How does student self-efficacy affect achievement?

Meghan Taylor
University of North Florida
S: Lake Shore Middle School

UNF

Student Problems and Issues

Throughout the semester at Lake Shore Middle School, many students appeared to be lacking confidence in their different classes. This lack of confidence stemmed greatly from their math classes, as more students have difficulty in math than other subjects. I began to wonder if the student's self-analysis of confidence directly affected their academic achievement in their classes.

For the purpose of this inquiry project, the idea of how student self-efficacy and confidence affects their academic achievement interested me. Throughout the semester, I studied the effects of self-efficacy

Jack's Levels of Self-Efficacy
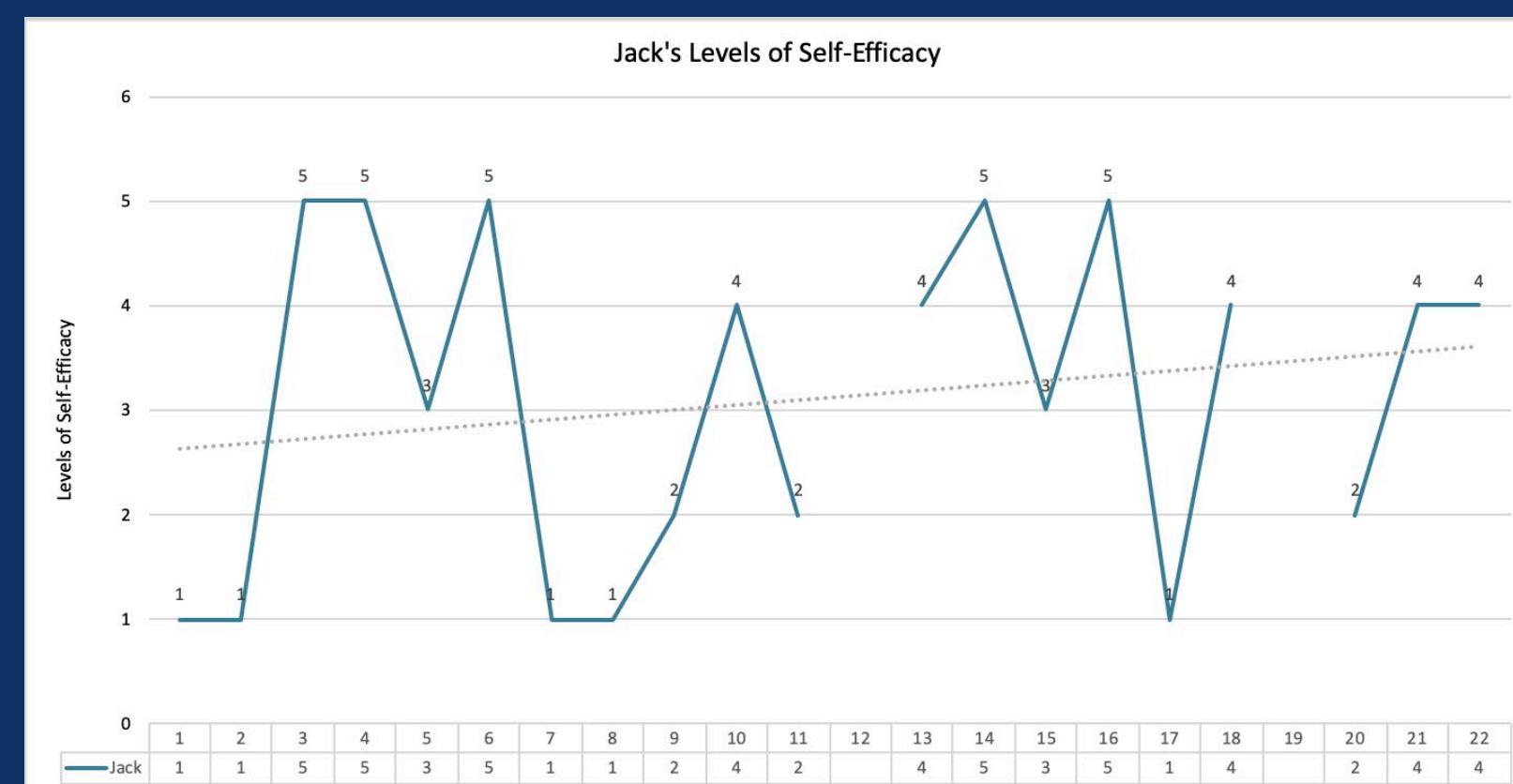
Summary of Data

Throughout the semester, Jack and Rebecca self-assessed their confidence levels for each day we worked on math tutoring and lessons together. Their self-reflections were analyzed and shown in the graphs and table.

Their self-efficacy levels fluctuated per lesson, but this was expected. When learning something new, a student is not going to immediately be confident in their ability to reciprocate the steps in the lesson.

However, as the lesson was extended for more days, their confidence would continue to grow. When comparing their indicated confidence correlated to how well they scored on their daily worksheets and formative assessments.

When there was higher confidence, Jack and Rebecca scored higher. When there was a lower indication of confidence, there was less academic achievement. The graphs display their positive trendline of improved self-efficacy throughout the semester.

Date	Lesson	Rebecca	Jack
9/9/19	Know your student	1	1
9/11/19	Pre-Test	1	1
9/16/19	Place Value (Whole #)	5	5
9/18/19	Place Value (Decimals)	4	5
9/23/19	Rounding with Decimals	3	3
9/25/19	Rounding with Decimals	5	5
9/30/19	Writing Decimals	1	1
10/2/19	Writing Decimals	1	1
10/7/19	Writing Decimals	3	2
10/9/19	Writing Decimals	4	4
10/14/19	Adding with Decimals	2	2
10/16/19	8th Grade Pre-ACT Test		
10/21/19	Adding with Decimals	4	4
10/23/19	Adding with Decimals	5	5
10/28/19	Subtracting with Decimals	3	3
10/30/19	Subtracting with Decimals	5	5
11/4/19	Multiplying with Decimals	2	1
11/6/19	Multiplying with Decimals	4	4
11/11/19	Veteran's Day		
11/13/19	Review	4	2
11/18/19	Review	5	4
11/20/19	Post-Test	5	4

Strategies

Throughout the semester, I used multiple mathematical strategies to improve upon the student's math skills. Additionally, some strategies were used to help improve student self-efficacy suvh as collaboration (Ronfeldt, Farmer. McQueen, & Grissom, 2015).

In order to improve math skills, multiple manipulatives were utilized along with different charts we created throughout the lessons. Also, we took advantage of the graph paper alignment strategy that helped the students greatly.

In order to improve self-efficacy, it is important to establish rapport from the beginning with your students. If there is a good relationship with your students and with each other, they will likely build their confidence. Lastly, a collaborative model was put in place to build connections and establish self-efficacy both individually and as a small group.

Rebecca's Levels of Self-Efficacy
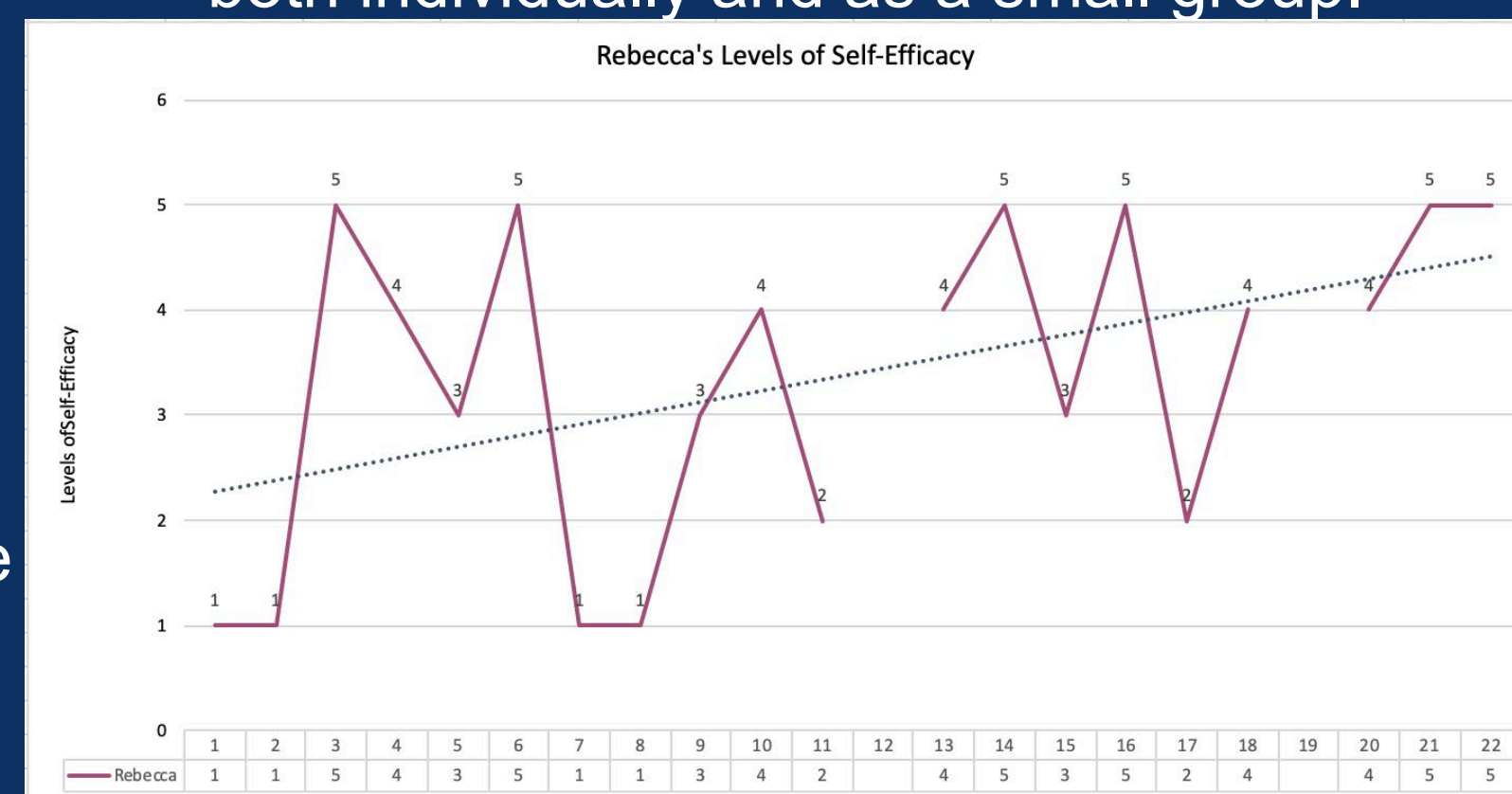
Literature Review

Researching self-efficacy in students is a developing research topic. As mental health awareness is becoming increasingly acceptable research brought into schools, the correlation between student self-concept and achievement is improving radically.

Most of the literature explains how student's view themselves and their ability is one of the largest factors in their achievement of all classes (Nurhavati, N., Rosmaivadi, R., Buyung, B., 2017). If a student continues to feel very poorly of themselves, then this will begin to affect their achievement (Telbis, Helgeson, & Kingsbury, 2014).

Appropriate methods to help improve student self-efficacy in the classroom needs to be taken in order to help improve overall mental health and academic achievement despite the subject or grade level. Learning the different factors that build a student's self-efficacy can help improve the student's learning, achievement, behavior, and overall mental health. Students should ultimately feel empowered by their education and abilities