



# My Student Survey

Technical Manual

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As part of an effort to develop cohesive measures for identifying effective teaching, Teachscape, Charlotte Danielson, and My Student Survey have partnered together in an alignment analysis between classroom observation ratings using the Framework for Teaching and My Student Survey. This analysis will investigate the strength of the relationship between two measures as well as provide further information on the areas that show discrepancies as a way of understanding how the measures can serve as complementary tools in understanding teacher practice.

## Introduction

Classroom observations represent one of the most commonly used evaluation systems for teachers (Goe, 2008). Some of the main issues to consider with observations are the validity of the instrument and the reliability of rating, particularly if ratings are attached to financial rewards or job security. Outside researchers found that a student with a teacher in the top quartile (according to Danielson's rubric) would score 0.10 standard deviations higher in math and 0.125 standard deviations higher in reading than a student assigned to a teacher in the bottom quartile (Kane, Taylor, Tyler, & Wooten, 2010). Further, a project funded by the Gates Foundation investigated the relationship between several measures of teaching and value-added estimates of student achievement in the Measures of Effective Teaching (MET) project. Teacher ratings from the Danielson Framework had a 0.19 correlation with student achievement in math and a 0.11 correlation with student achievement in ELA. These correlations were all statistically significant ( $p < .05$ ).

When considering possible measures of teacher effectiveness in K-12 education, it can be argued that student perceptions of a teacher are an important consideration in any teacher evaluation system as students have the most contact with teachers and are the direct consumers of a teacher's service. In addition, student surveys have shown a positive relationship to student achievement as well as other outcomes of interest such as student engagement and self-efficacy (Balch, 2012; Kane & Cantrell, 2010; Kyriakides, 2005; Wilkerson, Manatt, Rogers, & Maughan, 2000; Peterson, Wahlquist, & Bone, 2000). Further research suggests that when student surveys are combined with other sources of information, such as observational rubrics, they provide more information and improve the reliability of an evaluation (Kane & Staiger, 2012).

My Student Survey was developed using both reviews of the literature and commonalities among established observational rubrics. The first procedure consisted of identifying overlapping teacher behaviors from the various reviews of the literature. For instance, all of the reviews highlight a link between providing feedback for students and higher student achievement. Schachter and Thum (2004) note that teachers should provide "frequent, elaborate,

and high quality academic feedback”, Good and Brophy (1986) discuss “monitoring of students’ understanding and providing appropriate feedback”, Emmer and Evertson (1994) note that “all student work, including seatwork, homework, and papers, is corrected, errors are discussed, and feedback is promptly provided”, and finally Marzano (2001) outline several research based feedback strategies.

The second procedure involved using common observational rubrics such as Charlotte Danielson’s (1996) *Framework for Teaching* and the Classroom Assessment Scoring System (CLASS) for grades K-5 (Pianta, La Paro, & Hamre, 2006). Both of these instruments have been thoroughly tested for criterion validity by assessing the relationship between teacher scores on the rubric and a teacher’s value-added student achievement (Kane, Taylor, Tyler, & Wooten, 2010). Teacher behaviors identified by the highest levels of the rubric were transformed into questions appropriate for students to answer. There was considerable overlap between the two rubrics, but certain areas were only addressed by one or the other. Examples are provided in **Error! Reference source not found.1**.

**Table 1- CLASS and Framework for Teaching Behaviors and Corresponding Student Survey Questions**

<b>CLASS</b>	<b>Framework for Teaching</b>	<b>Student Survey Question</b>
<b>The teacher conveys interest in the content and materials to the students through his/her facial expressions, tone, and other non-verbal communication.</b>	High levels of student engagement and teacher passion for the subject create a culture for learning.	My teacher is enthusiastic about the subject.
<b>Rules and behavior expectations are clearly stated or understood by everyone in the class.</b>	Standards of conduct are clear.	My teacher explains how we are supposed to behave in class.  I understand the rules for behavior in this class.
<b>The teacher can answer all levels of student questions.</b>	N/A	My teacher is able to answer students’ questions about the subject.

Overall, these procedures led to the development of 64 survey questions that all have a basis in either overlapping areas of literature reviews or are grounded in descriptions of teacher behaviors from valid observational rubrics.

Once the questions were developed, several steps were taken to establish validity for the survey. These include cognitive interviews and a pilot administration for seven districts in Georgia. Two of the outcomes used in the pilot phase include previously developed measures of academic engagement and academic self-efficacy that were administered concurrently with the survey. The

results from the pilot demonstrated a positive and significant relationship between My Student Survey and value-added student achievement as well as other outcomes such as a student’s level of engagement and academic self-efficacy.

Summary of Findings for Alignment Analysis

- Strong and positive overall relationship between Framework for Teaching and My Student Survey
- Stronger relationship between items aligned with FFT Domain 2 than items aligned with FFT Domain 3
- Strong relationship among components of FFT (i.e. 2a, 2b, etc.) and questions that were designed to align with these components
- Similar results for winter and spring student survey administrations
- Teachers scores on student surveys are relatively stable across administrations
- Preliminary evidence that My Student Survey and Framework for Teaching have potential to serve as complementary measures

For the current survey investigation, there were five schools in Aldine Independent School District that participated. Surveys were administered using My Student Survey in winter 2013 and spring 2013 and observations using the Framework for Teacher (FFT) were done throughout year.

In total, 195 total teachers had both observation scores and student survey scores from the winter survey administration, and 153 teachers participated in the spring survey administration that also had observation scores. The number of teachers by schools is shown in Table 2. During the spring administration, Nimitz did not participate.

**Table 2 - Sample in Aldine Independent School District**

<b>School Name</b>	<b>Number of Teachers – Winter</b>	<b>Number of Teachers – Spring</b>
<b>Davis</b>	76	72
<b>Grantham</b>	48	43
<b>Harris</b>	10	5
<b>Stehlik</b>	39	33
<b>Nimitz</b>	22	N/A
<b>Total</b>	195	153

The observation average was generated by taking mean of categories in which teacher received ratings as well as an overall teacher average if a teacher had multiple observations. The

Framework for Teaching uses a 1-4 scale. For student surveys, the average was generated by taking overall average for all items on survey, with the scores ranging from 1-5. Table 3 displays the overall average and standard deviation for both survey administrations and for the observation scores.

**Table 3 - Summary Statistics**

	<b>My Student Survey (Spring)</b>	<b>My Student Survey (Winter)</b>	<b>Framework For Teaching</b>
<b>Mean</b>	3.895	3.891	2.95
<b>Standard Deviation</b>	.551	.457	.332

Alignment Analysis

Overall there was strong alignment between a teacher’s average using My Student Survey and observation scores using the Framework for Teaching. Table 4 displays the correlation for both the winter and spring administration. The winter administration shows a slightly stronger correlation, partly due to a larger sample size, but both figures are significant at the  $p < .0001$  level.

**Table 4 - Correlation Between Total Score on Student Survey and FFT**

	<b>Framework For Teaching</b>
<b>My Student Survey Total Teacher Average-Winter</b>	.3720 P<.0001 n=195
<b>My Student Survey Total Teacher Average-Spring</b>	.3215 P<.0001 n=153

To put this relationship in context, it is helpful to show how teachers that scored high or low on student surveys did on their observation scores. Teachers that scored 1 SD below the mean on student surveys had a mean observation average of 2.76, while teachers that scored 1 SD above the mean on student surveys had a mean observation average of 3.04. Further, teachers that scored 1 SD below the mean on observations had a mean student survey score of 3.53, and

teachers that scored 1 SD above the mean on observations had a mean student survey score of 4.28. Overall, these figures highlight the fact that teachers who did better on surveys also tended to have higher overall averages on observations and vice versa.

**Table 5 -Correlation Between Total Score in Comparison to Overall Teacher Rating**

	<b>Framework for Teaching</b>
<b>My Student Survey Total Teacher Average</b>	.3720 <sup>1</sup> p<.0001 n=195
<b>Teacher Average for “On a Scale of 1-10, How Would You Rate Your Teacher?”</b>	.2892 p<.0001 n=195

The true correlation between student surveys and observations may actually be higher because both observations and student surveys have measurement error. When doing a correlation between measures, the measurement error of each instrument is largely unrelated. This drives down (or attenuates) the correlation unless measurement error is corrected for. To correct for measurement error, the following formula can be used.

$$\frac{\text{Correlation Between Measures}}{\sqrt{\text{Student Survey Reliability} * \text{Observation Reliability}}}$$

Earlier, the correlation between the FFT and My Student Survey was found to be .3720. As a measure of reliability for student surveys, it is helpful to investigate the similarity of results for teachers that had survey scores from both the winter and spring administration. Table 6 shows a .6316 correlation between winter and spring scores for the 161 teachers that participated in both (8 teachers in the spring did not have observation scores).

**Table 6 - Reliability**

<sup>1</sup> The disattenuated correlation for all survey items is .5719.

**My Student Survey  
Total Teacher  
Average-Spring**

<b>My Student Survey Total Teacher Average-Winter</b>	.6316 P<.0001 n=161
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From earlier research, the reliability of the Framework for Teaching is .37 for one observation, .53 when using two observations, and .67 when using four observations (Kane & Staiger, 2012). This leads to a disattenuated correlation of .5719<sup>2</sup> using the reliability for four observations this was the median number of observations done for teachers within the sample.

$$\frac{.3720}{\sqrt{0.6316 * 0.67}}$$

It is also useful to compare the strength of the relationship between the two measures when looking at the domains as they are organized within the Framework for Teaching. Table 7 shows that Domain 2, with items that relate to classroom environment, had a stronger correlation than Domain 3, with items that relate more to delivery of instruction. Correlations for components within each domain are listed in Appendix A.

**Table 7 - Correlation Among Domains**

	<b>Danielson Domain 2</b>	<b>Danielson Domain 3</b>
<b>My Student Survey Domain 2 Items</b>	.4044 <sup>3</sup> p<.0001 n=195	
<b>My Student Survey Domain 3 Items</b>		.3003 <sup>4</sup> p<.0001 n=195

Summary

<sup>2</sup> The disattenuated correlation using one observation would be .7695. The disattenuated correlation using two observations would be .6429.

<sup>3</sup> The disattenuated correlation for Domain 2 Items would be .6217.

<sup>4</sup> The disattenuated correlation for Domain 3 Items would be .4616

Overall, the analysis provides evidence for a strong alignment between Framework for Teaching and My Student Survey. Further, teachers have a stable tendency to score either higher on observations or on student surveys and there is preliminary evidence that My Student Survey and Framework for Teaching have potential to serve as complementary measures. Finally, a high degree of correlation exists between multiple survey administrations indicating that survey results are stable across time.

Appendix A – Component relationships Between Danielson and My Student Survey

	<b>Danielson Rubric 2a</b>
<b>My Student Survey Average for Items Related to 2a</b>	.3803 <sup>5</sup> P<.0001 n=195
<ul style="list-style-type: none"> <li>• <b>My teacher shows respect for all students</b></li> <li>• <b>Students in this class show respect for the teacher</b></li> </ul>	

	<b>Danielson Rubric 2b</b>
<b>My Student Survey Average for Items Related to 2b</b>	.4159 <sup>6</sup> P<.0001 n=195
<ul style="list-style-type: none"> <li>• <b>My teacher is excited about the subject</b></li> <li>• <b>My teacher tells us why the things we are learning in class are important</b></li> <li>• <b>My teacher expects me to do my best on assignments</b></li> <li>• <b>My teacher seems to enjoy teaching this class</b></li> </ul>	

	<b>Danielson Rubric 2c</b>
<b>My Student Survey Average for Items Related to 2c</b>	.2343 <sup>7</sup> P<.001 n=195
<ul style="list-style-type: none"> <li>• <b>My teacher has everything ready for the next activity</b></li> </ul>	

<sup>5</sup> The disattenuated correlation for this components is .5846

<sup>6</sup> The disattenuated correlation for this components is .6394

<sup>7</sup> The disattenuated correlation for this components is .3602

	<b>Danielson Rubric 2d</b>
<b>My Student Survey Average for Items Related to 2d</b>	
<ul style="list-style-type: none"> <li>• <b>Students in this class behave the way my teacher wants them to</b></li> <li>• <b>My teacher corrects students when they do not follow the rules of the class</b></li> <li>• <b>My teacher tells the class when we are behaving well</b></li> </ul>	

.2575<sup>8</sup>  
P<.001  
n=195

	<b>Danielson Rubric 3a</b>
<b>My Student Survey Average for Items Related to 3a</b>	
<ul style="list-style-type: none"> <li>• <b>My teacher explains things in a way that is easy for me to understand</b></li> <li>• <b>When teaching us new things in class, my teacher tells us about mistakes that students often make</b></li> <li>• <b>My teacher tells us about the learning goals/objective of the day</b></li> <li>• <b>My teacher explains information in a way that keeps me interested</b></li> </ul>	

.3505<sup>9</sup>  
P<.0001  
n=195

<sup>8</sup> The disattenuated correlation for this components is .3958

<sup>9</sup> The disattenuated correlation for this components is .5388

	Danielson Rubric 3b
<b>My Student Survey Average for Items Related to 3b</b>	
<ul style="list-style-type: none"> <li>• My teacher asks questions in class that make me really think about the information we are learning</li> <li>• My teacher encourages us to ask questions in class</li> <li>• My teacher asks me to explain the answers I give in class</li> <li>• When my teacher asks a question, s/he gives us a few seconds to think before calling on students</li> <li>• When I answer a question wrong in class, my teacher helps me figure out the right answer</li> </ul>	

.2079<sup>10</sup>  
P<.05  
n=195

	Danielson Rubric 3c
<b>My Student Survey Average for Items Related to 3c</b>	
<ul style="list-style-type: none"> <li>• At the end of each lesson, the teacher reviews what we have just learned</li> <li>• We are learning or working during the entire class period</li> <li>• The activities we do in class keep me interested</li> <li>• The activities we do in class help me understand what we are learning</li> </ul>	

.2392<sup>11</sup>  
P<.001  
n=195

<sup>10</sup> The disattenuated correlation for this components is .3196

<sup>11</sup> The disattenuated correlation for this components is .3677

	Danielson Rubric 3d
<b>My Student Survey Average for Items Related to 3d</b>	.2254 <sup>12</sup> P<.05 n=195
<ul style="list-style-type: none"> <li>• My teacher gives us helpful comments (or feedback) on our assignments</li> <li>• My teacher gives me opportunities to show what I know in different ways (tests, projects, presentations, etc.)</li> </ul>	

	Danielson Rubric 3e
<b>My Student Survey Average for Items Related to 3e</b>	.0679* (.1175**) P<.4 n=195
<ul style="list-style-type: none"> <li>• If I do not understand something in class, my teacher explains it in a different way to help me understand**</li> <li>• If I do not understand something in class, my teacher works with me until I understand**</li> <li>• My teacher encourages me to share my ideas or opinions about what we are learning in class</li> </ul>	

<sup>12</sup> The disattenuated correlation for this components is .3465