The Transition to Standards-Based Grading

John Blumenreich
Illinois Wesleyan University

Leah Nillas, Faculty Advisor
Illinois Wesleyan University

Follow this and additional works at: https://digitalcommons.iwu.edu/jwprc

Part of the Education Commons

Blumenreich, John and Nillas, Faculty Advisor, Leah, "The Transition to Standards-Based Grading" (2015). John Wesley Powell Student Research Conference. 9.
https://digitalcommons.iwu.edu/jwprc/2015/ESposters/9

This Event is protected by copyright and/or related rights. It has been brought to you by Digital Commons @ IWU with permission from the rights-holder(s). You are free to use this material in any way that is permitted by the copyright and related rights legislation that applies to your use. For other uses you need to obtain permission from the rights-holder(s) directly, unless additional rights are indicated by a Creative Commons license in the record and/or on the work itself. This material has been accepted for inclusion by faculty at Illinois Wesleyan University. For more information, please contact digitalcommons@iwu.edu.
©Copyright is owned by the author of this document.
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).

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.

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.

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 (Scruffiny, 2008).

Table 1: Average Scores on Honors Precalculus Summative Assessments

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

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

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

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