

Teacher Incentive Allotment Application

Step Two: Texas Tech Data Validation

OVERVIEW:

The step two process consists of four main data checks:

1. Correlation between teacher observation ratings and teacher student growth ratings
2. Correlation between teacher student growth ratings and value-added measures
3. Degree of inter-rater reliability for observation and teacher student growth ratings
4. Comparison of district designation percentage to overall statewide performance

The purpose of these checks is to verify, through statistical analysis, the reliability and validity of a district's designation system. The approach of the data validation process is to look at a district's system holistically. Each check contributes to the overall validity and reliability of a district's system, and no single check will approve/disapprove the system. The content in this document offers a narrative of the data validation process.

Key Definitions:

- *Correlation coefficient or "r" value* -a statistical measure of the relation between two variables. The values range between -1.0 and 1.0. A correlation of -1.0 shows a perfect negative correlation, while a correlation of +1.0 shows a perfect positive correlation. A correlation of 0.0 shows no linear relationship between the movement of the two variables.
- *Teachers student-growth rating* – District-derived growth rating of student growth for a given teacher. Derived from student growth measures that are integrated with the statewide performance standards.
- *Inter-rater reliability*- the degree of agreement among raters. This indicates how much homogeneity or consensus exists in the ratings given by various appraisers.
- *Proportion of agreement*- the proportion by which two data sets agree based on an assumption. Proportion of agreement goes beyond what correlation coefficient checks, the strength of the relationship between two variables, and checks that the agreed assumption about the two data sets is true.

DATA CHECK #1:

Correlation between teacher observation ratings and teacher student growth ratings

There will be two parts to this check to observe the overall correlation between a teacher's observation rating and the teacher's student growth rating. This check is intended to confirm that teachers who are rated as instructionally effective (i.e., Master, Exemplary, Recognized) are bringing about levels of student growth commensurate with the district designation.

None or almost no evidence	Limited evidence	Some evidence	Substantial evidence
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Data Check	Notes
a) There is a high proportion of agreement between observation ratings of designated teachers and the student growth ratings of designated teachers who used a standardized test as their student growth measure.	This check is based on the assumption that teachers with higher observation ratings will also have higher teacher student growth ratings. The check here is to see the proportion of agreement that this assumption is true.
b) There is a high proportion of agreement between observation ratings of designated teachers and the student growth ratings of designated teachers who did not use a standardized test as their student growth measure.	This check is based on the assumption that teachers with higher observation ratings will also have higher teacher student growth ratings. The check here is to see the proportion of agreement that this assumption is true.

DATA CHECK #2:

Correlation between teacher student growth ratings and value-added measures

This check will consist of two parts to examine the correlation between a district-derived student growth rating and value-added measures created by TTU/SAS. It is intended to confirm that district calculations of student growth are aligned with state-level descriptors of student growth.

None or almost no evidence	Limited evidence	Some evidence	Substantial evidence
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Data Check	Notes
a) District-level frequency and distribution of student growth in eligible STAAR-tested subjects is similar to VAM-based frequency and distribution of student growth for the district in eligible STAAR-tested subjects	This check will be calculated by examining the frequency of designations within a district <i>divided by</i> the frequency of VAM “designation-eligible” teachers taken from the SAS analysis of the same district.
b) District frequency and distribution of all teacher designations (in eligible STAAR-tested subjects and all other eligible teaching assignments) are found in similar proportion to the frequency and distribution of teacher designations found in statewide VAM for eligible STAAR-tested subjects	This check will be calculated by examining the frequency of designations within a district <i>divided by</i> the frequency with which district designation-eligible teachers are found within the state distribution calculated by SAS. In other words, how frequently are a district’s teachers found among the upper third of the statewide growth distribution?

DATA CHECK #3:

Degree of inter-rater reliability for observation and reliability of teacher student growth ratings

This check will consist of four parts to look at the degree of inter-rater reliability and the reliability of teacher student growth ratings. This check is intended to confirm that observation ratings and student growth are determined in a consistent manner across campuses and teaching assignments. This will include a check for skew within and among campuses, as well as a check for skew in teacher observation ratings compared to student growth ratings.

None or almost no evidence	Limited evidence	Some evidence	Substantial evidence
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Data Check
Notes: Student growth and teacher observation data for Master, Exemplary, and Recognized teachers will be analyzed for skew in the distribution of designations across all campuses and teaching assignments. In other words, specific campuses, subjects, or grade levels do not have inflated observation/student growth rating scores for a particular designation group.
a) <u>Across campuses</u> , observation scores are similar within each designation category (Master, Exemplary, Recognized, and eligible-but-not-designated teachers)
b) <u>Across campuses</u> , teacher student growth scores are similar within each designation category (Master, Exemplary, Recognized, and eligible-but-not-designated teachers)
c) <u>Across Assignments</u> , observation scores are similar within each designation category (Master, Exemplary, Recognized, and eligible-but-not-designated teachers)
d) <u>Across Assignments</u> , teacher student growth scores are similar within each designation category (Master, Exemplary, Recognized, and eligible-but-not-designated teachers)

DATA CHECK #4:

Comparison of district designation percentage to overall statewide performance.

This check is intended to confirm that designation rates in each district are aligned with initial (baseline) statewide projections of the proportion of designated teachers in each district.

None or almost no evidence	Limited evidence	Some evidence	Substantial evidence
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Data Check	Notes
a) The proportion of designated teachers in a district is roughly equivalent to other districts in the same Domain 2A accountability rating.	The proportion of designated teachers will be compared at both the campus and district level to determine if skew exists between the number of designated teachers and a district/campus performance level.