

Response to United States Department of Education Clarification Questions on Texas' Growth Model Pilot Proposal

November 12, 2008

Principle 1.2.2 How does the state plan to establish growth targets between grades 8 and 11 and does the assessment system support such an approach?

Students in grade 8 are defined as meeting prediction targets if the predicted scores for those students in grade 11 are at or above the score indicating proficiency. The formula used to make that prediction will be developed empirically, using scores from students in grade 11 in the prior year and history scores for those same students from grade 8. For example, English language arts scores for students in grade 11 in 2008 will be regressed on reading and mathematics scores for those students from grade 8 in 2005. Campus means for the students used in the development of the equations will be campus means from 2005. Then, the equations will be applied to the 2009 grade 8 students' reading and mathematics scores and campus mean reading and mathematics scores to obtain a prediction for the 2009 grade 8 students. Texas' assessment system supports this approach, because the hierarchical regression model proposed by Texas does not assume that the grade 8 and grade 11 scores are on the same measurement scale.

Principle 1.2.2 Please provide additional information to support the model description on pages 11-12 and in table 5 of the proposal that a one-year model is as accurate as a model using multiple years of data. Specifically, please provide any available information on the reliability of the Texas model accurately predict scores two and three years out compared to the more complex model. What are the reliabilities for all relevant subgroups?

Table 1 provides prediction accuracy data for predictions made over one, two, and three years using the Texas model. Data for comparing the Texas model and more complex model predictions are only available for the prediction over one year. Results indicate that prediction accuracy slightly decreases as the number of years in the prediction increases. In particular, the percent accurately predicted to meet the standard in reading/English language arts is the same for predictions over one, two, and three years. The percent accurately predicted to not meet the standard dropped by one percentage point, from 2% over one year to 1% over two and three years. Results for mathematics were similar. The percent accurately predicted to meet the standard in mathematics dropped by one percentage point (from 73% to 72%) when the number of years in the prediction increased from one to two. When the number of years increased from one to three, the prediction accuracy in mathematics dropped three percentage points (from 73% to 70%). The percent accurately predicted to not meet the standard in mathematics dropped by one percentage point (from 13% to 12%) when the number of years in the prediction increased from one to two. When the number of years increased from one to

three, the prediction accuracy for students predicted to not meet the standard remained the same (13%).

Table 1. Prediction Accuracy for Predictions Over 1, 2, and 3 Years

Years in Prediction	PREDICTION GRADES AND SUBJECT	TEXAS MODEL			MORE COMPLEX MODEL		
		N	Perfect Agreement Met Standard	Perfect Agreement Did Not Meet Standard	N	Perfect Agreement Met Standard	Perfect Agreement Did Not Meet Standard
1	Reading Grade 7 in 2007 Predicted to Grade 8 in 2008	270,700	94%	2%	269,015	94%	2%
1	English Language Arts Grade 10 in 2007 Predicted to Grade 11 in 2008	222,603	93%	1%	225,923	92%	3%
1	Mathematics Grade 7 in 2007 Predicted to Grade 8 in 2008	269,675	73%	13%	267,540	73%	14%
1	Mathematics Grade 10 in 2007 Predicted to Grade 11 in 2008	224,341	79%	10%	228,110	78%	11%
2	Reading Grade 6 in 2006 Predicted to Grade 8 in 2008	255,654	94%	1%	Data Not Available	Data Not Available	Data Not Available
3	Reading Grade 5 in 2005 Predicted to Grade 8 in 2008	244,053	94%	1%	Data Not Available	Data Not Available	Data Not Available
2	Mathematics Grade 6 in 2006 Predicted to Grade 8 in 2008	256,043	72%	12%	Data Not Available	Data Not Available	Data Not Available
3	Mathematics Grade 5 in 2005 Predicted to Grade 8 in 2008	245,352	70%	13%	Data Not Available	Data Not Available	Data Not Available

Reliabilities for all relevant groups of students are presented in Appendix A. In general, results illustrate that prediction accuracy does not vary much for the different groups with the exception of the limited English proficiency (LEP) and special education (SP ED) groups. The total percent of accurate predictions in reading drops for the LEP group from 81% to 71% as the number of years in the prediction increases from one to three years. In mathematics, the total percent of accurate predictions drops for the LEP group from 75% to 66% as the prediction increases from one to three years. For the SPED

group, the total percent of accurate predictions in reading drops from 89% to 77% as the number of years in the prediction increases from one to three years. In mathematics, the total percent of accurate predictions drops for the SPED group from 79% to 68% as the prediction increases from one to three years.

Since prediction accuracy dropped more for the LEP and SPED groups over time, an evaluation of the types of misclassifications for these groups was conducted. For the LEP group, the type of the misclassification differs for the two subjects. For reading, LEP students are more often predicted to meet the standard when they actually do not meet the standard. In other words, LEP students often underperformed in reading assessments relative to their predictions. For example, 19% of the 2005 grade 5 LEP students were predicted to meet the standard in reading in grade 8 in 2008 and actually did not meet the standard. In contrast, only 10% of the 2005 grade 5 LEP students predicted to not meet the reading standard in grade 8 in 2008 actually met the standard. In mathematics, the misclassification was more often due to students performing better than their predictions. For example, 7% of the 2005 grade 5 LEP students were predicted to meet the mathematics standard in grade 8 in 2008 and actually did not. In contrast, 27% of the 2005 grade 5 LEP students predicted to not meet the standard in grade 8 in 2008 actually met the mathematics standard.

For the SPED group, the direction of the misclassification is mostly the same for the two subjects. SPED students tend to perform better than their predictions. For reading, SPED students are more often predicted to not meet the standard when they actually do meet the standard. For example, 13% of the 2005 grade 5 SPED students were predicted to not meet the reading standard in grade 8 in 2008 and actually did meet the standard. In contrast, 10% of the 2005 grade 5 SPED students predicted to meet the reading standard in grade 8 in 2008 actually did not meet the standard. In mathematics, the discrepancy in misclassification was greater and students more often outperformed their predictions. For example, 25% of the 2005 grade 5 SPED students were predicted to not meet the mathematics standard in grade 8 in 2008 and actually did. In contrast, 8% of the 2005 grade 5 SPED students predicted to meet the standard in grade 8 in 2008 actually did not meet the mathematics standard in 2008.

In sum, the two groups of students for whom prediction accuracy drops the most as the number of years to the prediction increases are the LEP and SPED groups. LEP students tended to perform worse than their predictions in reading and better than their predictions in mathematics. Students in the SPED group tended to perform better than their predictions in both reading and mathematics.

Principle 1.3.1 Please clarify whether Texas intends to apply a confidence interval to the growth model calculations for small schools, as noted on page 18.

Texas does not propose to apply a confidence interval to any student prediction. Page 18 of the initial Texas prediction model proposal describes the process for which adequate yearly progress (AYP) decisions are made for small districts and campuses. Approved in 2004, the Texas Consolidated Accountability Workbook describes the application of a

confidence interval as one of five methods for evaluating the assessment measure for small districts and campuses. The addition of the prediction model does not change these methods except that the percent of students compared with the AYP targets is the percent of students meeting the standard plus the percent predicted to pass.

Principle 2.1.1 Please provide additional evidence that the assessment system is stable enough to use prior year scores as predictors for the growth model, as explained on pages 27-28.

Texas will develop prediction equations in one year and apply them the next year. To evaluate the stability of growth formulas over a year, Texas conducted a study in which the prediction formulas for two different years (2007 and 2008) were applied to student scores in 2008. Table 2 illustrates those mean differences. In Table 2, the mean difference in prediction represents the mean difference for student predictions using the 2008 equations minus the student predictions using the 2007 equations. The standard deviations represent the standard deviations of the differences. Mean difference in the scale score predictions for reading were all were positive indicating that predictions were higher when the 2008 equations were used. In addition the mean differences in reading were found to be small, with all mean differences smaller than 30 scale scores.

Mean differences were slightly larger for mathematics with differences smaller than 100 scale scores except for the Asian group that had a mean prediction that was 123.45 scale scores higher when the 2008 equations were used than when the 2007 equations were used.

Table 1. Stability of 2008 Predictions Using Equations from 2007 and 2008

Prediction Grades and Subject	Group	Number of Students	Mean Difference in Prediction	Standard Deviation
Grade 7 to 8 Reading	Total	316,574	27.43	2.88
	Ethnicity			
	Native American	1,190	27.83	2.76
	Asian	10,739	27.81	3.07
	African American	44,711	27.02	2.77
	Hispanic	143,816	26.85	2.73
	White	115,892	28.28	2.88
	Economically Disadvantaged			
	No	150,089	28.20	2.87
	Yes	166,134	26.71	2.71
	Limited English Proficiency			
	No	293,217	27.60	2.84
	Yes	22,928	25.33	2.52
	Special Education			
No	292,893	27.53	2.85	
Yes	23,312	26.25	3.03	
Grade 7 to 8 Mathematics	Total	316,809	68.75	59.61
	Ethnicity			

	Native American	1,193	72.70	55.64
	Asian	10,776	123.45	62.61
	African American	44,697	44.49	52.86
	Hispanic	143,983	54.93	54.28
	White	115,935	90.23	57.98
	Economically Disadvantaged			
	No	150,155	89.96	59.21
	Yes	166,300	49.68	53.12
	Limited English Proficiency			
	No	293,303	72.47	58.88
	Yes	23,075	22.20	47.78
	Special Education			
	No	293,144	73.49	57.82
	Yes	23,293	9.61	48.97

Principle 2.1.1 Please provide additional documentation of the accuracy of growth projections two and three years out when the model uses only one year of data.

See Table 1 and Appendix A for additional documentation of prediction accuracy for all students and for groups of students when predictions are made over one, two, and three years.

Principle 2.1.1 Please indicate whether the proposed growth model includes any predictor variables other than a student’s reading and mathematics score and the campus-level mean scores for reading and mathematics.

Only the four variables listed in the question are included in the predictions.

Principle 4.1.1 Please clarify how growth model data will be attributed to AYP purposes when a student moves from one school to another or one district to another.

Texas will include student predictions the same way the proficient results are included in the AYP calculations for students who move between schools or districts. Both proficient and prediction results for students enrolled in the district on the fall enrollment snapshot date will be considered in district AYP evaluations. Both proficient and prediction results for students enrolled in the campus on the fall enrollment snapshot date will be considered in campus AYP evaluations. The fall enrollment snapshot date is defined in the annual Public Education Information Management System (PEIMS) Data Standards. Fall enrollment records submitted by each district represent students enrolled in the district on the snapshot date. The snapshot date is typically the last Friday in October. The fall enrollment snapshot date is the date the enrollment count is taken for the National Center for Education Statistics (NCES) Common Core of Data (CCD).

Principle 4.1.1 Please provide evidence for the percentage of students, by subgroup, that have two assessment scores in the current year; please explain how Texas will mitigate against any possible bias in the model.

The percents of students with two assessment scores in 2008 are presented in Table 3. Results indicate that 98% of students overall had sufficient data in 2008 to obtain a prediction in reading/English language arts and 97% had sufficient data to obtain a prediction in mathematics. Results for AYP reporting groups indicate that for almost all AYP groups in 2008, cross-subject match rates were high, exceeding 90%. Lower match rates were found for student groups with missing indicator values and LEP students in mathematics. The number of students with missing indicator values is small relative to the student population (less than 0.2% in all cases), so the lower match rate for these groups does not affect many students. For LEP students, the match rate for mathematics was just slightly below 90% at 89.3%.

The match rates using data from 2008 were higher than the match rates using data from the pilot study in 2007 (see Table 2 in the original proposal on page 9). In particular, the reading match rate for students in special education in 2008 was 91%. In analyses with the 2007 pilot study data, the reading match rate for students in special education was 79%. The most likely reason explaining the higher match rate in 2008 is that the pilot data were from 2007, a year when the alternate assessment available for students with disabilities was the State-Developed Alternative Assessment (SDAA II), which has been replaced by the TAKS (Accommodated), TAKS-M, and TAKS-Alt tests in the 2007-2008 school year. Students in special education in 2008 did not have the option of taking the SDAA II. The shift to the new set of alternate assessments increased the number of students taking TAKS, TAKS Accommodated, and LAT versions of the TAKS, resulting in the higher match rates. It is anticipated that the inclusion of all alternate assessments in the growth calculations in future years will significantly improve match rates for students in special education.

Table 3. Percents of Students with Two Assessment Scores in 2008

GROUP		READING/ENGLISH LANGUAGE ARTS			MATHEMATICS		
		Number Tested	Percent Tested	Percent Matched	Number Tested	Percent Tested	Percent Matched
TOTAL		2,250,386	100.0	98.0	2,264,532	100.0	97.4
GENDER	MALE	1,135,525	50.5	97.9	1,144,734	50.6	97.1
	FEMALE	1,113,776	49.5	98.1	1,118,475	49.4	97.7
	NO INFORMATION PROVIDED	1,085	0.0	75.7	1,323	0.1	62.1
ETHNICITY	NATIVE AMERICAN	7,972	0.4	97.9	8,071	0.4	96.7
	ASIAN	78,465	3.5	99.4	80,944	3.6	96.3
	AFRICAN AMERICAN	313,037	13.9	97.8	312,456	13.8	98.0
	HISPANIC	1,035,519	46.0	97.5	1,048,081	46.3	96.4
	WHITE	814,027	36.2	98.6	813,383	35.9	98.7
	NO INFORMATION PROVIDED	1,597	0.1	60.1	1,597	0.1	60.1
ECONOMIC DISADVAN.	YES	1,201,997	53.4	97.4	1,213,161	53.6	96.6
	NO	1,046,245	46.5	98.7	1,048,805	46.3	98.5
	NO INFORMATION	2,144	0.1	78.0	2,566	0.1	65.2

	PROVIDED						
LIMITED ENGLISH PROFICIENT	LEP	286,726	12.7	94.8	304,276	13.4	89.3
	NON-LEP	1,961,084	87.1	98.5	1,957,412	86.4	98.7
	NO INFORMATION PROVIDED	2,576	0.1	80.6	2,844	0.1	73.0
SPECIAL EDUCATION	YES	160,393	7.1	91.0	161,187	7.1	90.6
	NO	2,087,552	92.8	98.6	2,100,428	92.8	98.0
	NO INFORMATION PROVIDED	2,441	0.1	82.5	2,917	0.1	69.0

Since not all students will be used to generate the prediction equations and not all students will have sufficient data to make predictions, bias in the model is possible. Texas implemented and will continue to implement annually three techniques to investigate and mitigate against any possible bias in the model. The first technique was to investigate the potential for bias due to students with missing history data. Students without scale scores in both reading and mathematics in past years are students who will not be included in the development of prediction equations. According to Table 4 in the full proposal, the two groups of students with history data that were missing more than for other groups were students in special education (SPED) and students with limited English proficiency (LEP). To investigate potential bias due to these students having missing history data, the cohort of students used to develop the 2008 prediction equations for grade 5 was studied. This cohort was chosen because it represented predictions made over three years, the maximum number of years proposed. The study involved the 2008 grade 8 students with history data in 2005. The history data for students with grade 8 scale scores in 2008 and grade 5 scale scores in 2005 were used to empirically develop the prediction equations. To evaluate potential bias in the equation development process for these students, the study compared features of those students with sufficient TAKS data in special education and those students without sufficient TAKS data in special education for inclusion in the prediction equation development. The study then repeated the process focusing on LEP students. Overall, study results indicated that students in these groups with missing history data had similar performance levels and ethnic representation as did students in these groups with sufficient data for inclusion. The study results are summarized below.

Special Education

- The total number of non-matching SPED students was 19,290.
- A total of 3,857 SPED students with a valid reading scale score in 2008 had a valid reading scale score in 2005, but not a valid math scale score in 2005. The loss due to a missing math score represents about a 6% loss for this student group.
- 10,356 (53.7%) of the **non-matched** SPED students met the TAKS standard. Of all SPED students **statewide**, 60% met the TAKS standard.
- 1,563 (8.1%) of the **non-matching** SPED students were Commended. Of all SPED students **statewide**, 12% were commended.
- The ethnic distribution of the non-matching reading SPED students was similar to the state percentages. **Non-matching:** Hispanic 43.6%, African American 19.3%, White 35.7%. **Statewide:** Hispanic 41.5%, African American 18.6%, White 38.3%.

- 13,587 (70.4%) of the non-matching SPED students had a history reading score code in grade 5 indicating that the student took the previous assessment for students with disabilities, the SDAA, in grade 5. 12,831 (66.5%) of the non-matching SPED students had a history math score code indicating the same.

Limited English Proficiency

- The total number of non-matching LEP students was 12,668.
- 6,841 (54.0%) of the **non-matched** LEP students met the TAKS standard. Of all LEP students **statewide**, 58% met the TAKS standard.
- 917 (7.2%) of the **non-matching** LEP students were commended. Of all LEP students **statewide**, 8% were commended.
- 11,784 (93%) of the **non-matching** LEP students were Hispanic. Of all LEP students **statewide**, 94% were Hispanic.
- 2,890 (22.8%) of the non-matching LEP students had a history reading score code in grade 5 indicating that the student took the previous assessment for students with disabilities, the SDAA, in grade 5. 2,578 (20.4%) of the non-matching LEP students had a history math score code indicating the same.
- 3,245 (25.6%) of the non-matching LEP students had a history reading test version in the Spanish language. 3,268 (25.8%) of the non-matching LEP students had a history math test version in the Spanish language.

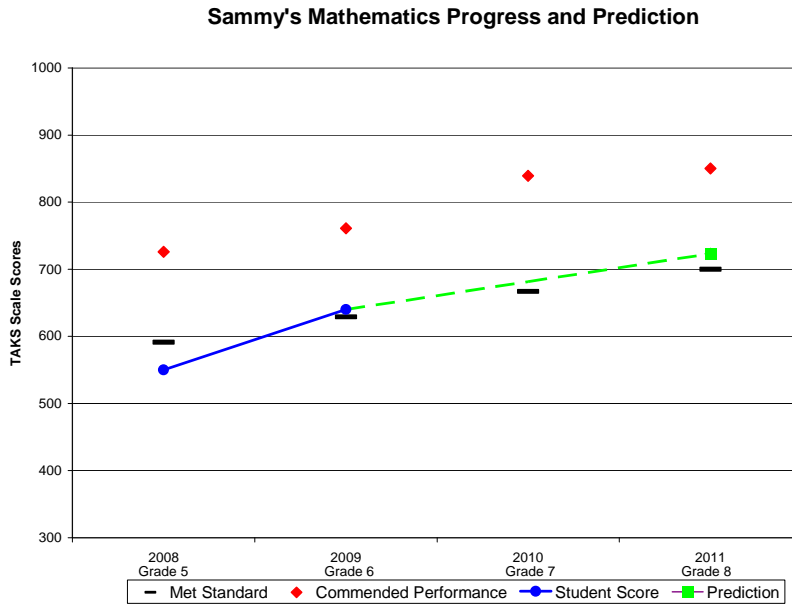
The second technique Texas employed and will continue to employ annually to help mitigate against possible bias in the models will be to update prediction equations annually. Results comparing the percents of students with sufficient data to make predications in 2007 compared with 2008 indicate that, as expected, the percents of students with sufficient data for making predictions is increasing, especially for students in special education. Therefore, by updating the prediction equations each year using the most current data and using those updated equations in the following year, Texas will help mitigate against bias introduced by students without valid reading and mathematics scale scores in the current year.

The third technique Texas will employ will be annual monitoring of match rates for formula development and for formula application. Each year, as Texas updates the regression equations, the match rates for formula development and application will be calculated and compared with match rates from prior year. If match rates do not continue to increase, as expected, more in-depth analyses will be conducted to investigate which students are excluded and features of the excluded students. This more in-depth analysis will help identify potential bias in the prediction model.

Principle 5.2.1 Please provide additional information about how growth will be reported to parents and the public.

Texas plans to report growth information in many ways to reach all stakeholders. For instance, on students' confidential student report, an indicator about whether or not students are predicted to meet the standard at the prediction grade will be reported. This will be reported using a yes or no. Then, a separate report is planned in which student

data over multiple years will be reported, growth will be explained, and a graph will be displayed. The graph will facilitate parents' understanding of three pieces of information—student scale scores in any one year relative to the academic achievement standards, scale scores over multiple years, and predictions. An example graph is shown below.



For districts, background information, training materials, and an interpretive guide will be provided. In addition, the methods used to calculate the growth measure and applicable formulas will be posted annually on the agency website ahead of reporting the measure.

Principle 5.3.2 Please provide further rationale for why students taking the general assessment in different languages across years cannot be included in the growth model calculations. How will such students be included in the growth model?

Students taking the general assessment in different languages across years can be included in the prediction model calculations, as long as the student takes the assessment in both reading/English language arts and mathematics in the same language. For example, a student who tests in Spanish in grade 4 in both reading and mathematics will have a prediction and that prediction will be made using the Spanish equations. If that student tests in English in grade 5 in both reading and mathematics, that student will again receive a prediction, but the prediction in grade 5 will be made using the English equations. Students taking the reading/English language arts and mathematics assessments in different languages in the same year are the students for whom predictions will not be made. The reason these students will not have predictions is that to develop a stable prediction equation, a sufficient number of students is needed with the predictor variables and predicted variables. The numbers of students who test in different languages in the same year is insufficient to develop stable prediction equations. These students will be removed from the prediction equation. They will not receive a prediction. For AYP calculations, these students will be included based on their status performance.

Principle 5.3.2 Please provide further information about the various tests used in the Texas assessment system, particularly distinctions between the TAKS and TAKS Accommodated.

Further information about all Texas assessments is provided in Appendix B. Distinctions between TAKS and TAKS Accommodated are explained in the appendix. As a summary, TAKS is the primary state-mandated assessment. First administered in spring 2003, TAKS is administered to students in mathematics at grades 3–10 and exit level; in reading at grades 3–9; in writing at grades 4 and 7; in English language arts (ELA) at grade 10 and exit level; in science at grades 5, 8, and 10 and exit level; and in social studies at grades 8 and 10 and exit level. Spanish versions of TAKS are available at grades 3–6. Linguistically accommodated versions of TAKS mathematics and reading assessments are available for eligible English language learners at grades 3–8 and 10. Linguistically accommodated versions of TAKS science assessments at grades 5, 8, and 10 became available for the first time in spring 2008. TAKS includes TAKS (Accommodated) for students served by special education who meet eligibility requirements for specific accommodations. In 2007–2008 the TAKS (Accommodated) was available for all English and Spanish TAKS tests, including retest opportunities for the Student Success Initiative (SSI) grades and subjects, grades 3, 5, and 8. Retest opportunities for exit level assessments were offered beginning in July 2008. The TAKS, linguistically accommodated versions of TAKS, and TAKS Accommodated assessments are reported on the same measurement scale. The academic achievement standards required for proficiency are also the same for each of these assessments.

Impact of Prediction Model on AYP Calculations in 2008 and 2009

Since the submission of the initial Texas prediction model proposal on October 15, 2008, the state has been able to evaluate the impact of including a prediction measure into AYP calculations. The analyses included the calculation of a prediction for all students taking TAKS, a linguistically accommodated version of TAKS, or TAKS Accommodated in 2008. For each student with sufficient data for a prediction, an indicator was calculated, such that the indicator was 1 if the student was predicted to meet or exceed the academic achievement standard in the prediction grade and a 0 if the student was predicted to score below the academic achievement standard in the prediction equation. For students in grades 3, 5, and 8, students' primary administration and first retest were included, as these scores are the scores used in AYP calculations in 2008. Predictions for students with a retest were made using the highest scale scores in each subject area. The 2008 AYP calculations were then repeated with the prediction information included in the calculations as proposed. Three sets of data were generated—numbers and percents of districts and campuses meeting AYP in 2008 without prediction information included, numbers and percents of districts and campuses meeting AYP in 2008 with predictions included, and numbers and percents of districts and campuses meeting AYP using 2009 AYP targets with predictions included.

Results indicated that according to the preliminary 2008 results without including the proposed prediction measure, 66% of districts and 75% of campuses met AYP in 2008.

When the prediction measure was added to the AYP calculations, 77% of districts and 80% of campuses would have met AYP. The impact of adding the prediction equations was that 136 districts (11%) and 411 campuses (5%) would have met AYP due to the prediction model. When the 2009 AYP targets were applied to the 2008 AYP calculations with predictions included, 68% of districts and 77% of campuses would be expected to meet AYP.

USDE Growth Model Proposal: 2008 AYP Impact Data

District AYP Results

AYP Status	Preliminary 2008 Results	
Meets AYP	816	66%
Missed AYP	399	32%
Not Evaluated	14	1%
TOTAL	1,229	100%

2008 w/ Predicted Growth		Change	2009 w/ Predicted Growth *		Change
952	77%	136	833	68%	-119
263	21%	-136	382	31%	119
14	1%	0	14	1%	0
1,229	100%	0	1,229	100%	0

Campus AYP Results (Regular and Charter)

AYP Status	Preliminary 2008 Results	
Meets AYP	6,122	75%
Missed AYP	1,160	14%
Not Evaluated	913	11%
TOTAL	8,195	100%

2008 w/ Predicted Growth		Change	2009 w/ Predicted Growth *		Change
6,533	80%	411	6,272	77%	-261
749	9%	-411	1010	12%	261
913	11%	0	913	11%	0
8,195	100%	0	8,195	100%	0

* The 2009 AYP targets increase to 67% in Reading/English Language Arts, and 58% in Mathematics compared to 60% and 50%, respectively, in 2008.

Updates to Original Proposal

Since the original proposal was submitted, a few incorrect terms were noticed and corrected. The following changes were made to the original proposal, and the revised proposal with the updates is attached.

1. In Table 7 (page 14), the words “level” and “levels” were changed to “sub-level” and “sub-levels” in the Progress Target column.
2. In Table A1 (page 29), the column title, “Percent Variance Accounted for by Both Predictors” was changed to “Percent Variance Accounted for by Predictors.”
3. In Table A3 (page 29), the last two row labels were switched. The third row label is now “2008 Grade 11 English Language Arts” and the fourth row label is now “2008 Grade 11 Mathematics.”

Appendix A

Grade and Subject (Grade Predicted From and To)	Group	N	Total Prediction Accuracy		Accurate Classification		Misclassification	
			Percent Accurate	Percent Inaccurate	Did Not Meet Standard	Met Standard	Met Standard When Predicted Did Not Meet Standard	Did Not Meet Standard When Predicted Met Standard
Grade 7 Reading (7 to 8)	Total	271344	96%	4%	2%	94%	1%	3%
	Ethnicity							
	Native American	863	97%	3%	1%	97%	1%	2%
	Asian	9499	99%	1%	< 1%	98%	< 1%	1%
	African American	36820	93%	7%	3%	91%	2%	5%
	Hispanic	119213	94%	6%	2%	92%	1%	4%
	White	104902	98%	2%	< 1%	98%	< 1%	2%
	Economically Disadvantaged							
	No	134900	98%	2%	1%	97%	< 1%	2%
	Yes	136444	94%	6%	3%	91%	2%	5%
	Limited English Proficiency							
	No	257982	96%	4%	1%	95%	1%	3%
	Yes	13362	81%	19%	14%	67%	6%	13%
	Special Education							
	No	263245	96%	4%	2%	94%	1%	3%
	Yes	7908	89%	11%	5%	85%	3%	8%

Grade and Subject (Grade Predicted From and To)	Group	N	Total Prediction Accuracy		Accurate Classification		Misclassification	
			Percent Accurate	Percent Inaccurate	Did Not Meet Standard	Met Standard	Met Standard When Predicted Did Not Meet Standard	Did Not Meet Standard When Predicted Met Standard
Grade 7 Mathematics (7 to 8)	Total	263430	86%	14%	14%	72%	8%	6%
	Ethnicity							
	Native American	830	86%	14%	8%	78%	7%	7%
	Asian	9267	95%	5%	3%	92%	3%	2%
	African American	35551	80%	20%	24%	56%	11%	8%
	Hispanic	115280	82%	18%	19%	64%	11%	7%
	White	102461	90%	10%	6%	84%	5%	5%
	Economically Disadvantaged							
	No	131708	90%	10%	7%	83%	5%	5%
	Yes	131722	81%	19%	20%	61%	11%	7%
	Limited English Proficiency							
	No	250698	86%	14%	12%	74%	8%	6%
	Yes	12732	75%	25%	41%	34%	19%	6%
	Special Education							
	No	255716	86%	14%	13%	72%	8%	6%
	Yes	7537	79%	21%	30%	49%	14%	8%

Grade and Subject (Grade Predicted From and To)	Group	N	Total Prediction Accuracy		Accurate Classification		Misclassification	
			Percent Accurate	Percent Inaccurate	Did Not Meet Standard	Met Standard	Met Standard When Predicted Did Not Meet Standard	Did Not Meet Standard When Predicted Met Standard
Grade 6 Reading (6 to 8)	Total	255654	95%	5%	1%	94%	2%	3%
	Ethnicity							
	Native American	808	97%	3%	1%	96%	1%	1%
	Asian	8523	99%	1%	< 1%	98%	< 1%	1%
	African American	34341	93%	7%	2%	90%	2%	5%
	Hispanic	112808	93%	7%	2%	91%	2%	4%
	White	99153	97%	3%	< 1%	97%	1%	2%
	Economically Disadvantaged							
	No	130502	97%	3%	< 1%	97%	1%	2%
	Yes	125152	93%	7%	2%	90%	2%	5%
	Limited English Proficiency							
	No	246667	96%	4%	1%	95%	1%	3%
	Yes	8987	72%	28%	17%	55%	11%	16%
	Special Education							
	No	248402	96%	4%	1%	94%	1%	3%
	Yes	7179	77%	23%	8%	69%	15%	7%

Grade and Subject (Grade Predicted From and To)	Group	N	Total Prediction Accuracy		Accurate Classification		Misclassification	
			Percent Accurate	Percent Inaccurate	Did Not Meet Standard	Met Standard	Met Standard When Predicted Did Not Meet Standard	Did Not Meet Standard When Predicted Met Standard
Grade 6 Mathematics (6 to 8)	Total	256043	84%	16%	12%	72%	8%	8%
	Ethnicity							
	Native American	814	84%	16%	9%	75%	8%	8%
	Asian	8567	94%	6%	2%	92%	3%	3%
	African American	34218	79%	21%	21%	58%	10%	11%
	Hispanic	113271	81%	19%	17%	64%	10%	9%
	White	99153	90%	10%	5%	85%	4%	6%
	Economically Disadvantaged							
	No	130512	89%	11%	6%	83%	5%	6%
	Yes	125531	79%	21%	18%	61%	11%	10%
	Limited English Proficiency							
	No	246563	85%	15%	11%	74%	7%	8%
	Yes	9480	70%	30%	49%	22%	23%	7%
	Special Education							
	No	248099	85%	15%	11%	74%	7%	8%
	Yes	7870	68%	32%	36%	32%	25%	8%

Grade and Subject (Grade Predicted From and To)	Group	N	Total Prediction Accuracy		Accurate Classification		Misclassification	
			Percent Accurate	Percent Inaccurate	Did Not Meet Standard	Met Standard	Met Standard When Predicted Did Not Meet Standard	Did Not Meet Standard When Predicted Met Standard
Grade 5 Reading (5 to 8)	Total	244053	95%	5%	1%	94%	2%	3%
	Ethnicity							
	Native American	758	97%	3%	1%	97%	1%	2%
	Asian	7724	99%	1%	< 1%	99%	< 1%	1%
	African American	32226	92%	8%	2%	90%	3%	5%
	Hispanic	108851	93%	7%	2%	91%	2%	5%
	White	94475	97%	3%	<1%	97%	1%	2%
	Economically Disadvantaged							
	No	124267	97%	3%	< 1%	97%	1%	2%
	Yes	119786	92%	8%	2%	90%	3%	5%
	Limited English Proficiency							
	No	235949	96%	4%	1%	95%	1%	3%
	Yes	8104	71%	29%	15%	57%	10%	19%
	Special Education							
	No	236746	96%	4%	1%	94%	1%	3%
	Yes	7238	77%	23%	10%	67%	13%	10%

Grade and Subject (Grade Predicted From and To)	Group	N	Total Prediction Accuracy		Accurate Classification		Misclassification	
			Percent Accurate	Percent Inaccurate	Did Not Meet Standard	Met Standard	Met Standard When Predicted Did Not Meet Standard	Did Not Meet Standard When Predicted Met Standard
Grade 5 Mathematics (5 to 8)	Total	245352	82%	18%	13%	70%	10%	8%
	Ethnicity							
	Native American	770	83%	17%	9%	75%	9%	8%
	Asian	7777	93%	7%	3%	90%	5%	2%
	African American	32171	75%	25%	22%	53%	15%	10%
	Hispanic	109524	78%	22%	17%	61%	13%	9%
	White	95091	89%	11%	5%	84%	6%	6%
	Economically Disadvantaged							
	No	124934	88%	12%	6%	81%	6%	6%
	Yes	120418	77%	23%	19%	58%	14%	9%
	Limited English Proficiency							
	No	236871	83%	17%	11%	72%	10%	8%
	Yes	8481	66%	34%	48%	18%	27%	7%
	Special Education							
	No	237327	73%	17%	12%	71%	10%	8%
	Yes	7952	68%	32%	40%	28%	25%	8%

Appendix B.

SEE TECHNICAL DIGEST CHAPTER 1 ATTACHED