

Texas Projection Measure (TPM) Questions and Answers

September 24, 2010

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Texas Projection Measure (TPM) Questions and Answers September 24, 2010

Texas Projection Measure

1. What is the Texas Projection Measure (TPM)?

The TPM is an estimate of whether a student is likely to meet the standard (pass) and/or achieve commended performance (obtain the highest performance level) on the Texas Assessment of Knowledge and Skills (TAKS) tests at a future grade.

Background:

This measure is based on (1) a student's current and prior-year scores on TAKS and (2) the TAKS scores of other students in the campus that a student attends. Projections are generated using a statistical procedure known as regression. Regression models are commonly used to make estimations in many areas such as economics, finance, and health fields. General information about the TPM is available at: <http://www.tea.state.tx.us/student.assessment/taks/tpm/>.

2. In what other fields are regression models used to make predictions?

Regression modeling is a common statistical procedure that is used to make predictions in many different fields. For example, political scientists use regression to predict election results, businesses use regression to forecast sales when determining cash flow, the medical field uses regression to determine the effectiveness of new drugs, school districts use regression to project enrollment for funding purposes, and insurance companies use regression to compile actuarial tables.

3. Does TPM change a student's passing status on TAKS?

No. TPM results are not a substitute measure for whether or not a student has passed TAKS in a given year. The TPM scores are not meant to take the place of TAKS scores. Students receive TPM scores ***in addition to*** their TAKS scores.

Background:

TPM projection information is sent to individual students on their Confidential Student Report (CSR) along with their TAKS scores. Sample CSRs are found at: <http://www.tea.state.tx.us/student.assessment/explainresults/>. Interpretive information is provided to parents on the *Understanding the Confidential Student Report—Texas Projection Measure*, which can be found at: <http://www.tea.state.tx.us/student.assessment/taks/csr-tpm/>. Additionally, educators are provided additional explanatory information when they receive their students' reports, examples of which can be found at: <http://www.tea.state.tx.us/student.assessment/taks/tpm/BLMasterGuide2010.pdf>

4. Why did Texas develop and implement a measure of student progress?

The TPM was developed to meet state legislative requirements and to provide additional information about student achievement.

Background:

In order to meet requirements of state law (House Bill 1, Senate Bill 1031, and House Bill 3), Texas developed and implemented a measure of expected annual improvement in student achievement called the Texas Projection Measure (TPM).

In addition, TEA developed this measure of expected annual improvement in student achievement so campuses and school districts could get credit in the state and federal accountability systems for students whose most recent test scores would indicate that they will pass in the future, but who are not yet meeting the passing standard. The measure is designed to credit the hard work of teachers and campuses with students who, at the end of the year, have demonstrated knowledge of sufficient grade-level content to position them for passing in a future year.

5. Is the TPM a growth measure?

Actual student growth is used in developing the projection equations. However, the TPM reports a student's projected performance at a future grade so it is not a direct measure of student growth. Therefore, the TPM is more accurately classified as a projection measure.

Background:

In developing the TPM equations, the growth of prior student cohorts is used to estimate the relation between students' current and future scores. For example, the projections from grade 4 to grade 5 reading in 2010 are based on the growth of Texas students from grade 4 in 2008 to grade 5 in 2009. The projections reported for individual students use the growth of previous cohorts to estimate the future growth of students. Further information about the procedures used to develop TPM equations can be found at:

<http://www.tea.state.tx.us/student.assessment/taks/tpm/TPMDevelop042009.pdf>

The United States Department of Education (USDE) refers to all models approved for states to use in adequate yearly progress (AYP) calculations (growth to proficiency or growth to standards, value or transition tables, and projection measures) as "growth models."

6. What process was used to select the TPM?

The process TEA used to select the TPM as the measure of expected annual improvement of student achievement was one that has been used successfully in the past—research of existing measures, conduct of a pilot study of different types of measures with actual Texas student data, consideration of stakeholder feedback

obtained at numerous committee meetings, and evaluation of the measure chosen after the first year of implementation.

Background:

Details about each step of the selection process can be found in the *Procedures for Developing the Texas Projection Measure* report that can be accessed at: <http://www.tea.state.tx.us/student.assessment/taks/tpm/TPMDevelop042009.pdf>. Highlights from the evaluation process include:

- Texas initially researched all of the model types (e.g., growth to proficiency models, linear equating methods, projection models, transition tables) that met state and federal requirements and were being used by other states and Texas districts.
- A pilot study was initiated in 2007 that empirically compared different models using scores from approximately 2.4 million Texas students. The pilot study report can be found at: <http://www.tea.state.tx.us/student.assessment/resources/techdigest/TechnicalReports/MeasuringAnnualImprovementInStudentAchievement.doc>.
- The research and study findings were shared with multiple committees (e.g., the Select Committee on Public School Accountability, the Growth Advisory Committee, the Student Assessment Advisory Committee, the Texas Technical Advisory Committee, the Educator Accountability Focus Group, the Commissioner's Accountability Advisory Committee, and the Student Assessment District Advisory Committee) to obtain suggestions and recommendations to inform the selection process.
- The advisory committees overwhelmingly recommended a projection measure over a measure that had been developed by TEA to quantify student growth from prior years to current years called Reaching the Standard (RTS). In the September 2008 Growth Advisory Committee meeting, the attendees unanimously recommended that TEA implement a regression-based projection measure over the growth-to-proficiency or growth-to-standards measure, which had been developed by the Texas Education Agency as an alternative to a projection measure.
- Furthermore, the commissioner of education required that the projection measure be transparent and the formulas be publicly shared and easily calculated, given it was critical that schools continue to be evaluated in a manner that could be replicated at the local level.

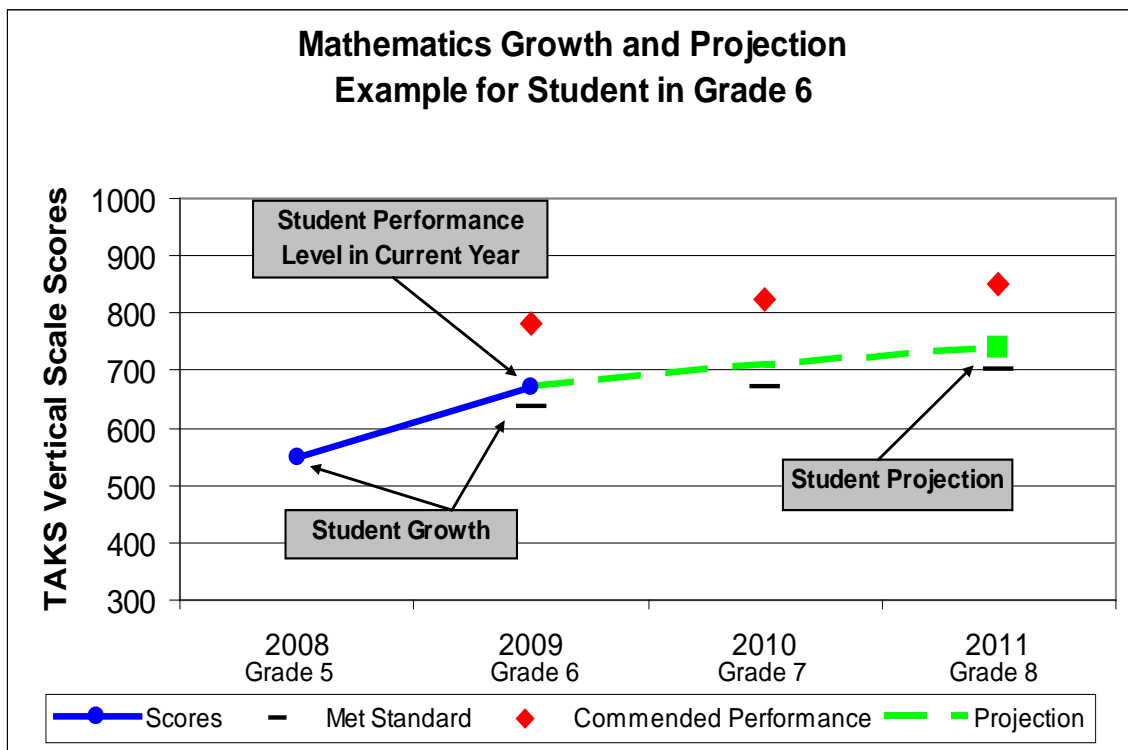
7. How does a projection measure fit with other measures of student achievement used in Texas?

TPM provides information about whether or not a student is on track to pass at a future grade. This is information that is provided in addition to what students currently receive, that is, how they perform in the current year (TAKS score) and, for those grades and subjects with vertical scale scores, how much they grew over the past year.

Background:

In 2009, Texas implemented the vertical scale for TAKS English grades 3–8 in reading and mathematics and for TAKS Spanish grades 3–5 in reading and

mathematics. The vertical scale provides a direct measure of student growth from prior grades to the current grade, or a look back at a student's progress. TAKS scores in the current year provide a snapshot of student performance at the present time. The projection measure provides a look ahead, or an estimate of future student performance. By combining the vertical scale, the TAKS score in the current year, and the TPM, the state offered a past, current, and future view—or a comprehensive view—of student progress in reading and mathematics through the state education system. See the graph below showing the combination of the vertical scale, the current TAKS score, and the projection for an example student.



8. When can the projection accuracy of TPM be evaluated?

For 2010, the accuracy of the one-year TPM projections (see Attachment A) can be checked against actual 2010 performance. Information about when the two- and three-year projections can be evaluated for accuracy is also provided.

Texas committed to conducting annual evaluations of the projection accuracy of the TPM. This annual evaluation allows Texas to monitor projection accuracy for all students, for student groups, for different subjects/language versions, and for different numbers of projection years. The projection accuracy of the TPM is evaluated in two ways: (1) the classification accuracy of students projected to either “meet the standard” or “not meet the standard” and (2) the projected scale score values. A scale score is a statistic that provides a comparison of scores with the performance standard and takes into consideration the differences in the overall difficulty of the test form used for each administration.

In order to evaluate the overall accuracy of the one-year projections reported for all students (not just the accountability subset), final testing results must be available from the four 2010 administrations of TAKS: the April primary administration, the first retest in May 2010, the second retest in June 2010, and the July 2010 exit level retest. Information about the accuracy of the one-year projections for all students is presented in Question 10.

Separate information concerning the accuracy of the one-year projections for a specific subset of students included in state accountability are discussed and presented separately in the state accountability section of this document (see Question 19).

9. Are the methods used by TEA to evaluate TPM projection accuracy similar to ones that are used by other national assessments?

Yes. TEA uses standard methods to evaluate the accuracy of the TPM. In 2002, for example, ACT followed more than 166,000 students from 84 colleges and universities to evaluate whether students predicted to be successful in college based on ACT's college readiness benchmark scores went on to be successful in college. The overall success rate from that study, defined as the percentage of students who *were* successful out of all the students who were *projected* to be successful on the basis of the model, ranged from percents in the low 70s to the mid 90s.

10. How accurate are the projections?

For 2010, one-year accuracy evaluations for Met Standard found that the overall percentage of students who were accurately classified (as passers or non-passers) exceeded 93%. Similar results were found for each specific grade/subject combination for which one-year projections have been verified. The accuracy ratings ranged from 90% (for grade 7-8 and 10-11 mathematics) to 98% (for grade 10-11 social studies). The complete 2010 projection accuracy report can be found at:
<http://www.tea.state.tx.us/student.assessment/measures/>

Evaluations for students in 2009 who did not meet the standard and were projected to pass in 2010 showed that 89% of those students actually passed in 2010, and an additional 3% missed passing by only 1 or 2 questions.

Projection accuracy for students scoring right above and right below passing tends to be lower than for students whose test scores are farther from the passing cut score because answering only one less or one more question correctly can frequently make the difference between passing or failing the test.

An analysis is attached (Attachment B) that examines the 2010 performance of students who failed in 2009 and were projected to meet standard in 2010. This analysis shows how many of these students that failed in 2009 actually passed in 2010 and how close the remaining failers were to passing in 2010. These data look at performance of the non-passers in terms of whether these students were 1, 2, 3, or 4+ correct answers away from passing.

In 2010, performance can be examined for 187,515 students that failed in 2009 and were projected to pass in 2010. Of these 187,515 students, 166,728 students or 89% passed the test and 20,787 or 11% failed the test. However, of the 20,787 non-passers, 6,112 students were within one or two items of passing the test. If you were to calculate the numbers of students that either passed the test or were within 1 or 2 correct answers of passing the test, that represents over 92% of the non-passers in 2009 that were projected to pass in 2010.

Similar results are found if performance is examined for specific grades and subjects for which one-year projections have been verified. Across the eight grade/subject combinations that could be verified in 2010, the percent of students who failed TAKS in 2009, were projected to pass in 2010, and who actually did pass in 2010 are all at or above 85%, with the exception of the grade 10-11 ELA non-passers. For this group, 79% met the standard in 2010, and an additional 8% were within 1 or 2 questions of passing. The scoring of the ELA tests (essay + multiple choice questions) contributes to the lower accuracy rate because the essay is weighted in such a way that it isn't possible to pass the ELA test without scoring at least a 2 on the essay.

Background:

In general, the TPM is most accurate when making one-year projections, and less accurate when making two- and three-year projections. However, two- and three-year projections are updated annually when the most recent assessment data are available; thus, the projections students receive typically become more accurate as they get closer to the next high-stakes grade, or the projected grade.

Projection accuracy for performance levels has been shown overall to be high, typically greater than 90%. However, projection accuracy for performance levels tends to be **lower** for students scoring in the middle of the scale-score range and **higher** for students scoring at the ends of the scale-score range. The reason for this is that students whose performance is close to the passing standard of 2100 are the ones for whom it is most difficult to make projections to passing at a future grade. For students in the middle of the scale-score range, or those scoring around 2100, the projection accuracy to passing is less accurate than for students scoring at the high and low ends of the score.

11. Can a grade 4 student who passes reading and mathematics but scored very low on grade 4 writing be projected to pass grade 7 writing?

Yes. In fact, of the 12 students who passed 4th grade reading and mathematics but had raw scores of zero for writing in 2007, 11 passed writing when they took the grade 7 test in 2010.

Background:

Reviewing the results of the grade 4 to grade 7 writing projections demonstrates the relationship between current reading, writing, and mathematics scores and

future writing scores. Overall, students perform very well in grade 7 writing. In 2010, 95% of students passed grade 7 writing. Since 2006, passing rates for grade 7 writing have been consistently above 90%. The 95% passing rate means that for the 324,677 students who tested in writing in 2010, about 308,000 passed and about 16,000 did not pass (5%).

- The small number of students who scored below passing in grade 7 writing did not typically pass both grade 4 reading and grade 4 mathematics. Students who pass reading tend to score well on writing, since the correlation between student scores on these two tests ranges from 0.52 to 0.68. Students in prior cohorts who have passed reading and mathematics in grade 4 but score low in writing have gone on to pass the writing assessment in grade 7.
- Likewise, since the relationship between reading performance and writing performance is so closely correlated, most students who have pass reading in grade 4 will be expected to pass writing in grade 7—even if their writing scores are very low at grade 4. For example, 11 students passed grade 7 writing in 2010 who had passing scores in grade 4 reading and mathematics, but a raw score of 0 in writing. Only one student with this combination of scores in grade 4 did not pass grade 7 writing. In other words, 11 of 12 (91%) grade 4 students with passing mathematics and reading scores and 0s in writing went on to pass grade 7 writing.
- An additional study looked at the 86 students who passed reading and mathematics in grade 4 in 2007 but scored poorly in writing (10 or fewer raw score points). Of these 86 students, 81% went on to pass grade 7 writing in 2010. These results support the accuracy of projections for these types of score combinations.

12. What changes are planned for the assessment program in the future?

The new assessment program, the State of Texas Assessments of Academic Readiness (STAAR), will assess the content standards at a greater depth and at a higher level of complexity than the current TAKS program. The overall difficulty of the assessments will be increased as a result of including more rigorous items and by setting performance expectations at a higher level. Examples of how the level of student performance required on STAAR will be elevated to achieve the goal of graduating students who are college and career ready include:

- Twelve end-of-course tests will replace the TAKS high school end-of-grade tests.
- In grades 3–8 reading and mathematics, the tests will be linked from grade to grade to the performance expectations for the Algebra II and English III end-of-course assessments.
- In grades 5 and 8 science, there is increased focus on promoting readiness for high school science through an emphasis on content and skills in grades 3–5 and grades 6–8 that link to the high school science content standards for biology, chemistry, and physics.

- In grades 4 and 7 writing, students will be required to respond to two writing tasks (including first-person essay and expository) rather than just one task.
- In most cases, the tests will contain more items to better measure student skills at all performance levels.
- Performance standards will be set using empirical data gathered from studies that link performance year-to-year from grades 3 through 8 to high school and college and career readiness.
- Empirical studies will inform standard setting through the comparison of student performance on the STAAR assessments with nationally administered assessments.
- Performance standards will be reviewed at least once every three years and, if necessary, adjusted to ensure the assessments maintain a high level of rigor.

Use of TPM in State Accountability

13. When was TPM first used for students and as part of state and federal accountability ratings?

Student TPM results were first reported on the Confidential Student Reports (CSR) in spring 2009 along with students' TAKS scores. TPM projections were first used in state and federal accountability ratings in 2009.

Background:

Information about TPM's use in state and federal accountability can be found at: <http://www.tea.state.tx.us/student.assessment/taks/tpm/FAQs-TPMAcc.pdf>.

However, the TPM is not the first time growth has been reported and used as part of the state assessment and accountability systems in Texas. Starting in 1994 with the Texas Assessment of Academic Skills (TAAS) program, Texas reported student growth using the Texas Learning Index (TLI). With the TAKS program, Texas used the Texas Growth Index (TGI) as part of the alternative education accountability (AEA) procedures of the state accountability system.

14. How was TPM used in state accountability calculations in 2009 and 2010?

First, performance of each campus and district is evaluated based on the percentage of students who met the passing standard on TAKS. Second, performance based on percent meeting passing standards is evaluated to determine if the campus or district has shown enough improvement from the prior year to be able to meet the current year accountability standard in two years. This is the Required Improvement (RI) feature that has been used in the state accountability system since 1994. Third, performance is evaluated based on the percentage of students who either met the passing standard or are projected to meet the passing standard in a future grade with TPM. The Exceptions Provision is applied last to determine if performance based on percent meeting passing standards meets the necessary criteria to elevate the rating for a district or campus. To be eligible to use this provision, minimum performance floors must be met and other safeguards are applied.

Background:

For any TAKS measure for which student performance does not meet the accountability standard for the next higher rating level, the additional features can be used to achieve the next higher level. However, RI, TPM, and the Exceptions Provision (EP) can only be used to achieve the next higher rating level. Combinations of RI, TPM, and EP cannot be used for one measure. However, these features can be used independently for different TAKS measures.

For detailed information about the use of TPM in the state accountability system, review Chapters 2–4, Chapters 10-11, and Appendix D of the *2010 Accountability Manual* which can be found at <http://ritter.tea.state.tx.us/perfreport/account/2010/manual/>

15. What was the TPM impact on 2009 state accountability ratings?

In 2009, the first year for the use of TPM in state accountability ratings, **331** districts used TPM to increase their rating designation. Of these, **79** districts used TPM to achieve *Academically Acceptable*, **179** used TPM to achieve *Recognized*, and **73** used it to achieve *Exemplary*. TPM was used most frequently by districts for science and for mathematics.

In 2009, **2,560** campuses used TPM to increase their rating designation. Of these, **358** used it to achieve *Academically Acceptable*, **1,088** used it to achieve *Recognized*, and **1,114** used it to achieve *Exemplary*. Campuses used TPM most frequently for mathematics and science.

In 2009, **1,506** campuses and **199** districts were rated *Recognized* and met the state's absolute standards, and used no progress measures or exceptions to achieve the rating. Also, **1,373** campuses and **411** districts that were rated *Academically Acceptable* in 2009 met the state's absolute standards, and used no progress measures or exceptions to achieve the rating.

Background:

Among the campuses and districts using the TPM feature, the percentage of students passing the test was very high, relative to the rating level achieved. For example, the average percentage of students passing the test among the **1,114** campuses using TPM to achieve *Exemplary* is at least **90%** for all subjects. See the tables below for a summary of student performance on TAKS for campuses and districts that used TPM to achieve a higher rating.

2009 Average TAKS Passing Rates and Completion Rates for Campuses that Used TPM to Achieve Next Higher Rating							
Campus Accountability Rating	Number of Campuses in Category	Reading	Mathematics	Writing	Social Studies	Science	Completion Rate
<i>Acad. Acceptable</i>	358	84%	66%	83%	89%	65%	88%
<i>Recognized</i>	1,088	91%	80%	90%	95%	80%	94%
<i>Exemplary</i>	1,114	95%	92%	94%	99%	92%	98%

2009 Average TAKS Passing Rates and Completion Rates for Districts that Used TPM to Achieve Next Higher Rating							
District Accountability Rating	Number of Districts in Category	Reading	Mathematics	Writing	Social Studies	Science	Completion Rate
<i>Acad. Acceptable</i>	79	87%	72%	89%	87%	64%	91%
<i>Recognized</i>	179	93%	83%	94%	94%	80%	93%
<i>Exemplary</i>	73	97%	92%	97%	98%	91%	97%

16. What was the TPM impact on 2010 state accountability ratings?

In 2010, the second year for the use of this feature, **632** districts used TPM. Of these, **64** used it to achieve *Academically Acceptable*, **399** used it to achieve *Recognized*, and **167** used it to achieve *Exemplary*. TPM was used most frequently by districts for science and for mathematics.

In 2010, **3,866** campuses used TPM. Of these, **426** used it to achieve *Academically Acceptable*, **1,972** used it to achieve *Recognized*, and **1,443** used it to achieve *Exemplary*. As is true for districts, campuses used TPM most frequently for mathematics and science.

Background:

Similar to 2009, among the campuses and districts using the TPM feature, the percentage of students passing the test was very high, relative to the rating level achieved. For example, the average percentage of students passing the test among the **1,443** campuses using TPM to achieve *Exemplary* is at least **90%** for all subjects. See the tables below for a summary of student performance on TAKS for campuses and districts that used TPM to achieve a higher rating.

2010 Average TAKS Passing Rates and Completion Rates for Campuses that Used TPM to Achieve Next Higher Rating							
Campus Accountability Rating	Number of Campuses in Category	Reading	Mathematics	Writing	Social Studies	Science	Completion Rate
<i>Acad. Acceptable</i>	426	83%	70%	87%	91%	70%	90%
<i>Recognized</i>	1,972	90%	83%	93%	96%	82%	94%
<i>Exemplary</i>	1,443	94%	92%	95%	99%	93%	98%

2010 Average TAKS Passing Rates and Completion Rates for Districts that Used TPM to Achieve Next Higher Rating							
District Accountability Rating	Number of Districts in Category	Reading	Mathematics	Writing	Social Studies	Science	Completion Rate
<i>Acad. Acceptable</i>	64	83%	71%	86%	91%	71%	90%
<i>Recognized</i>	399	89%	82%	93%	95%	81%	93%
<i>Exemplary</i>	167	95%	92%	97%	98%	92%	97%

17. Is it possible to determine if a school district used TPM, Required Improvement, and Exceptions to achieve its rating?

When TEA released the 2010 accountability information on July 30, 2010, there were several enhancements to clearly show where TPM was used to elevate a district's or a campus's rating. The campus and district listings that contain the accountability rating labels are now annotated to indicate the campuses and districts that earned ratings without the use of any additional features (Met Absolute Standards) and those that used RI, TPM, or the Exceptions Provision to achieve the next higher rating. Additionally, a new listing shows the number of measures using each additional feature and percent of measures meeting absolute standards for percent passing for each campus and district. Also, each campus and district accountability data table continues to show measure by measure which campuses and districts earned ratings by meeting the absolute standards and specifically where additional features were used to elevate a rating.

Background:

Accountability listings and data tables can be found at:

<http://ritter.tea.state.tx.us/perfreport/account/2010/index.html>. A sample accountability data table is attached (see Attachment C).

18. For districts and campuses that used TPM to achieve their state accountability rating, would they have received a lower rating if the TPM feature was not used in the rating system?

Not necessarily. Since the exceptions provision allows districts and campuses to achieve a higher rating if specific criteria are met, it is possible that the rating assigned

based on the use of TPM would not differ from the rating assigned without the use of TPM.

Background:

Minimum performance floors based on percent meeting the standard must be met in order to use the exceptions provision. Other safeguards require that the exception was not applied to the deficient measure in the prior year and that no more than four exceptions can be used for the *Academically Acceptable* and *Recognized* ratings depending on the number of assessment measures evaluated. Only one exception can be used to achieve the *Exemplary* rating if there are at least ten measures evaluated.

The following example illustrates how a district or campus that achieved the *Recognized* rating based on the use of TPM could still achieve that rating if TPM was not applied. Tuloso-Midway ISD met or exceeded the absolute standard of 80% for the *Recognized* rating on each of the 20 assessment measures on which they are evaluated, except for the Economically Disadvantaged student group in science. For this student group, the performance based on percent meeting standards was 76%. Since the district met the minimum performance floor (five points below the absolute standard), was evaluated on more than 15 assessment measures and therefore eligible for four exceptions, and did not use an exception for this student group in the prior year, the district would have achieved the *Recognized* rating, regardless of TPM.

19. How would the 2009 state accountability ratings differ if the TPM projections used in that year were updated with actual 2010 results?

In 2009, TPM projections were made for 22 grade/subject combinations. In 2010, it is possible to determine the accuracy for the following eight grade/subject combinations: grade 4 reading and mathematics projected to grade 5, grade 7 reading and mathematics projected to grade 8, and grade 10 English language arts, mathematics, science, and social studies projected to grade 11. Attachment D compares the actual 2009 ratings distribution and the distribution that would result if TPM projections for these eight grades/subjects were updated with actual 2010 results. There would have been a slight increase in the number of districts achieving the *Exemplary* or *Recognized* ratings in 2009 and no change in the number receiving an *Academically Unacceptable* rating. For campuses, there would have been an increase in the number achieving the *Exemplary* rating in 2009, a slight decrease in the number receiving a *Recognized* rating, and fewer *Academically Unacceptable*.

For the eight grade/subject combinations listed above, Attachment E illustrates by grade/subject the breakdown of 2010 actual results for students included in the 2009 accountability system who failed the TAKS in 2009. For most grades/subjects, more students would have counted as passers in 2009 state accountability ratings if 2010 actual results had been used rather than 2009 TPM results.

20. What is the benefit of using TPM in state accountability ratings?

Campuses and districts earn ratings by having performance that meets absolute standards or by demonstrating sufficient improvement toward the standard. With the addition of TPM in 2009, the state accountability rating system gives districts and campuses credit not only for students who pass but also for students who are on track to pass at a future grade.

Background:

The Texas state accountability system evaluates district and campus performance on 35 indicators and assigns an overall accountability rating based on the lowest-performing indicator. The inclusion of TPM allows some campuses and districts to meet the higher accountability standard on one or more of the 25 assessment indicators that were preventing them from receiving the next higher rating.

The inclusion of TPM allowed some campuses and districts to cross one additional hurdle that prevented them from moving to the next higher accountability rating category. Take Needville ISD (NISD) as an example. In 2010, NISD is evaluated on 22 of the 25 TAKS measures. In 2010 the percentage of NISD students who passed the test met or exceeded the *Exemplary* performance level on 16 of the 22 TAKS measures (73% of TAKS measures), and met or exceeded the *Recognized* performance level on 21 of the 22 TAKS measures (95% of TAKS measures). In mathematics, NISD African-American students performed at the *Acceptable* level with 74% passing the test, an increase of 18 percentage points from the percent passing in 2009. The percent meeting the standard on TAKS with TPM was 85%, allowing NISD to receive a *Recognized* rating in 2010.

21. How will TPM be used in state accountability in 2011?

For 2011 state accountability, TEA is considering several options for changing the use of TPM so that student performance is acknowledged and the state accountability system remains transparent. Proposals under consideration include the following:

- suspension of the use of TPM for accountability ratings
- continued use of TPM in state accountability, but only for districts that elect to use it
- modifications to the calculation of TPM and/or its use to include additional safeguards, such as:
 - applying performance floors
 - counting each student who fails but is projected to pass as a fraction of a passer
 - prohibiting TPM to be used for the same measure in a subsequent year
 - limiting the number of measures for which TPM can be used in a given year
 - limiting which rating categories can make use of TPM

TEA will evaluate all options available for computing growth or the degree to which a student is on track to succeed in a subsequent grade or course as part of the

development of the new State of Texas Assessments of Academic Readiness (STAAR) program. Options for how the student progress measure developed for STAAR will be used in the new accountability system will be considered as part of the accountability development process.

22. Are there significant changes planned for 2011 state accountability?

The 2010–2011 school year will be the last year under the current state accountability system. The rating system in 2011 will serve as a transition to a new accountability system for 2013 and beyond. Consistent with this new direction for state accountability, the 2011 accountability ratings will emphasize performance above the proficient level by requiring the evaluation of TAKS commended performance for the *Recognized* and *Exemplary* rating levels.

23. What changes are planned for the new accountability system that will be implemented in 2013?

The intent is to design a new accountability system rather than modify the current system to align with the new provisions of House Bill 3. Every aspect of the accountability system will be reevaluated. The resulting accountability system will look very different from the current state accountability system. The defining characteristic of the new accountability system will be the emphasis on college and career ready performance on the STAAR. The *Recognized* and *Exemplary* labels will emphasize higher levels of student performance rather than higher percentages of students performing at the proficient level.

24. What would the state accountability ratings look like if there could be an apples-to-apples comparison of 2008, 2009, and 2010 without the TPM feature?

Due to increases in accountability standards, the inclusion of additional students tested on the TAKS-Accommodated, and other changes in rigor across years, comparisons of the state accountability ratings cannot be made without applying the same criteria to the rating results for each of the comparison years. To compare 2008, 2009, and 2010 ratings, the following 2010 system criteria were applied to the 2008 and 2009 rating years.

The TAKS base indicator was adjusted for 2008 and 2009 to include all TAKS (Accommodated) results, exclude the second administration of grade 3 reading, and include the 2010 vertical scale score adjustments. The following 2010 TAKS accountability standards were applied to the 2008 and 2009 results: *Academically Acceptable*: 70% (reading/ELA, writing, social studies); 60% (math); 55% (science); *Recognized*: 80% (all subjects); and, *Exemplary*: 90% (all subjects). The 2010 Completion Rate I standard and the annual grade 7-8 Dropout Rate standard were also applied to both years, and the School Leaver Provision that was originally applied to the 2008 rating results was removed. In addition, the 2010 Exceptions Provision criteria were applied to the 2008 and 2009 rating results. There were some adjustments that were not possible to make across all three

years, such as the exclusion of students displaced by Hurricane Ike that was applied to the 2009 results that is not applicable to 2008 or 2010.

The following table provides a comparison of the 2008, 2009, and 2010 rating distributions when the 2010 criteria are applied to the 2008 and 2009 rating results, as described above. Note that these comparisons do not include the use of TPM in 2009 and 2010.

	2008 Performance		2009 Performance		2010 Performance	
Campuses	Count	Percent	Count	Percent	Count	Percent
<i>Acad. Unacceptable</i>	981	13%	788	10%	336	4%
<i>Acad. Acceptable</i>	3,436	44%	3,155	40%	2,606	33%
<i>Recognized</i>	1,981	25%	2,375	30%	2,965	37%
<i>Exemplary</i>	727	9%	927	12%	1,427	18%
Using RI	281		477		554	
Using TPM	0		0		0	
Using EP	1,360		959		902	
Using Combo (RI/EP)	227		222		175	
Districts	Count	Percent	Count	Percent	Count	Percent
<i>Acad. Unacceptable</i>	196	17%	148	13%	68	6%
<i>Acad. Acceptable</i>	751	65%	730	63%	566	48%
<i>Recognized</i>	171	15%	234	20%	436	37%
<i>Exemplary</i>	37	3%	46	4%	94	8%
Using RI	76		103		136	
Using TPM	0		0		0	
Using EP	140		103		113	
Using Combo (RI/EP)	55		35		37	

Percentages do not sum to 100% because the Not Rated categories are not shown.

Use of TPM in Federal Accountability

25. Has the TPM been approved for use by the USDE?

Yes. After review of the technical qualities of the measure by psychometric, accountability, and policy experts at the national level, the USDE approved the use of TPM in Texas' federal accountability calculations in January 2009.

Background:

TEA's growth pilot application to USDE can be found at:

<http://www.tea.state.tx.us/student.assessment/measures/Measure-011209-USDE-GrowthProposalTX.pdf>. Additional documentation of the pilot application process can be found at:

<http://www.tea.state.tx.us/student.assessment/measures/archive/> under the *Texas Growth Proposal to the USDE* section.

26. How is TPM used in federal Adequate Yearly Progress (AYP)?

For federal accountability, beginning in 2009, Texas has received approval to use TPM in the AYP calculations for students taking reading/English language arts and mathematics assessments in grades 3–8 and 10. Students who met the standard or are projected to meet the standard at the next high-stakes grade will be included in district and campus performance ratings for evaluating AYP results.

Background:

For detailed information about the use of TPM in the 2010 AYP calculations, see Section III of the *2010 AYP Guide* available online at <http://www.tea.state.tx.us/ayp/>.

27. What has been the TPM impact to 2009 federal accountability ratings (AYP)?

Of the **1,235** districts evaluated for AYP in 2009, **126** districts (**10%**) that would have otherwise missed AYP in 2009 met AYP due to TPM. Of the **8,322** campuses evaluated, **528** campuses (**6%**) that would not have met AYP had TPM been excluded from the calculations met AYP due to TPM.

Background:

Actual results of TPM's impact on 2009 federal accountability are consistent with impact analyses submitted to USDE in the state's growth pilot application. That is, it was anticipated that had TPM been used in 2008 federal accountability ratings, 11% of districts and 5% of campuses would have used TPM to meet AYP.

28. What has been the TPM impact to 2010 federal accountability ratings (AYP)?

Based on the 2010 AYP ratings released on August 5, 2010, of the **1,237** districts evaluated for AYP in 2010, **175** districts (**14%**) that would have otherwise missed AYP in 2010 met AYP due to TPM. Of the **8,435** campuses evaluated, **933** campuses (**11%**) that would not have met AYP had TPM been excluded from the calculations met AYP due to TPM.

Background:

As in 2009, the TPM results were included at all grade levels for the TAKS and TAKS (Accommodated) assessments. In addition, TPM results for TAKS-Modified (TAKS-M) assessments were phased in beginning in 2010 with grades 4, 7, and 10.

29. Are other states using USDE-approved growth measures for accountability?

Currently 15 states have approved growth measures. To date, the USDE has approved three types of growth measures for use in AYP: projection models, growth to standard models, and value tables. States that use projections in their AYP calculations are Colorado, Ohio, Pennsylvania, Tennessee, and Texas.

Background:

The three types of growth measures the USDE has approved for use in AYP are projection models, growth to standard, and transition tables.

Projection Models: A regression model projects whether or not students will meet the proficient performance standard on the test in a future grade, given how students have performed in the past. This model answers the question: Based on how the student performed this year, and performance of students scoring similarly in the past, is the student expected to meet the proficient performance standard in a specified future year?

Growth to Standard: This model measures the amount of improvement in test scores needed to meet the proficient performance standard in a future grade divided by the number of years for a student to reach that grade. This model answers the question: Based on how the student performed last year and this year, if the student continues to improve at the same rate will the student meet the proficient performance standard in a specified future year?

Value Table: This model evaluates student progress in terms of performance levels on the test – below basic to basic to proficient to advanced, for example. This model answers the question: Based on the student performance level last year and this year, if the student continues to move from one performance level to the next at the same rate will the student reach the proficient performance level in a specified future year?

Information regarding the USDE growth pilot can be found on the USDE website at <http://www2.ed.gov/admins/lead/account/growthmodel/index.html>.

30. Does use of growth measures in accountability systems have the same ratings impact in other states as in Texas?

The best comparison of use of growth measures in accountability systems in other states is for federal AYP because the underlying accountability systems are similar. Growth is used in the Texas AYP system in the same way it is used in the Texas state accountability system. As Attachment F indicates, based on available data, the percentage of schools that met AYP due to growth varied from 0% of Alaska schools in 2007 to 26% of Ohio schools in 2008. Twelve of the 15 states that use a growth model for AYP already count some students who did not pass the state test as proficient for purposes of calculating AYP before giving credit for growth in the final AYP calculation. Therefore, the three states that initially count only students who pass the test as proficient (Florida, Ohio, and Texas) before giving credit for growth in the AYP calculation would be expected to see more improvement with use of the growth measure than the 12 other states using growth in AYP. The additional schools that met AYP by using growth in these states is 5% in Florida, 26% in Ohio, and 6% in Texas.

Background:

Many factors may contribute to the variation among the 15 states in impact of growth on AYP status.

- Assessment factors – difficulty of the test, student proficiency standards on the test, how many years the tests have been used
- Growth factors – type of growth model, grades for which growth is calculated (not all states calculate growth for grade 3 and for high school), the ways the models define sufficient growth
- AYP factors – AYP performance targets, percentage of campuses meeting AYP without growth, definition of proficiency measure, why campuses missed AYP before growth model applied (performance, participation, or graduation rate), how and when growth is used in the process of calculating AYP
- Student factors – actual performance of students at all levels

Attachments

Attachment A: Accuracy Checks for Projections Used in 2009 Accountability

Attachment B: Student Performance in 2010 for Students Who Did Not Meet Standard in 2009 and Were Projected to Meet Standard in 2010

Attachment C: Sample Accountability Data Table

Attachment D: Analysis of 2009 Ratings Distributions, Standard Procedures, when Actual 2010 Performance Results are Substituted for 2009 Projections

Attachment E: TPM Projection Accuracy in 2009 Accountability

Attachment F: How States That Are Using USDE Approved Growth Measures Count Students

Attachment A

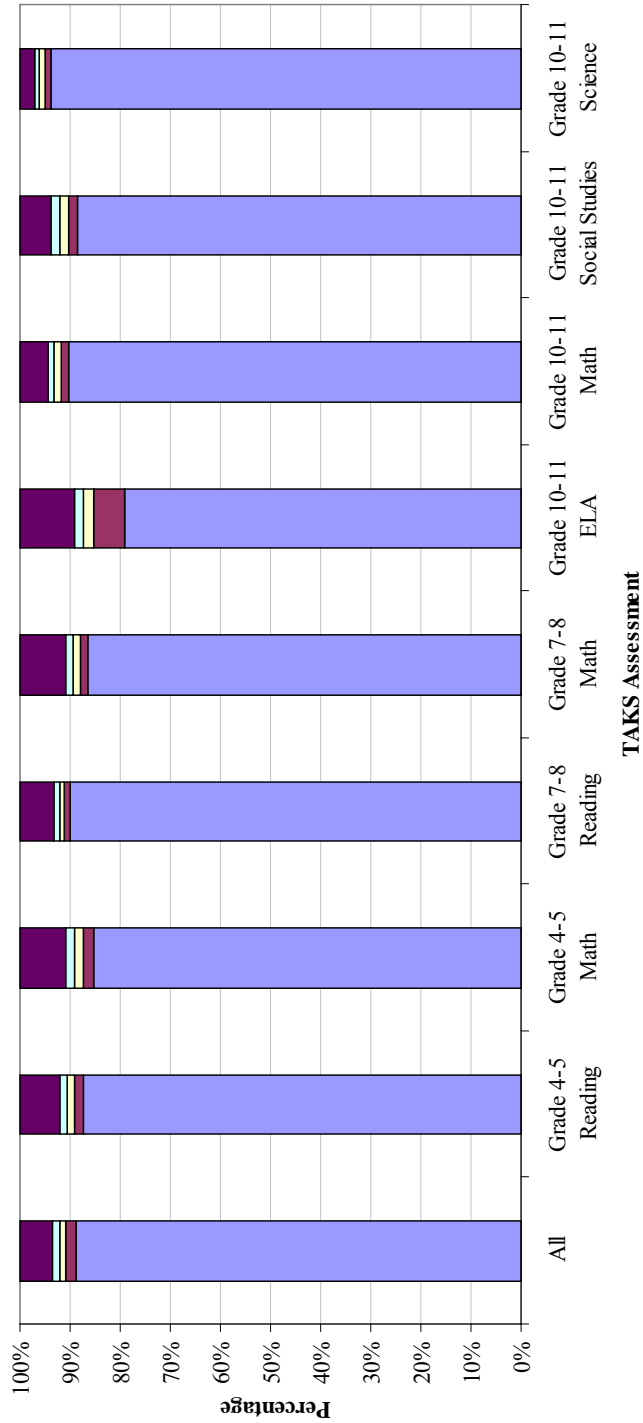
Accuracy Checks for Projections Used in 2009 Accountability*

Grade	Reading	Mathematics	Writing	Science	Social Studies	Total
3	3 → 5	3 → 5				2
4	4 → 5	4 → 5	4 → 7 *			3
5	5 → 8 *	5 → 8 *		5 → 8 *		3
6	6 → 8	6 → 8				2
7	7 → 8	7 → 8				2
8	8 → 11	8 → 11		8 → 11	8 → 11	4
9	9 → 11	9 → 11				2
10	10 → 11	10 → 11		10 → 11	10 → 11	4
Total Projections	8	8	1	3	2	22

2010	2011	2012
Accuracy can be checked for 8 projections	Accuracy can be checked for 6 projections	Accuracy can be checked for 4 projections

* 18 of the 22 projections can be checked; 4 cannot be checked due to transition from TAKS to STAAR in 2012

Student Performance in 2010 for Students Who Did Not Meet Standard in 2009 and Were Projected to Meet Standard in 2010



Note. These analyses were limited to students who had a projected value in 2009 and were able to be matched to a tested record in 2010. This study included final data from the primary, first, and second retest administrations for grades 5 and 8 in 2010. For exit level, the primary administration and preliminary July 2010 retest data were included.

DISTRICT NAME:	SAMPLE DISTRICT
CAMPUS NAME:	SAMPLE H S
CAMPUS NUMBER:	999999999

Campus Rating: Recognized
Grade Span: 09 - 12

SAMPLE

Analysis groups used to determine ratings are marked with an 'X'. Accountability standards are shown in parentheses. Special formats (*, >99%, <1%) are used to protect student confidentiality.

TEXAS ASSESSMENT OF KNOWLEDGE AND SKILLS (TAKS) TABLE

2010										2009					Required Improvement			2010 TPM			Status by Measure		
Performance Results	Number Met Std	Number Taking	Pct Met Std	Stu Grp %	Number Met Std	Number Taking	Pct Met Std	Met Min Size	Act Chg	Met RI?	Number Met Std w/TPM	Number Taking	Pct Met w/TPM	STD	RI	TPM	EXCP	***					
Reading/ELA (70%/80%/90%)																							
All Students	1,299	1,351	96%	100%	1,269	1,326	96%		0		1,326	1,351	98%	EX	-	-	-	EX					
African Amer	*	*	95%	10%	125	133	94%		1		*	*	98%	EX	-	-	-	EX					
Hispanic	350	370	95%	27%	294	320	92%		3		363	370	98%	EX	-	-	-	EX					
White	715	740	97%	55%	751	770	98%		-1		725	740	98%	EX	-	-	-	EX					
Econ Disadv	350	374	94%	28%	311	341	91%		3		363	374	97%	EX	-	-	-	EX					
Writing (70%/80%/90%)																							
All Students	*	*	*	*	*	*	*		*		*	*	*	-	-	-	-	-					
African Amer	*	*	*	*	*	*	*		*		*	*	*	-	-	-	-	-					
Hispanic	*	*	*	*	*	*	*		*		*	*	*	-	-	-	-	-					
White	*	*	*	*	*	*	*		*		*	*	*	-	-	-	-	-					
Econ Disadv	*	*	*	*	*	*	*		*		*	*	*	-	-	-	-	-					
Social Studies (70%/80%/90%)																							
All Students	*	*	98%	100%	795	825	96%		2		*	*	> 99%	EX	-	-	-	EX					
African Amer	*	*	93%	10%	70	80	88%		5		*	*	> 98%	EX	-	-	-	EX					
Hispanic	*	*	97%	26%	175	190	92%		5		*	*	> 99%	EX	-	-	-	EX					
White	*	*	> 99%	*	485	488	99%		*		*	*	> 99%	EX	-	-	-	EX					
Econ Disadv	*	*	95%	24%	167	183	91%		4		*	*	99%	EX	-	-	-	EX					
Mathematics (60%/80%/90%)																							
All Students	1,141	1,342	85%	100%	1,078	1,297	83%		2		1,280	1,342	95%	RE	RE	EX	-	EX					
African Amer	88	125	70%	9%	90	133	68%	Yes	2	**	No	125	90%	AA	AA	RE	-	RE					
Hispanic	290	367	79%	27%	238	307	78%	Yes	1	1	Yes	367	92%	AA	RE	-	-	RE					
White	660	737	90%	55%	654	756	87%		3		718	737	97%	EX	-	-	-	EX					
Econ Disadv	278	372	75%	28%	232	325	71%	Yes	4	5	No	340	91%	AA	AA	RE	-	RE					
Science (55%/80%/90%)																							
All Students	762	837	91%	100%	712	828	86%		5		806	837	96%	EX	-	-	-	EX					
African Amer	68	87	78%	10%	59	79	75%	Yes	3	3	Yes	77	89%	AA	RE	-	-	RE					
Hispanic	190	222	86%	27%	143	189	76%		10		208	222	94%	RE	RE	EX	-	EX					
White	432	456	95%	54%	448	493	91%		4		449	456	98%	EX	-	-	-	EX					
Econ Disadv	165	205	80%	24%	134	182	74%		6		187	205	91%	RE	RE	EX	-	EX					

*** Met the minimum size requirement, but did not meet the 75% floor for Recognized.
 **** Summary column: Note that RI, TPM, and EXCP may elevate the rating one level, but only one level.

EXCEPTIONS TABLE

Number Msrs Evaluated	Number Allowed	Number Needed	Floor(s) Met?	Msr(s) Used in 2009?	Exceptions Applied
20	1	4	N/A	N/A	N/A

DISTRICT NAME: SAMPLE DISTRICT
CAMPUS NAME: SAMPLE H S
CAMPUS NUMBER: 999999999

Campus Rating: Recognized
Grade Span: 09 - 12

S A M P L E

Analysis groups used to determine ratings are marked with an 'X'.
Accountability standards are shown in parentheses.
Special formats ('*', >99%, <1%) are used to protect student confidentiality.

COMPLETION I RATE TABLE (Gr. 9-12) (75.0%/85.0%/95.0%)

----- Class of 2009 -----										----- Class of 2008 -----										Required Improvement -----									
# Com- pleters	# dropouts	# in Class	Comp Rate	Stu Grp %	# Com- pleters	# in Class	Comp Rate	Met Min Size	Act Chg	RI	Met RI?																		
X All Students	389	6	398	97.7%	100%	413	426	96.9%	0.8																				
African Amer	29	1	31	93.5%	8%	33	36	91.7%	1.8																				
Hispanic	97	2	100	97.0%	25%	79	82	96.3%	0.7																				
White	232	3	236	98.3%	59%	268	273	98.2%	0.1																				
Econ Disadv	75	1	77	97.4%	19%	54	58	93.1%	4.3																				

Decreases in completion rates may be due to significant changes in the dropout definition beginning with the 2005-06 school year.

ANNUAL DROPOUT RATE TABLE (Gr. 7-8) (1.8%)

----- 2008-09 -----										----- 2007-08 -----										Required Improvement -----									
#		# 7-8		Dropout		Stu		#		# 7-8		Dropout		Met		Act		Met											
Dropouts		Graders		Rate		Grp		Dropouts		Graders		Rate		Min		Chg		RI?											
						%								Size															
All Students	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
African Amer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
Hispanic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
White	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
Econ Disadv	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-										
Dropout data not evaluated for your accountability rating due to grade span, small numbers, or no data.																													

Dropout data not evaluated for your accountability rating due to grade span, small numbers, or no data.

Attachment D

Analysis of 2009 Ratings Distributions, Standard Procedures, when Actual 2010 Performance Results are Substituted for 2009 Projections* September 2010

DISTRICTS	Actual 2009 State Ratings	Revised 2009 Ratings (if 2009 TPM projections for Grades 4, 7, and 10 in 2010 were updated with actual 2010 results)
Exemplary	117	123
Recognized	464	491
Academically Acceptable	518	486
Academically Unacceptable	56	56
Not Rated	8	7
Total	1,163	1,163

CAMPUSES	Actual 2009 State Ratings	Revised 2009 Ratings (if 2009 TPM projections for Grades 4, 7, and 10 in 2010 were updated with actual 2010 results)
Exemplary	2,158	2,202
Recognized	2,943	2,944
Academically Acceptable	1,911	1,883
Academically Unacceptable	208	194
Not Rated	654	651
Total	7,874	7,874

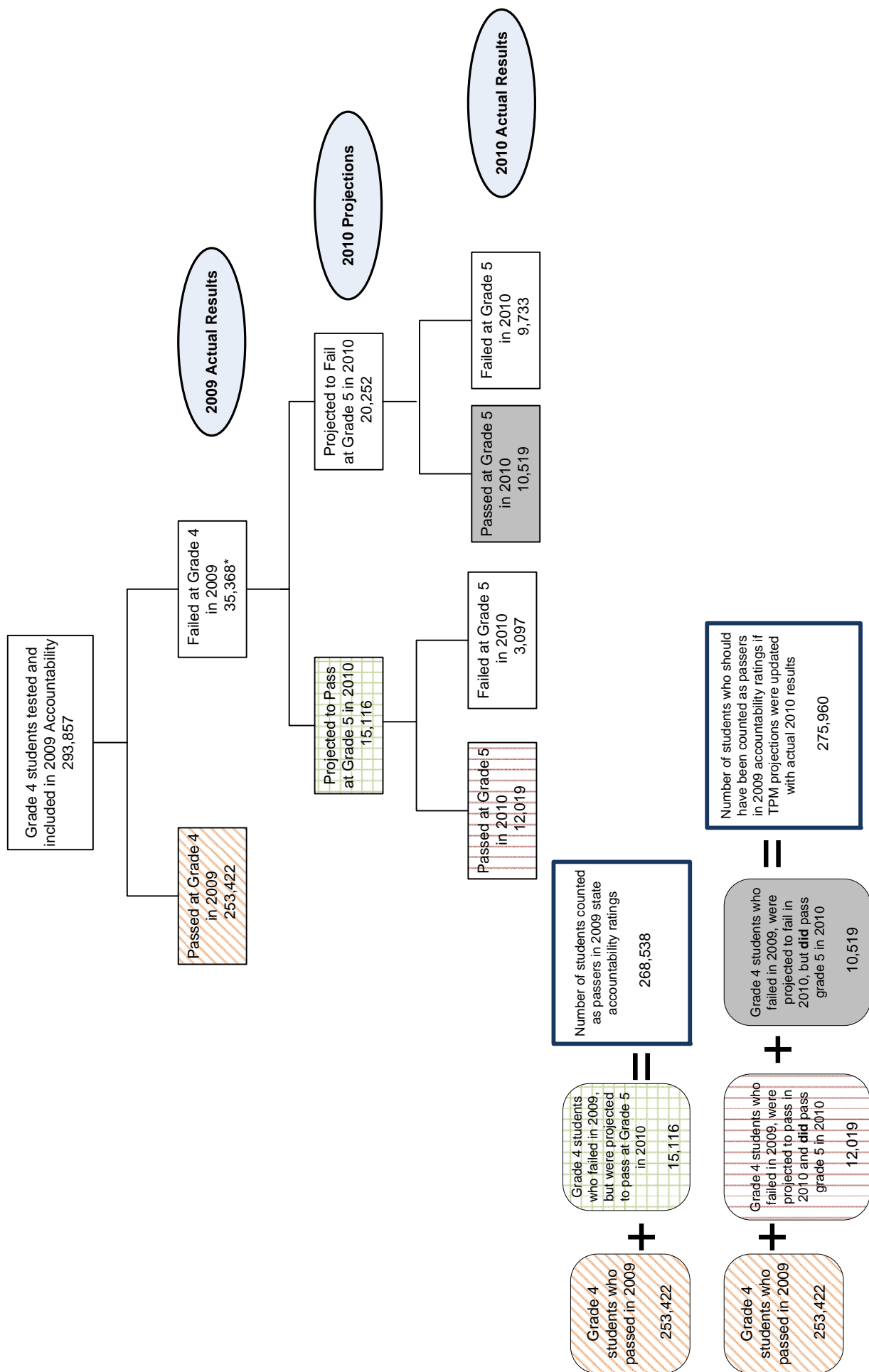
- * The revised 2009 ratings are based on the TPM projections that have been updated with the actual 2010 results for the following eight grade/subject combinations: grade 4 reading and mathematics projected to grade 5, grade 7 reading and mathematics projected to grade 8, and grade 10 English language arts, mathematics, science, and social studies projected to grade 11. A full accuracy analysis using more of the grade/subject combinations is not possible until 2012. However, a complete accuracy analysis will never be possible due to the transition from the TAKS to STAAR testing program in 2012.

This analysis includes the final data for the April 2010 primary administration, the May and June 2010 retest administrations for grades 5 and 8, and the results from the July 2010 exit level retest administration.

Attachment E

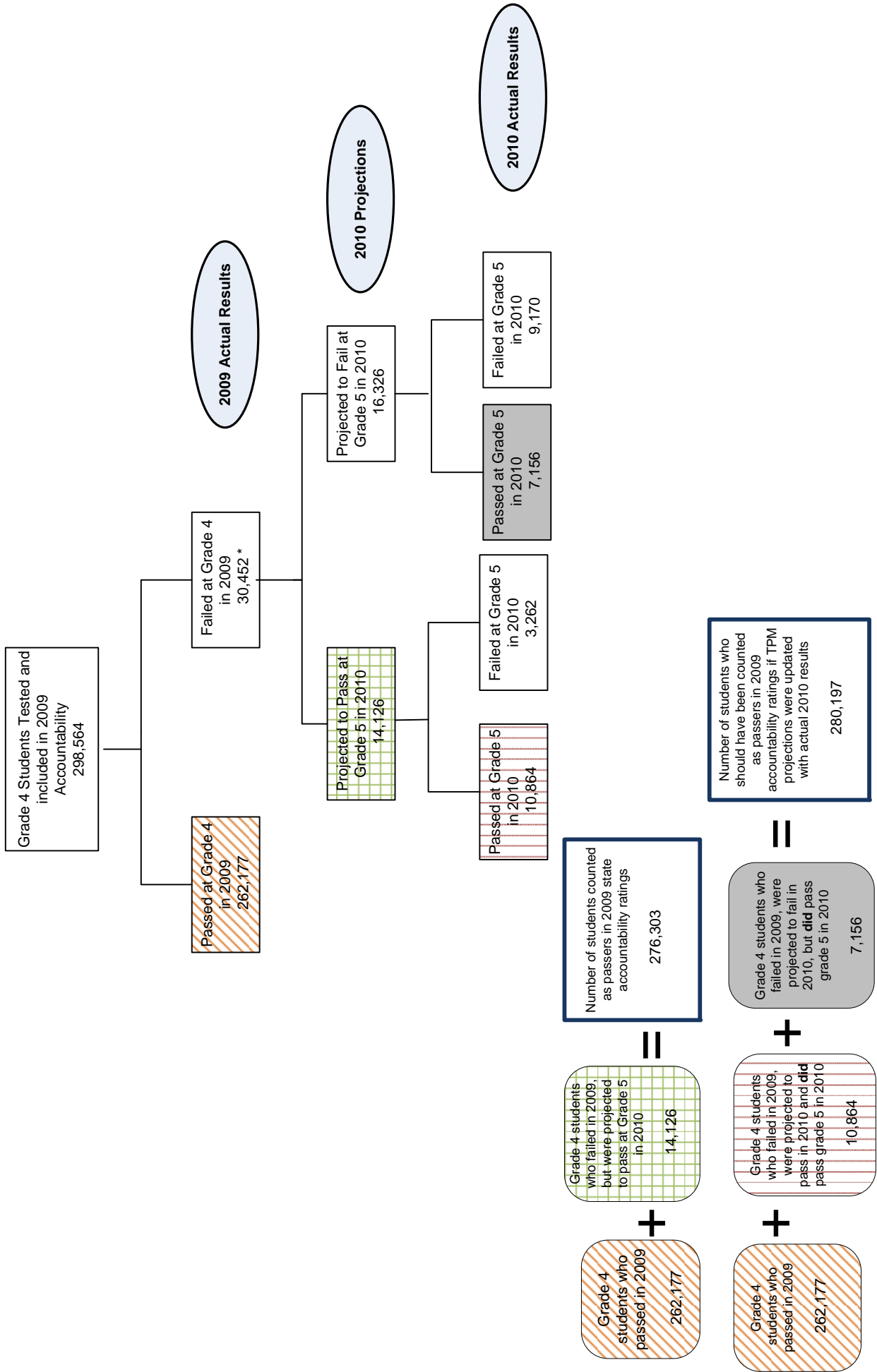
TPM Projection Accuracy in 2009 Accountability

TPM Projection Accuracy in 2009 Accountability Grade 4 (2009) to Grade 5 (April 2010 Primary, May and June 2010 Retest Administrations) TAKS Reading (English)



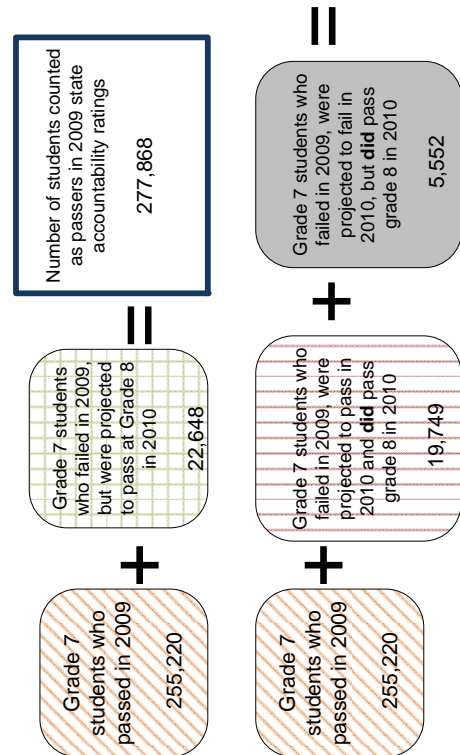
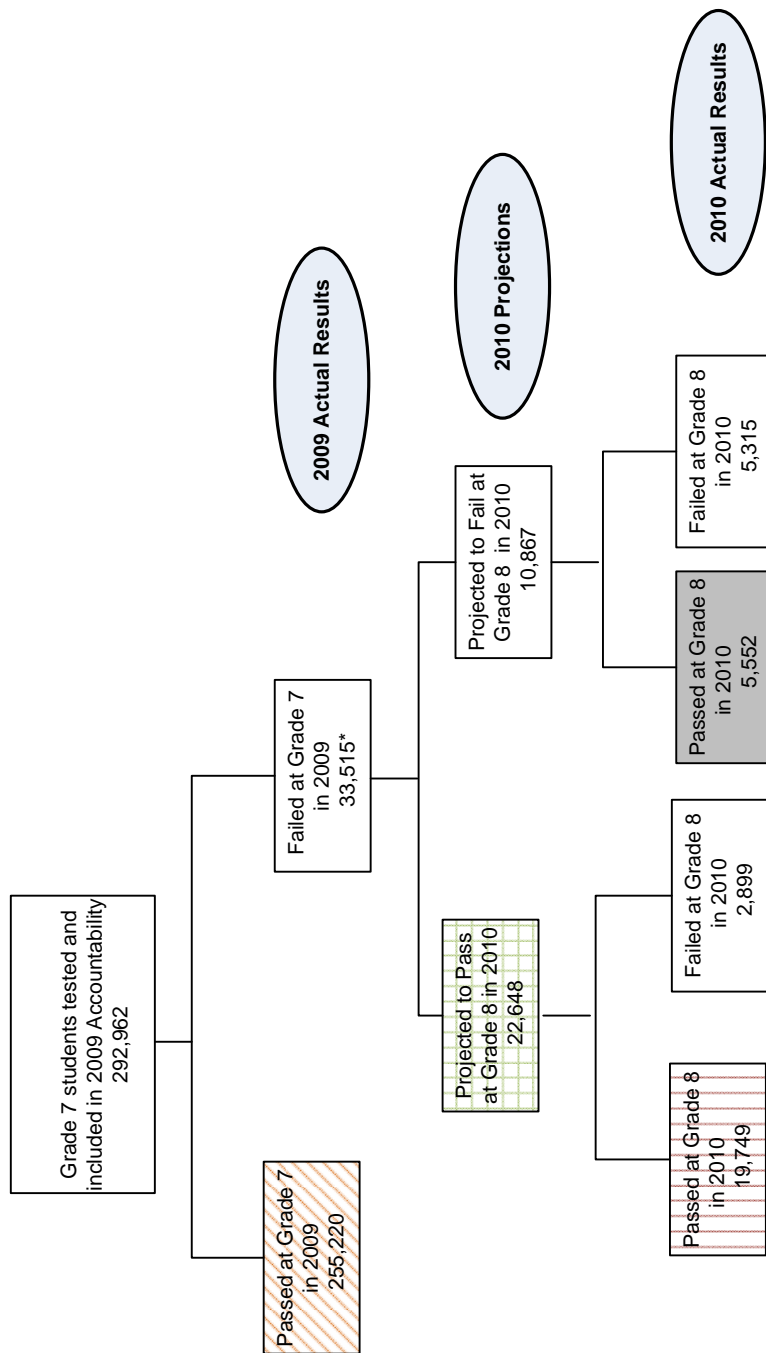
* This analysis is limited to students who had a projected value in 2009 and were able to be matched to a tested record in 2010.

TPM Projection Accuracy in 2009 Accountability Grade 4 (2009) to Grade 5 (April 2010 Primary, May and June 2010 Retest Administrations) TAKS Mathematics (English)



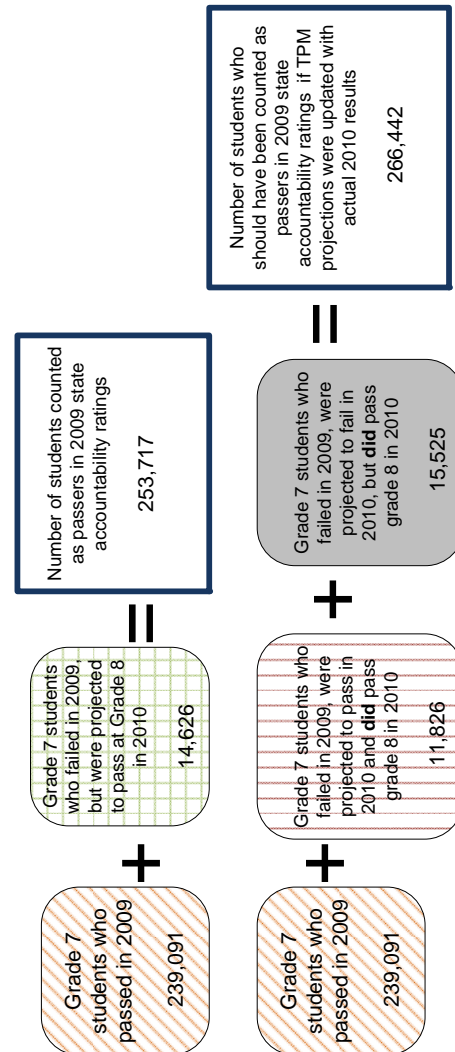
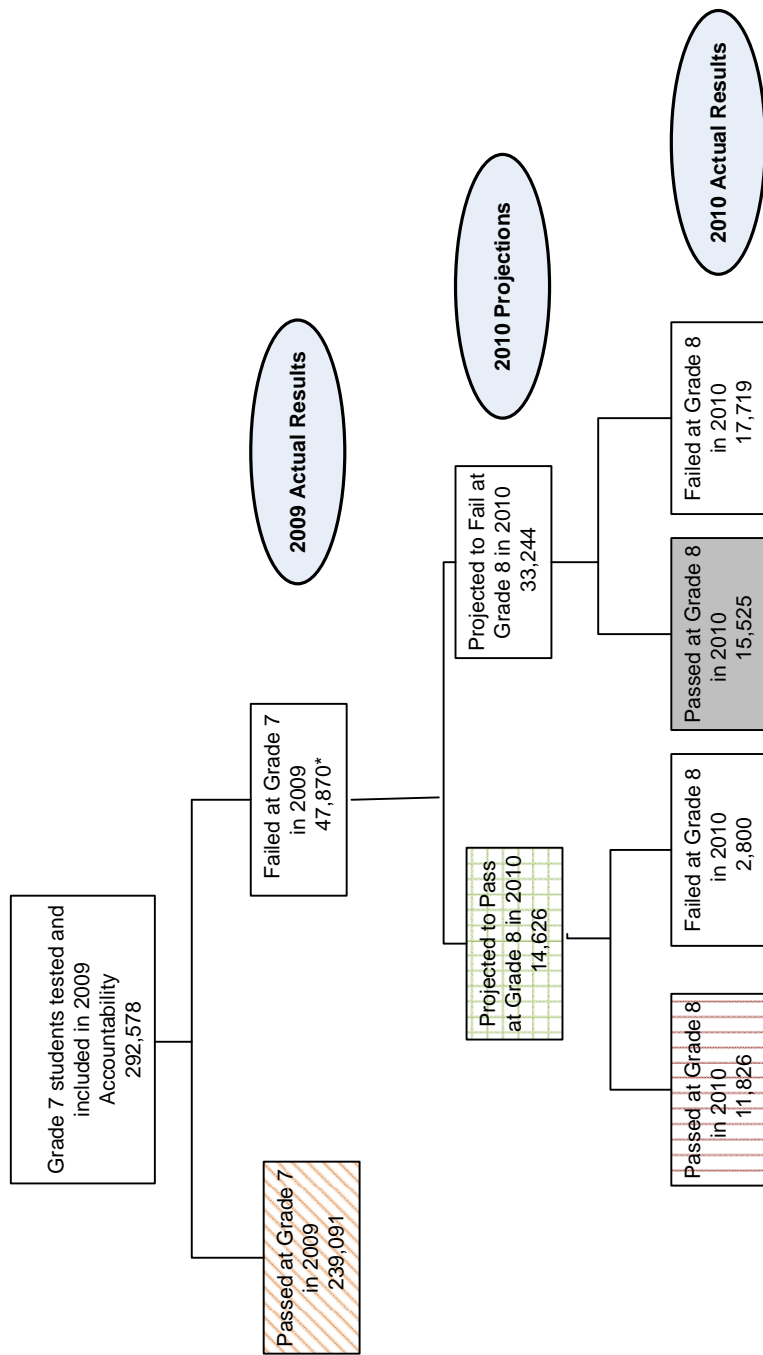
* This analysis is limited to students who had a projected value in 2009 and were able to be matched to a tested record in 2010.

TPM Projection Accuracy in 2009 Accountability Grade 7 (2009) to Grade 8 (April 2010 Primary, May and June 2010 Retest Administrations) TAKS Reading



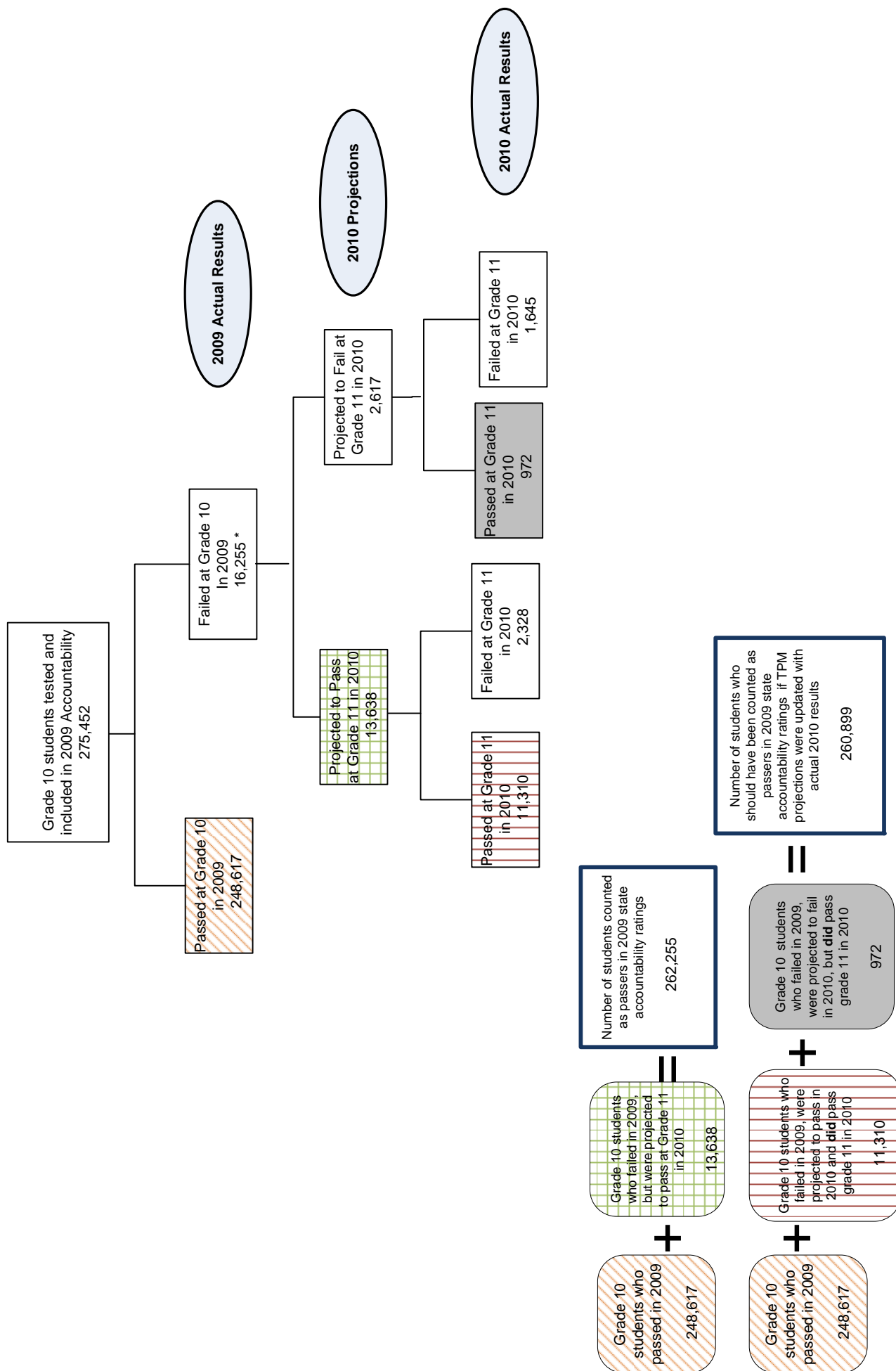
* This analysis is limited to students who had a projected value in 2009 and were able to be matched to a tested record in 2010.

TPM Projection Accuracy in 2009 Accountability Grade 7 (2009) to Grade 8 (April 2010 Primary, May and June 2010 Retest Administrations) TAKS Mathematics



* This analysis is limited to students who had a projected value in 2009 and were able to be matched to a tested record in 2010.

TPM Projection Accuracy in 2009 Accountability Grade 10 (2009) to Grade 11 (April 2010 Primary and July 2010 Retest Administrations) TAKS English Language Arts

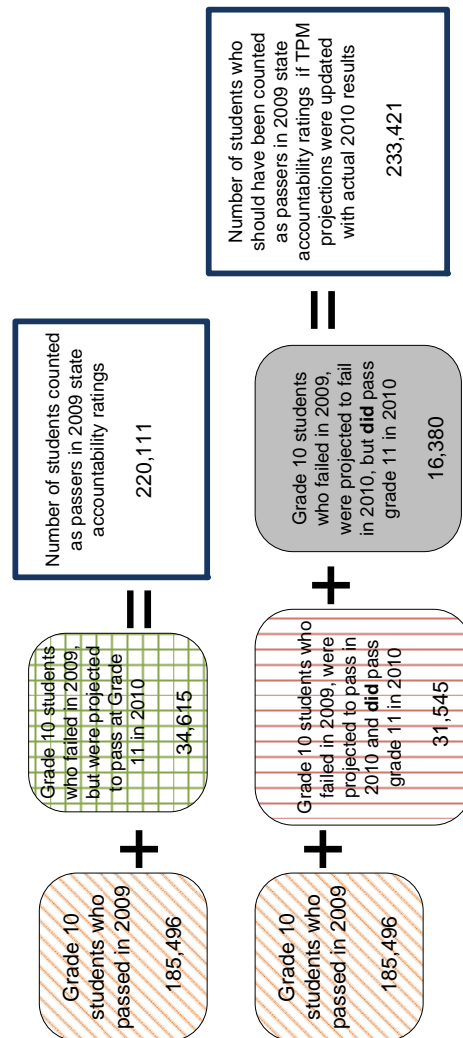
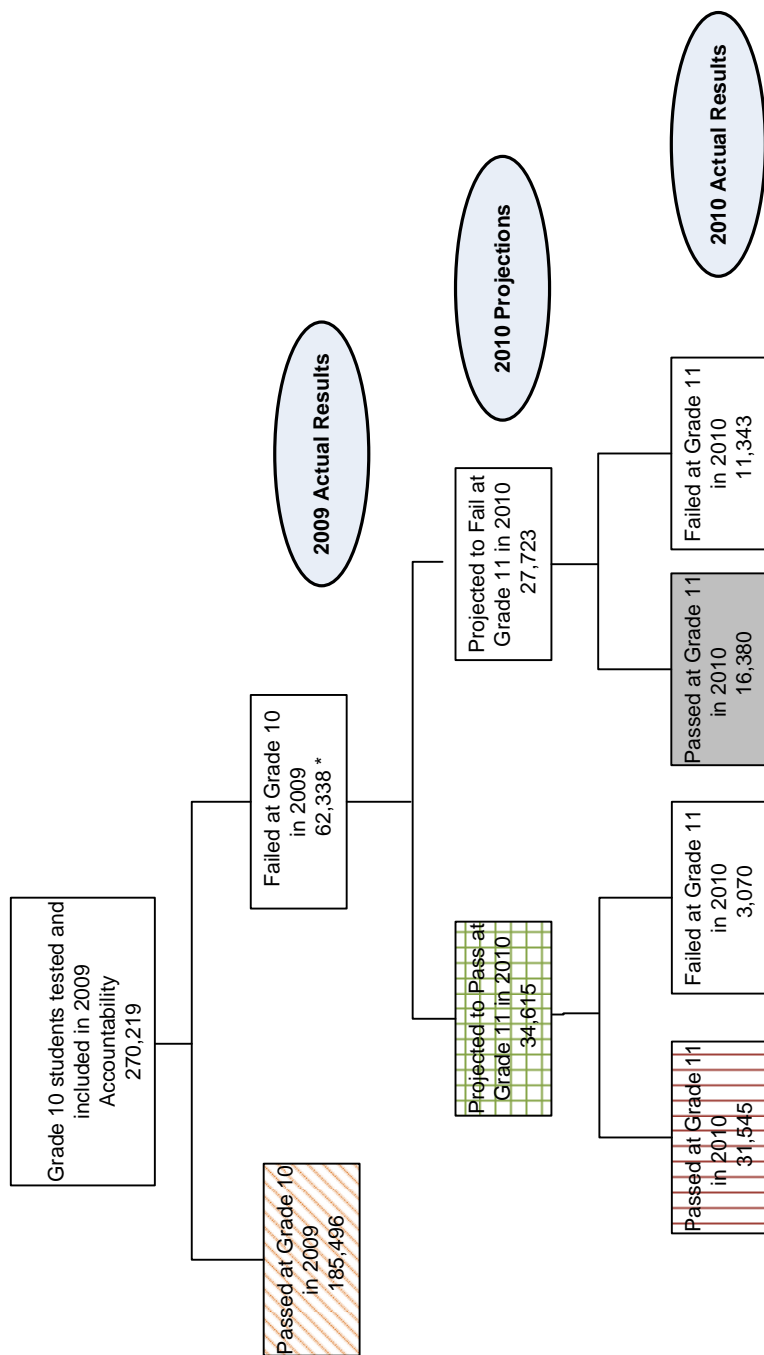


* This analysis is limited to students who had a projected value in 2009 and were able to be matched to a tested record in 2010.

TPM Projection Accuracy in 2009 Accountability

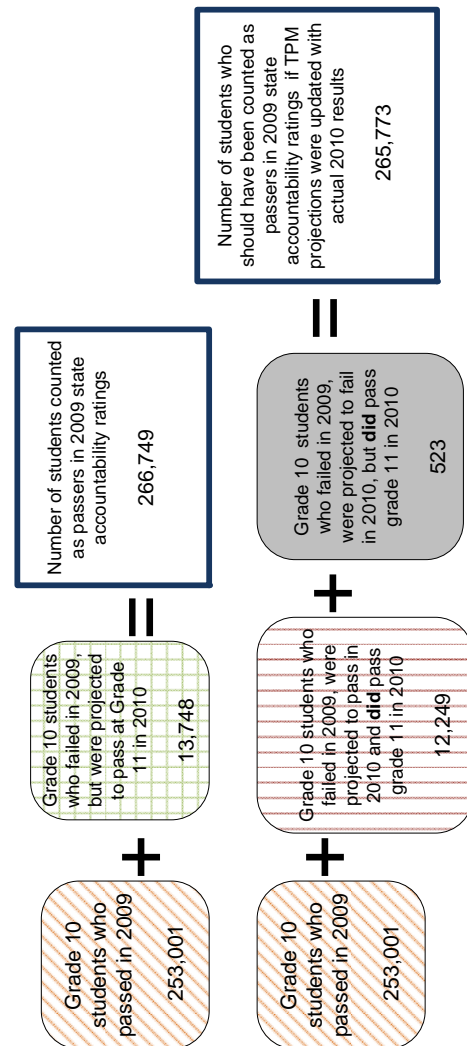
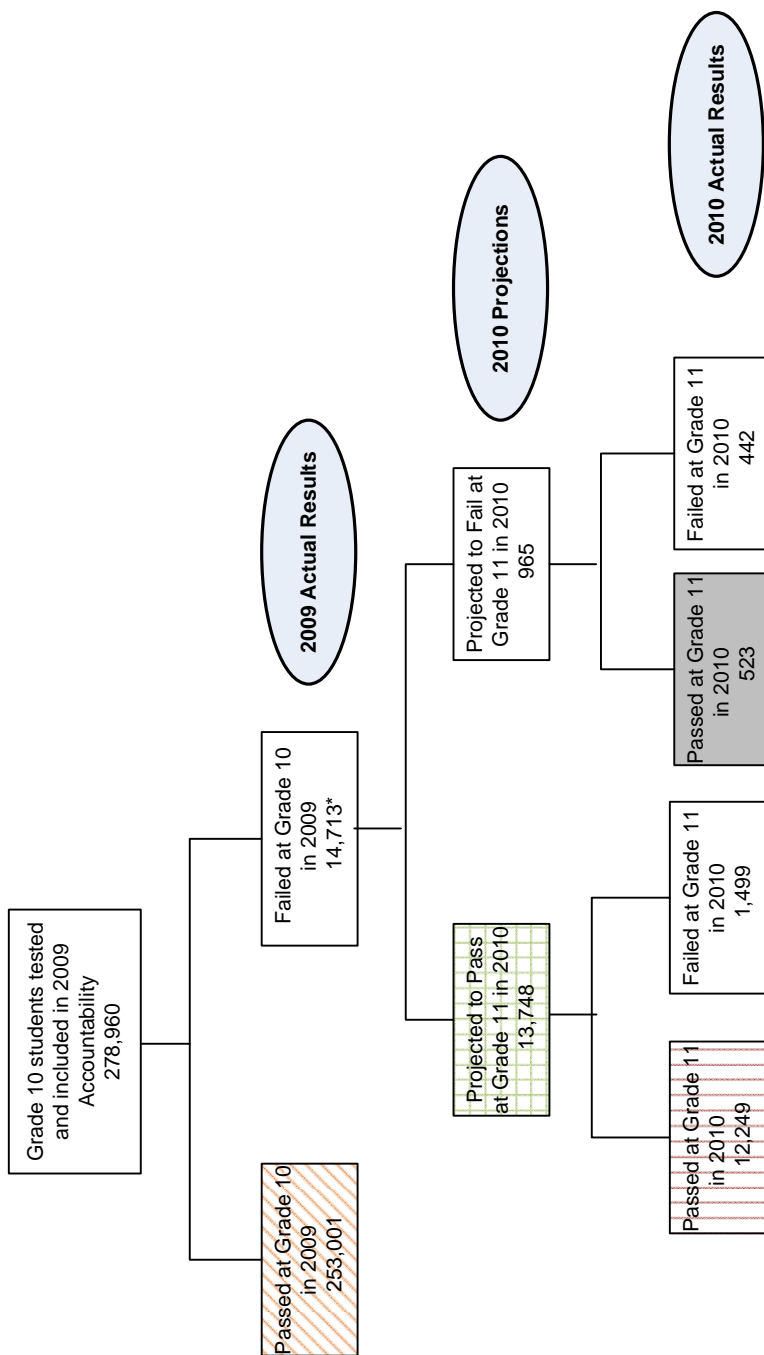
Grade 10 (2009) to Grade 11 (April 2010 Primary and July 2010 Retest Administrations)

TAKS Mathematics



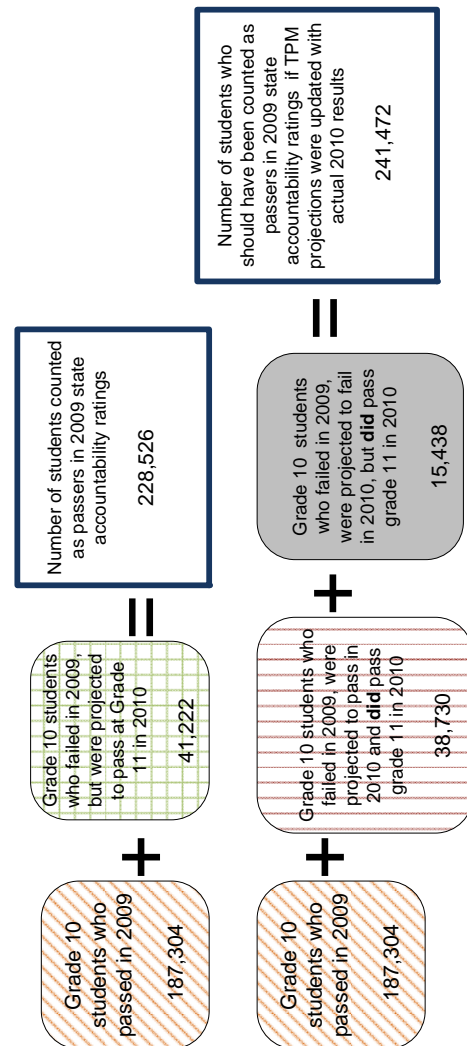
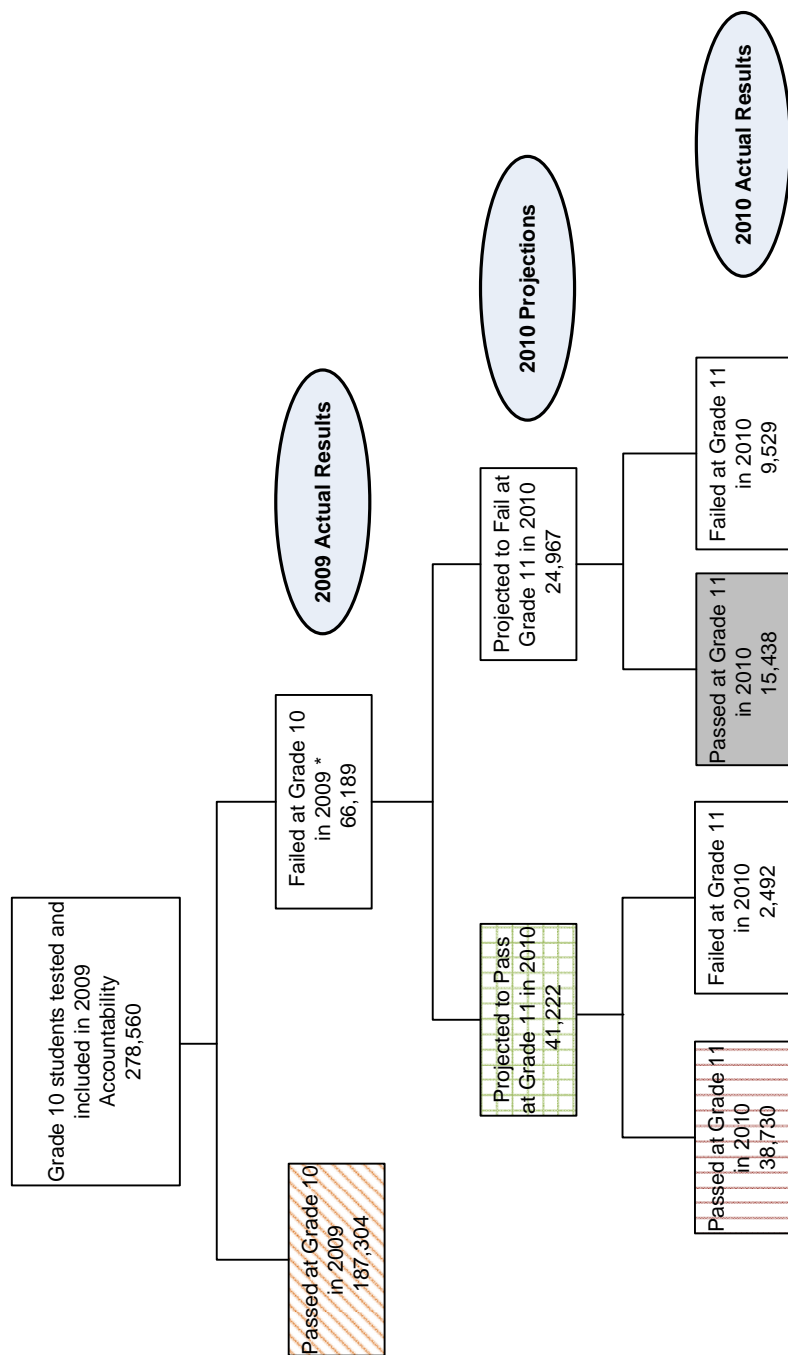
* This analysis is limited to students who had a projected value in 2009 and were able to be matched to a tested record in 2010.

TPM Projection Accuracy in 2009 Accountability Grade 10 (2009) to Grade 11 (April 2010 Primary and July 2010 Retest Administrations) TAKS Social Studies



* This analysis is limited to students who had a projected value in 2009 and were able to be matched to a tested record in 2010.

TPM Projection Accuracy in 2009 Accountability Grade 10 (2009) to Grade 11 (April 2010 Primary and July 2010 Retest Administrations) TAKS Science



* This analysis is limited to students who had a projected value in 2009 and were able to be matched to a tested record in 2010.

Attachment F

How States That Are Using USDE Approved Growth Measures Count Students

All of the states that use a growth measure for Adequate Yearly Progress (AYP) give districts and campuses two ways to meet annual accountability standards – a proficiency measure that does not include growth and a growth measure that includes growth or projection to proficiency.

Twelve of the 15 states that use a growth model for AYP already count some students who did not pass the state test as proficient for purposes of calculating AYP before giving credit for growth in the final AYP calculation. The three states that initially count only students who pass the test as proficient (Florida, Ohio, and Texas) before giving credit for growth in the AYP calculation would be expected to see more improvement with use of the growth measure.

State	Type of Growth Measure in AYP	Proficiency Measure		Growth Measure		Impact of Growth on AYP Status*		
		Credit for Proficient Only	Credit for Proficient and Below Proficient	Credit for Meet Growth Only	Credit for Proficient or Meet Growth	Additional Districts Met AYP	Additional Campuses Met AYP	Year of AYP Data
Alaska	Growth to Standard		X		X	0%	0%	2007
Arizona	Growth to Standard		X		X	0%	1%	2007
Arkansas	Growth to Standard		X	X			8%	2007
Colorado	Projection		X	X				
Delaware	Value Table		X		X		3%	2007
Florida	Growth to Standard	X			X	5%	5%	2007
Iowa	Value Table		X		X	2%	4%	2008
Michigan	Value Table		X		X	6%	3%	2008
Minnesota	Value Table		X	X				
Missouri	Growth to Standard		X		X	3%	6%	2008
North Carolina	Growth to Standard		X		X	1%	1%	2007
Ohio	Projection	X			X	40%	26%	2008
Pennsylvania	Projection		X	X				
Tennessee	Projection		X	X		N/A	1%	2007
Texas	Projection	X			X	10%	6%	2009

* Impact of Growth on AYP Status for states other than Texas: 2007 campus results are from *Interim Report on the Evaluation of the Growth Model Pilot Project* (Washington, DC: U.S. Department of Education: 2010). 2008 campus results and all district results are from *Guide to United States Department of Education Growth Model Pilot Program 2005-2008* (Washington, DC: Council of Chief State School Officers, 2009), 37.

Proficiency Measure

Texas, as well as Florida and Ohio, define the proficiency measure as percent of students who meet the proficiency standard on the state assessment.

Minnesota and Pennsylvania use a performance index that gives partial credit for students who meet a performance standard that is below proficient on the state assessment.

Alaska, Arizona, Arkansas, Colorado, Delaware, Iowa, Minnesota, Missouri, North Carolina, Pennsylvania, and Tennessee place a confidence interval around either the percent proficient or the accountability standard and school performance that falls within this confidence interval is counted as meeting the accountability standard. Michigan places a confidence interval around individual student test scores and scores that fall within this confidence interval are counted as proficient. A confidence interval is a statistical measure that defines a range of values around a point that takes sampling error into account.

Growth Measure

Texas, as well as Alaska, Arizona, Delaware, Florida, Iowa, Michigan, Missouri, North Carolina, and Ohio, define the growth measure as percent of students who either meet the proficiency standard on the state assessment or meet the growth/projection standard.

Delaware gives full credit for students who meet the proficiency standard on the state assessment but only partial credit for students who fail the test but meet the growth standard.

Arkansas, Colorado, Minnesota, Pennsylvania, and Tennessee define the growth measure as students who meet the growth/projection standard – students who meet the proficiency standard on the state assessment but do not meet the growth/projection standard do not receive credit in the growth/projection measure.

Minnesota gives full credit for students who meet the proficiency standard on the state assessment, except those who move from *Exceeds* to *Meets*, and partial credit for students who fail the test but meet the growth standard.