

Supporting Mathematics Content through Individualized Support  
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**Introduction:** Every year, new students enter my classroom with the assumption they are not good at math, which in turn affects their attitudes and effort in the subject. For my students to enjoy and excel at math, I can work to helping them understand it better. In an effort to know how to best get students interested in math, I first needed to better understand their math knowledge as well as their attitude towards math. I then would have a better understanding of how to change my teaching methods to best rectify the situation. The idea for this study came from observations I have taken over the last three years in my industry summer work experience. Supervisors wear many hats and are not always able to individually train every new employee. Because of this, they often “pass the word” from worker to worker but this may not provide sufficient information to employees to be successful. If supervisors were able to a few extra minutes with new employees to explain their expectations, and provide supervision for a short length of time, the end result could be much better. Teachers encounter similar situations every day in their classrooms.

During the past year, I spent time during after school sessions with my students through one on one tutoring reviewing and re-teaching concepts they each struggled with. During this time, I collected formative assessment scores, journal entries, surveys, grades and after school tutoring observations as data to help me have an understanding of how the time I spent affected their scores and their attitudes in math.

**Findings:** *There was very little change in students’ average scores on one specific math content standard from the beginning of the year to the end of the year.* Students were tested on a specific content standard at the beginning of the year and again at the end of the year. Based on this finding, it would suggest that spending extra time with them does not change the outcome of their retention of this one specific piece of knowledge. *Students who received extra time with the teacher (tutored students) consistently grew in their math grades from quarter to quarter.* Overall student grades increased substantially throughout the year. These results are based on grades for each quarter through the year. Although this finding seems to contradict Finding 1, student grades are based on ongoing assessments of students’ knowledge rather than a single snapshot that may or may not align with current knowledge. This discrepancy highlights potential issues between in-class and external assessments. *Students who received ten or more hours of extra time with the teacher demonstrated attitude changes towards math from negative to positive.* This study has shown that individualized one-on-one instruction can change student’s attitudes towards math and demonstrably increase learning as reflected through grades.

**Plan of Action:**

- The classroom structure will be adapted provide more individualized instruction for students. This will initially be done with center-based teaching.
- Students who continue to have additional need will receive after school tutoring.
- I will collect modest amounts of data in in future teaching that will help determine successfulness of small group center based teaching providing students individual instruction.
- I will adjust my teaching as needed based on future observations and data collection.

