



# Developing Resilience In Third Grade Boys Using Collaborative Problem-solving

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**Further Information**  
This poster and further information is available at <http://www.theibsc.org/>

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## Introduction

I am completing my ninth year teaching third grade boys. One of the subjects I teach is math, and over the years I have seen the boys dislike solving word problems. Often the word problems are lengthy and have no context for a young boy. I wondered if the majority of the boys disliked solving word problems and what the result would be if they worked together to solve them? Would they not start to see that they are not the only ones who struggled?

I have found boys like to work together to complete a task. In defining resilience for my project, I wanted boys to solve word problems independently of the teacher. The work of Traver (2003) discusses the power behind peer collaboration. Students are more responsive and receptive to peer feedback on their assignments. In the same group of students researchers found they were more intrinsically interested in what their peers had done than examples from books.

## The Research Question

**How might participation in collaborative problem solving develop resilience in third grade boys?**

## Research Context and Participants

The Boys' Latin School of Maryland is an all-boys, university-preparatory school located in North Baltimore. Founded in 1844, it is the oldest independent, nonsectarian secondary school in the state of Maryland. For students in kindergarten through 12th grade, Boys' Latin provides a rigorous, college-preparatory curriculum that focuses on building 21st century skills and empowers each boy to achieve true excellence.

My project consisted of twenty participants in our third grade. The boys ranged in age from eight to nine years old. The participants were learning on level grade three math.

## The Research Action

After each topic in math, for an assessment, the boys would be given a set of real world math problems to solve using the current operation we studied. This would allow for practice with the math operation, word problems, and a practical application of the topic covered. The boys would be divided up into pairs, usually a random grouping to allow different boys to work with each other. For each assessment I would try to pair up different boys who normally would not work together. This would give them a chance to work on their math and collaboration skills. Using this method I would have a chance to see how well they could use the math operation to solve word problems, if real world math problems were easier for them to solve, and if solving word problems with a partner eased the frustration and anxiety the boys often felt when facing word problems.

## Data Collection and Analysis

The boys were paired with different partners for each session. I tried to match up boys who did not consider each other as friends, were in different classes, or had different interests. After each session I would have them fill out a questionnaire, which was completed away from their partner and then handed into me. I interviewed each boy as they turned in their questionnaire. In addition to the questionnaires, I observed the different groups and made notes on their interactions and ability to work together to solve their math problems. After the boys completed their interviews and I looked over their questions I coded the data to see if any key themes emerged.

## Key Findings and Discussion

- My students like working with a partner to solve word problems.
- When working with a partner they are less likely to give up.
- They can work with anyone in the class, but they have to feel like that person likes them.
- They do not like to solve word problems even word problems based on real life situations.

## Conclusions

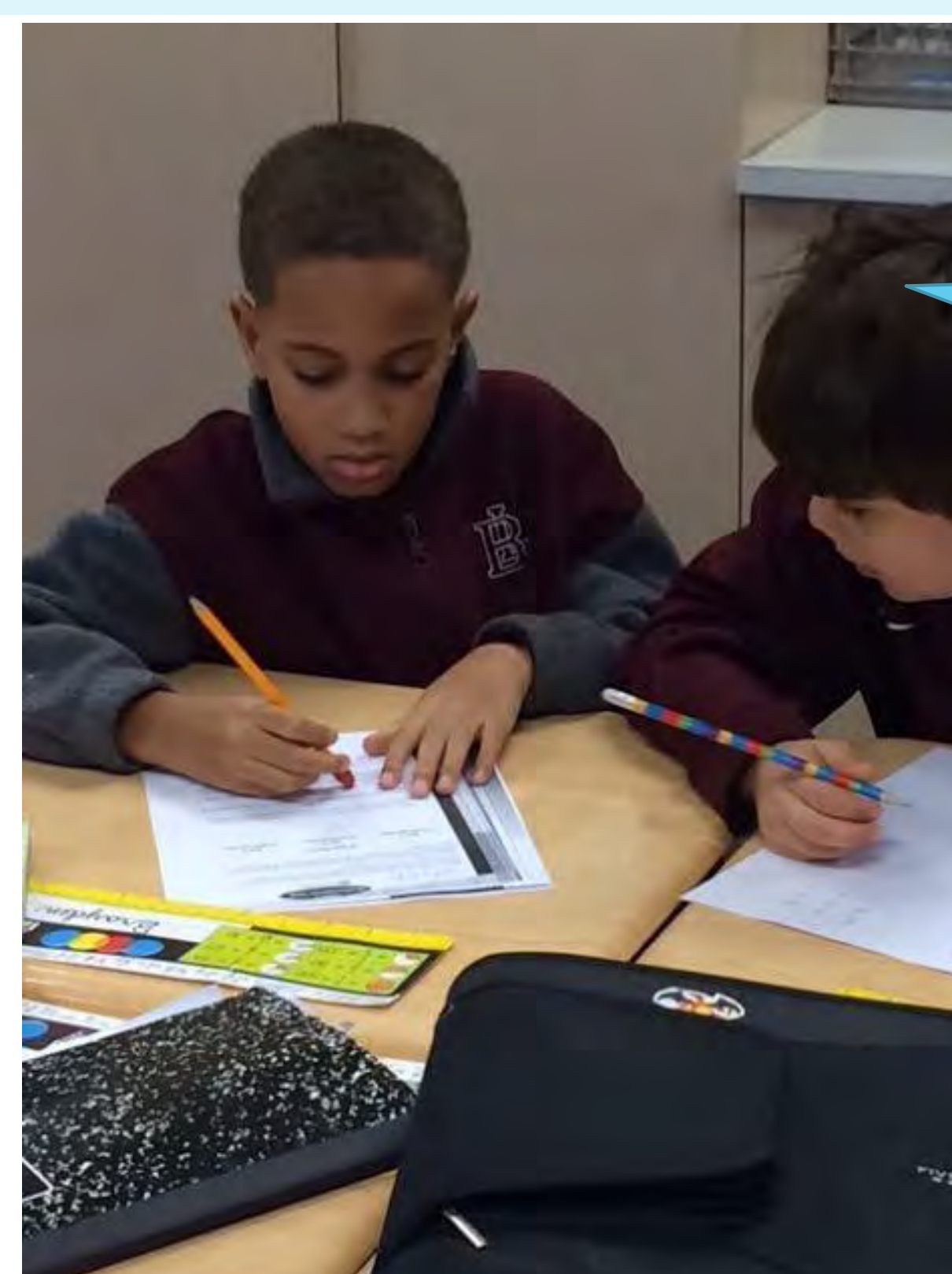
- Boys need to feel a positive personal connection with their partner in order to work successfully and not give up.
- Word problems are less challenging when solved with a partner.
- Using Real World Math word problems is a way for boys to make meaningful connections with mathematical operations.

## Key Readings

- Markova, D., & McArthur, A. (2015). *Collaborative intelligence: Thinking with people who think differently* (1st ed.). New York, NY: Spiegel & Grau.
- Stringer, E. T. (1996). *Action research: A handbook for practitioners* (4th ed.). Thousand Oaks, CA: Sage Publications.
- Traver, R. (2003). *The power of peers*. Educational Leadership, 73 ( 7), 68-72.



The Power of Collaboration



"I can work with anyone - but they have to be nice to me."



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