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# Underachievement in Mathematics in the Early Childhood Classroom

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# Underachievement in Mathematics in the Early Childhood Classroom



Amy E. Lieberman

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## Research Question

What math curriculum considerations should an early childhood general education teacher make in order to address the needs of the wide spectrum of learners within their classroom?



## Selected References

- Gersten, R., Ferrini-Mundy, J., Benbow, C., Clements, D., Loveless, T., Williams, V., Arispe, I., Banfield, M. (2008). Report of the National Mathematics Advisory Panel. Retrieved from <https://ed.gov/about/bdscomm/list/mathpanel/reports.html>
- Mandel, H. P., Marcus, S. I., & Dean, L. (1995). *Could do better: Why children underachieve and what to do about it*. Toronto, Canada: John Wiley & Sons, Inc.
- Nelson, G. D. (2006). *Breaking the learning barrier for underachieving students: Practical teaching strategies for dramatic results*. Thousand Oaks, Calif: Corwin.
- Sherman, H. J., Richardson, L. I., & Yard, G. J. (2005). *Teaching children who struggle with mathematics: A systematic approach to analysis and correction*. Upper Saddle River, NJ: Pearson/Merrill Prentice Hall.

## Why Mathematics?

Math ...

- is a progressive subject that builds foundation for skills in later grades
- tends to frustrate students if teachers fail to implement proper supports

## Why Study Underachievement?

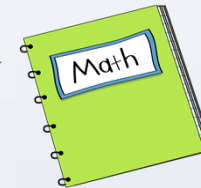
- No clear definition
- Varied reasons across all populations
  - Disabilities
  - Lack of motivation
- Achievement gap is widening
- Teachers have resources to provide for all students

Underachievers are generally **highly motivated** – in directions other than getting good grades. And finding out **precisely** where that **motivation** lies is the key to helping them turn around and **become achievers** at school”

-Mandel, Marcus, & Dean

## Why Should You Care?

- Inclusion increasingly prevalent in elementary classrooms
- General education teachers need to differentiate instruction to meet the needs of all learners



## Classroom Strategies

- Response to Intervention (RTI)
  - Tiers 1 & 2 in general education classroom
- Avoid perceptions that some students are better at math than others
  - Everyone can engage in mathematics
- Specific strategies
  - Use of manipulatives
  - Mechanisms to remember the processes



## Methodology

Write, implement, and evaluate a 4<sup>th</sup> grade mathematics curriculum intervention (3-5 day lesson plan).

- Fall 2018:
  - Write lesson plan
- Early Spring 2019:
  - Revise lesson plan to fit the needs of students in my student teaching placement
  - Implement lesson plan while collecting data on student achievement and attitudes
- Late Spring 2019:
  - Make necessary revisions
  - Determine if curriculum was effective



## Contact Information

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