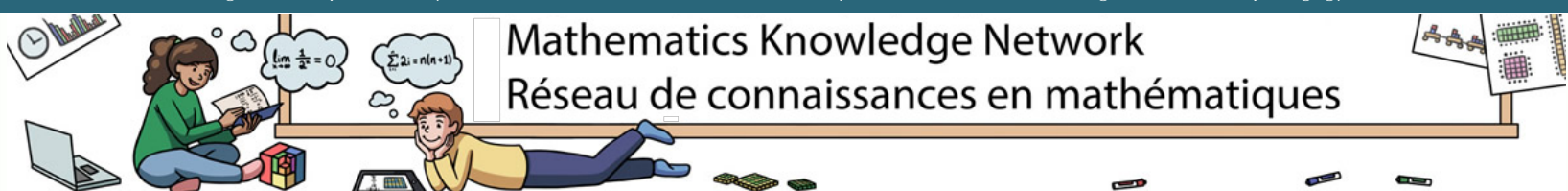
Ideas and Resources for Math Centres and Play-Based Learning

Read Aloud Math Books

Educators' perceived importance of math strands in early math education programs ranked:

- 1. Numbers**
- 2. Problem Solving**
- 3. Patterning**
- 4. Measurement**
- 5. Geometry**
- 6. Data Management**

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