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The Transition to Standards-Based Grading

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THE TRANSITION TO STANDARDS-BASED GRADING

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Research Questions

- What are the benefits of using standards-based grading? How do I integrate standards-based grading into a mathematics classroom?
- *Standards-Based Grading* is a method of assessing students by determining different levels of achievement (Marzano, 2010).

Literature Review

- Standards-based grading allows teachers to focus on what learning objectives students are struggling with (Iamarino, 2014).
- Giving students second chances to demonstrate their understanding of particular concepts can help them achieve subject mastery (Deddeh, Main, & Fulkerson, 2010).
- Using proficiency scales provides students with immediate feedback on what standards they are and are not meeting (Marzano & Heflebower, 2011).
- Assessing students using standards-based grading can help teachers develop and use new and innovative assessment strategies (Scriffiny, 2008).

Methodology

- Participants were 46 honors precalculus and 38 relearn geometry students in a high school.
- Standards-based grading was used to assess students throughout the semester.
- Data sources collected include students' graded summative assessments, a general grading rubric, and students' survey results on standards-based grading.
- A theoretical framework was used to examine standards-based grading, a new method of assessment.

Table 1: Average Scores on Honors Precalculus Summative Assessments

Summative Assessment	*2nd Period (21 students)*	*5th Period (25 students)*	*2nd and 5th Periods (46 students)*
Unit 1 (Matrices)	13.10/15.00	12.60/15.00	12.85/15.00
Unit 2 (Vectors)	12.79/15.00	12.29/15.00	12.54/15.00
Unit 3 (Sequences and Series)	12.12/15.00	12.06/15.00	12.09/15.00
Unit 4 (Ellipses and Circles)	12.01/15.00	12.00/15.00	12.01/15.00
Unit 5 (Hyperbolas and Parabolas)	12.46/15.00	11.92/15.00	12.19/15.00

***Table 1**:* Students' average summative assessment scores demonstrate high levels of understanding.

Table 2: Initial and Post-Reactions on Standards-Based Grading from 5 Honors Precalculus Students

	Initial Reaction	*Post-Reaction*
Student 1	"I don't feel like the rubric will help me receive partial credit."	"I really like standards-based grading because it tells me what I know and what I need to retake!"
Student 2	"I think it's alright."	"I am getting more used to it."
Student 3	"I really don't know if I'll like it or not."	"It was nice to see what things I knew and what I didn't know."
Student 4	"I don't have an opinion on it."	"I like it because I know I don't need to study until the retakes."
Student 5	"I think I'll like this grading system."	"It helped me know what I needed to retake to get a better grade."

***Table 2**:* Students' responses to standards-based grading became more positive by the end of the semester.

Results and Data Analysis

- Quantitative data listed in Table 1 is consistent with Clymer and Wiliam's (2006) research which suggests that students being assessed under a standards-based grading system demonstrate deeper understanding of different learning objectives.
- The data from Table 2 suggests that students became comfortable with and favored standards-based grading after one semester.
- Triangulation of content-analyzed data demonstrates the usefulness of standards-based grading in classroom assessment.
- Iamarino (2014) argues that standards-based grading focuses on comprehension and quality of work versus points-based grading.

Conclusion

- Findings suggest several benefits to standards-based grading and different ways to go about implementing this grading system into the classroom.
- Standards-based grading positively impacts the way students demonstrate their levels of understanding.
- Future research is needed in other classes of all disciplines to further support the findings of this study.