Apr 14th, 9:00 AM - 10:00 AM

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Math Self-Efficacy and Performance
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Questions
• In what ways are students’ math self-efficacy and grade-based performance related?
• What aspects of math self-efficacy are predictors of performance?

Methodology
• Participants: Approximately 90 high school students enrolled in Algebra II
• Data Sources: Teacher Journals, Questionnaires/Exit Slips, and Literature Review
• Data Analysis: Self-Efficacy Theory (Betz & Hackett, 1989)

Results and Data Analysis
• By triangulating the results of teacher journals and questionnaires students were identified as having high or low math self-efficacy.
• Based on the literature reviewed, students with high self-efficacy were confident on questionnaires, participated often in class, and displayed other strong academic qualities.
• Student predictors of grades were similar to actual grades received.

Conclusion
• Self-efficacy and performance have a reciprocal relationship; self-efficacy affects performance and performance also affect self-efficacy.
• Student’s own assessment of performance is a good predictor of actual performance.
• Future research it will need to take all aspects of a students life into account.

Acknowledgements
• I want to thank the students in the Algebra II classes that were patient and cooperative in filling out the questionnaires.
• Thank you to my advisor, cooperating teacher, and supervisor for encouraging me and helping me through this research process.

Literature Review
• The Social Cognitive Theory, encompasses concepts related to self-concept, anxiety, self-esteem, and self-efficacy (Bandura, 1997 as quoted in Kitching, 2011).
• Self-beliefs determine the action a person takes with the knowledge he possesses. This can explain why people’s performance differs when they have similar skills and knowledge (Pajares, 1995).

Procedures
• Observed students and kept a weekly teacher journal focusing on student interactions, body language, and work.
• Questionnaires were given with each test (Shown in Figures 1 & 2 below).
• Exit Slips were given halfway through a chapter asking students to rank confidence in chapter areas & what they need to feel prepared for the test.
• Self-Efficacy Theory (Betz & Hackett, 1989) was used to analyze data.

Figure 1. Front page of questionnaire given to students.

Figure 2. Questionnaire asking students to elaborate on confidence levels.

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