Teacher Effectiveness Evaluation Model 2015-16 *(Draft H)*

This report describes the Teacher Effectiveness Evaluation Model for 2015-16. This model is made up of four components including the Danielson Framework, Academic Growth, the Student Survey, and the Teacher Reflection. Each component factors into a teacher's final score, albeit with different weighting. The Danielson Framework comprises the majority of the score determination by making up 56% of the total score. The Academic Growth makes up 33% of the total score. The Student Survey makes up only 10% of the total score and the Teacher Reflection is 1% of the total score. Each component is described below and how the points are determined.

Danielson Framework

The Danielson teacher evaluation framework uses 22 criteria nested within four domains. They are: Planning and preparation (N=6); the classroom environment (N=5); instruction (N=5); and professional responsibilities (N=6). Each of the 22 components is scored on a four point rubric:

1 = Unsatisfactory
2 = Basic
3 = Proficient
4 = Distinguished

The maximum number of points possible on the Danielson is 88 points (22 components X 4 pt. rubric).

Academic Growth

In the past, academic growth has been determined by calculating the growth of state standardized scores in English Language Arts (ELA) and Math for grades 3-10 from one year to the next. The Arizona Department of Education determines labels for each school, ranging from A-F, that is based on student academic performance and growth. This approach, however, has limitations in that the state standardized tests in ELA and Math can measure the academic impact of only about a quarter of our teachers (called 'A' teachers). The non-ELA and non-Math teachers (called 'B' teachers) make up the other three-quarters of the teaching core. The 'B' teachers have been assigned growth points in the past based on the school or the district label.

This year, TUSD will make all teachers an 'A' teacher by administering pre-post assessments that are relevant to the course material of each teacher. Two models are presented below to account for the distribution of points for the academic growth part (33%) of the overall teacher model. Model 1 uses established measurement methodology to measure growth over time. Model 2 is not intended to measure academic growth with conventional methods but rather to provide relevant content feedback to teachers through written essays twice during the year. Consensus will need to occur among the different stakeholders about which model will be implemented in 2015-16.

Model is a multiple choice pre-post assessment with a relevant reading passage that can measure academic growth. The components are listed below:

A. Courses: TUSD offers a variety of courses at the middle and high school levels including core academic courses, enrichment courses, and technical courses. These courses have been

grouped into 41 umbrella categories. Each category encompasses multiple courses. For example, Physical Education is a category that includes body conditioning, yoga, tennis, etc.

B. Pre-Post Assessment: The pre-assessment will contain one or two short reading passages and up to 10 multiple choice questions that relate to the passage. Each category will have its own passage that is relevant to the content and the standards of the category. These themes of these passages may be similar across grades but will increase in complexity with each subsequent grade. An example of a theme in history/American government, etc might be a passage reflecting on the concept of what constitutes a human 'right' in modern society. The post-assessment will use the same passage, but the questions may be replaced with parallel questions. Parallel questions are questions of the same difficulty that measure the same concept but do not ask the same question. Parallel questions can be used to measure growth.

C. Development of the pre-post category assessments: Grades K-2 will use the DIBELs assessment and compare the fall results to the spring results. Grades 3 – 12 will use category assessments developed by Curriculum and Instruction Department in conjunction with District teachers in the summer 2015. Teams of teachers from all grades and content areas will be asked to participate in the development of these pre-post assessments. All assessments will be standard's based and aligned to the content of the category. Additionally, our psychometric specialist will work with the district's contracted assessment company to ensure that the pre-test and the post-test are parallel in difficulty. Items will be taken from the assessment company's item bank and/or teachers will develop their own questions. All assessments will be completed prior to the start of the 2015-16 school year.

D. Who will take the assessment: All students in grades K – 2 will take the DIBELs assessment. All students in grades 3 – 5 will take the category assessment. In grades, 6 – 12, a sampling strategy will be implemented so that each teacher will have a minimum of 30 students participating in the pre-post category assessment.

E. When will the assessment be administered: The pre-tests will be administered in the early fall and the post-tests will be administered in mid-spring.

F. Who will score the assessment: The category assessments will be made available on-line through the district's assessment vendor's webpage. For schools lacking the technology infrastructure to test on-line, paper tests will be made available that can be scanned into the assessment company's data base. For grades K-2, teachers will score the DIBELs assessments.

G. Scoring and point allocation: Students growth will be assessed by determining the difference between the pre-test and the post-test. Teachers will receive a 1 (below average growth), a 2 (average growth), or a 3 (above average growth) that will be added to the Teacher Evaluation points total.

Student Survey

The three Student Surveys are: Grades K-2, Grades 3 – 5, and Grades 6 – 12. Using the Tripod Study from Harvard University as the conceptual foundation, these surveys measure 7 classroom climate constructs including: Care, Challenge, Control, Clarify, Captivate, Confer, and Consolidate. Each survey has a different number of total questions. The K-2 Survey has 10 questions, the 3-5 Survey has 20 questions and the 6-12 Survey has 25 questions. Each of these 3 surveys is scored on the a 4-point Likert scale:

1 = Strongly Disagree
2 = Disagree
3 = Agree
4 = Strongly Agree

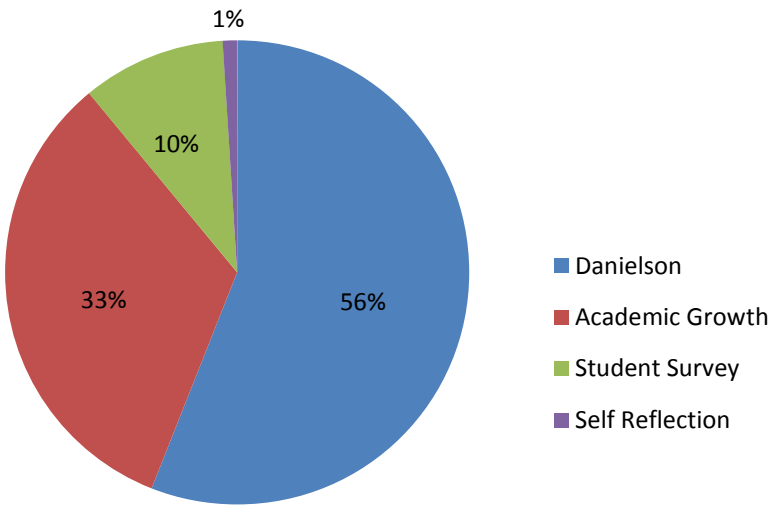
Responses on the Likert scale are averaged and result in an overall score that ranges from 1 to 4. So, regardless of the grade level and/or number of questions, the score will be the averaged number from the responses.

Teacher Self Reflection

The Teacher Self Reflection is completed by the teacher and is scored either 1 or zero depending on whether it was completed or not.

Converting Raw Scores into Weighted Scores

Figure 4. Breakdown by Percent of the Four Components in the Teacher Model



Each component of this model carries a different weight as represented in the pie chart above. For example, the results of the Danielson observations are weighted the most heavily because they represent 56% of the total model. The results from the Danielson observations, therefore, will have the greatest impact on a teacher's overall score. Secondly, the academic growth represents 33% of the total model so that it can impact a teacher's overall score, but not necessarily determine the outcome. The amount of impact from the academic growth is dependent upon how the cut scores are determined. Finally, the results of the Student Survey (10%) and the Self Reflection Survey (1%) each only will have a negligible impact on a teacher's overall score.

To get the ration of the current maximum raw points to desired maximum points, we must divide the desired maximum points by the current raw maximum points. Calculating the ration using scaling factors will produce properly weighted components.

In Tables 1 - 3, the raw maximum points are converted into weighted or desired maximum points using a scaling factor. The scaling factor is derived by dividing the Desired Maximum Points (the weighted percent of each component that adds up to 100) by the Current Maximum Raw Points. The scaling factor, therefore, changes the raw points into the weighted points for each component.

Because the Desired Maximum Points always add up to 100, it does not matter how many raw maximum points are allocated on the Student Survey or the other components. The scaling factor will always change in response to a change in the maximum raw points of each component so that the weight (Desired Maximum Points) remains constant.

Table 1. Grades K-12 Distribution of Points

Component	Current Max Raw Points	Desired Max Points	Scaling Factor*
Danielson	88	56	.636
Academic Growth	3	33	11
Student Survey	4	10	2.50
Teacher Self Reflection	1	1	1
Total	132	100	

** Scaling Factors are derived by dividing the Desired Points by the Maximum Points.*

The following examples show 3 different Grade 4 teachers with three different raw points. Their points are converted using the Scaling Factor Conversion to give the weighted points.

Teacher A – Grade 4

Table 4. Grades 3-5
Calculation of Points of a Teacher Scoring Full Points

Component	Max Raw Points	Scale Conversion	**Weighted Points**
Danielson	88	88 x .636	**56**
Academic Growth	3	3 x 11	**33**
Student Survey	4	4 x 2.5	**10**
Teacher Self Reflection	1	1 x 1	**1**
Total	152		**100**

Teacher B – Grade 4

Table 5. Grades 3-5 Calculation of Points of a Teacher Scoring about Half of the Possible Points			
Component	Max Raw Points	Scale Conversion	**Weighted Points**
Danielson	44	44 x .636	**28**
Academic Growth	1.5	1.5 x 11	**16.5**
Student Survey	2	2 x 2.5	**5**
Teacher Self Reflection	1	1 x 1	**1**
Total	86.5 or **87**		**50**

Teacher C – Grade 4

Table 6. Grades 3-5 Calculation of Points of a Teacher Scoring about Average of the Possible Points			
Component	Max Raw Points	Scale Conversion	**Weighted Points**
Danielson	73	73 x .636	**46**
Academic Growth	2	2 x 11	**22**
Student Survey	3.5	3.5 x 2.5	**9**
Teacher Self Reflection	1	1 x 1	**1**
Total	141		**78**

Cut Scores from 2013-14

The cut scores established for last year's teacher evaluation were:

Ineffective	0 – 39 total points
Developing	40 – 55 total points
Effective	56 – 73 total points
Highly Effective	74 - 100 total points

Based on last year's cuts Teacher A above would be considered "Highly Effective", Teacher B would be considered "Developing", and Teacher C would also be considered "Highly Effective".

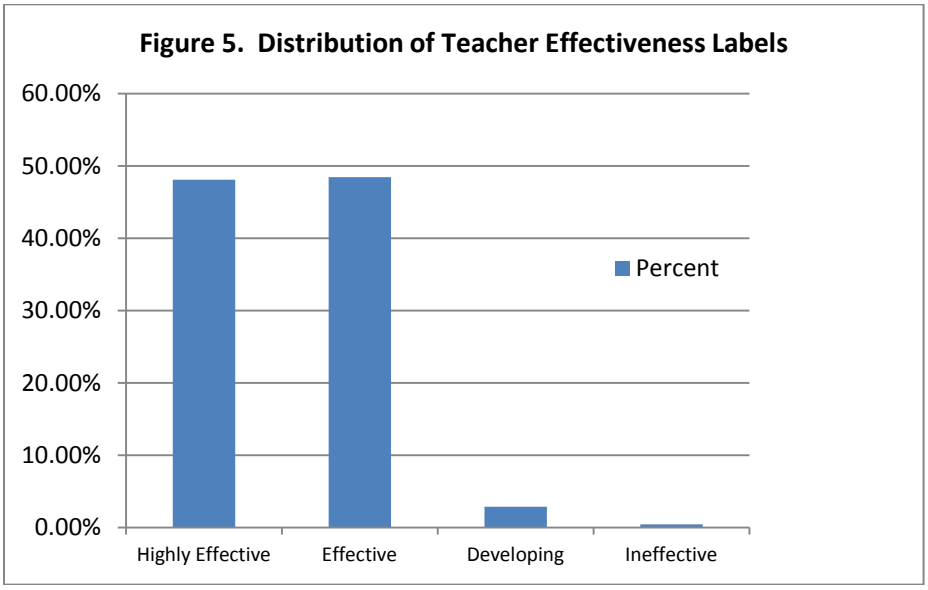
To be considered "Ineffective", a teacher would have to score very low on the Danielson Framework. The weighted percent of the Academic Growth, Student Survey, and the Teacher Self Reflection will have only a modest impact on the overall score. The only way a teacher can score 'ineffective' with the cut scores is to score about 32 points (out of a possible 88) on the Danielson observation. No teacher scored below 39 on the Danielson observation last year (2013-14).

Teacher D – Grade 4

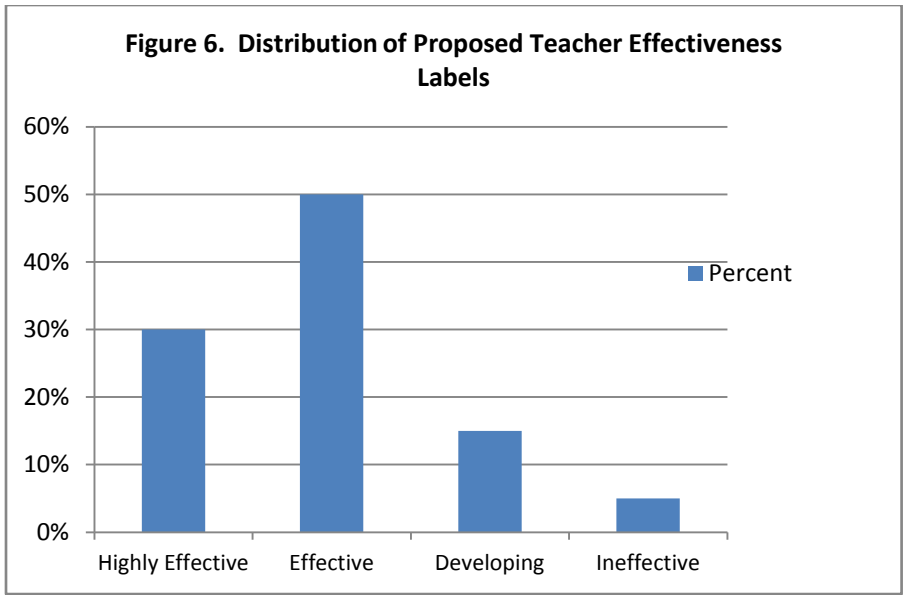
Table 7. Grades 3-5 Calculation of Points of a Teacher Scoring Some of the Possible Points			
Component	Max Raw Points	Scale Conversion	**Weighted Points**
Danielson	32	32 x .636	**20**
Academic Growth	1	1 x 11	**11**
Student Survey	2.75	2.75 x 2.5	**7**
Teacher Self Reflection	1	1 x 1	**1**
Total	102		**39**

An analysis was conducted of the distribution of the teacher effectiveness labels for 2013-14. The graph below reveals that the results were very skewed because the cut scores for effectiveness was low. It is recommended that new cuts are established to provide a more realistic distribution of teacher effectiveness.

Figure 5. Distribution of Teacher Effectiveness Labels



This data suggests that 96.61 percent of all teachers in TUSD were considered either “Effective” or “Highly Effective”. Additionally, this data indicates that only 3.38 percent were considered “Developing” or “Ineffective”. This data calls into question the validity of the Teacher Evaluation Instrument. Choosing different cut scores would serve to reduce the concern that these results are invalid. An appropriate (normal) distribution similar to the one presented below would be more in line psychometric standards and would also provide more discriminating data on teacher performance.



Summary

A number of Teacher Effectiveness models exist that range in analytic sophistication. One model, called "Value Added", takes into account the population of students that a teacher serves. Understanding the effects of certain demographic variables (e.g., SES, ELL, SPED, etc.) allows researchers to quantify and essentially mitigate their effects. Using value added calculations has been referred to as "leveling the playing field". The model is usually based on statistical analyses such as simple multiple regression or Hierarchical Linear Modeling (HLM). These statistical models are predictive in nature. The extent to which a teacher's score is above or below what is predicted defines the teacher's effectiveness. Another type of teacher effectiveness model that is less technical is to use a growth model to compare each student to him/herself over time. Student growth models do not need to remove variance due to demographic effects since each child is being compared to him/herself over time. Most student growth models use multiple measures for pre and post comparisons. Using multiple measures more closely approximates a student's "True score" by reducing the error associated with a single measure.

In summary, measuring teacher effectiveness requires multiple measures, both quantitative and qualitative to capture the range of instructional skills used in teaching and to determine how much students benefit academically from their teachers. For 2015-16, TUSD has chosen to use a simple model to evaluate teacher effectiveness. The majority of the points (56%) will derive from the Danielson observation that is conducted and scored by principals. The Danielson model calls for multiple observations over the course of the year and can be time intensive. The student growth piece has changed in design for next year and now stipulates that all teachers will be designated as 'A' teachers. Measuring student growth for each teacher is challenging because TUSD currently lacks district-developed assessments for each subject, grades 6 – 12 to show evidence of student learning over time. These assessments will be developed with teacher teams to be ready for implementation in 2016-17. In the meantime, two models have therefore been proposed for 2015-16: a pre-post multiple choice test or a series of written essays administered twice a year. The decision will occur in the summer, 2015 as to which model will be implemented. Also, 10% of the teacher evaluation is accounted for by the on-line student survey. This assessment will provide student feedback on the instructional qualities of their teachers. Finally, a reflection survey (1%) is to be filled out by teachers.