

SAS® EVAAS

How Accelerated Students Are Included in Growth Measures

Introduction

For the Ohio State Tests (OSTs) in Math and English Language Arts, the gain model follows students and measures growth from one grade to the next. This model assumes typical grade patterns for students. Students with non-traditional patterns, such as those who have been retained in a grade or skipped a grade, can be included in the model but are treated as separate students in different cohorts when these non-traditional patterns occur. This process occurs separately by subject since some students can be accelerated in one subject and not the other. The purpose of this document is to clarify how this policy works in practice. It includes examples from both the gain model, which is used in consecutive grades, as well as the predictive model, which is used in non-consecutive grades.

Sample Scenarios

The students described in the following scenarios are accelerated for the first time. For simplicity, assume that all test scores are usable, that all students are accountable to their school, and that all linkages result in enough equivalent students to get a value-added report.

1. Students accelerate with an MRM test to a grade not served in the school.

The students attend a K-5 elementary school. Grade 6 is served in the middle school. Students are accelerated in Math from grade 4 to grade 6 (skipping grade 5). It is the grade 5 Math teacher's job to teach the accelerated students the grade 6 Math content, and the students take the grade 6 test at the elementary school. The teacher links for both grade 5 Math and grade 6 Math. The teacher has 12 equivalent students on their grade 6 linkage and all have usable tests. They do not teach any students who have a normal trajectory of going from grade 4 to 5 to 6 because all the "regular" sixth graders are in the middle school; thus, these students and tests are the only grade 6 data attributed to this school.

- **Will the *teacher* get a grade 6 Math Value-Added report? If not, why?** No, the teacher will not receive a grade 6 Math report because OST Math uses a growth model (MRM) that requires traditional grade progression to estimate gains. None of this teacher's students will have gains from grade 5 in the previous year to grade 6 in the current year.
- **Will the *school* get a grade 6 Math Value-Added report? If not, why?** No, the school will not receive a grade 6 Math report because no grade 6 Math students at this school have traditional grade progression.
- **If the teacher and school get Value-Added reports, are these students used in the calculation? If not, why?** Neither the teacher nor the school receive value-added reports in grade 6 Math.
- **Will the students be used in the *district's* grade 6 Math Value-Added report? If not, why?** Yes, the students will be included in the District Value-Added report for grade 6 Math. These students will be treated as students with missing prior testing history. Since the district has

other non-accelerated students with grade 6 Math scores and all inclusion rules are met, the district will receive grade 6 Math reporting because of those non-accelerated students.

- **What will the teacher, school, and district see (or not see) in their Diagnostic reports?** Students without gains from the previous grade to the next grade are not included in Diagnostic reports for MRM-based tests.

2. Students accelerate with a URM test to a grade not served in the school.

The students attend a 5–7 middle school. Grade 8 is served in the high school. Students are accelerated in Science from grade 6 to grade 8 (skipping grade 7). It is the grade 7 teacher’s job to teach the accelerated students the grade 8 Science content, and the students take the grade 8 Science test at the middle school. The teacher links for *only* grade 8 Science because there is no Science test for grade 7. The teacher has 12 equivalent students on their grade 8 linkage and all have usable tests. They do not teach any students who have a normal trajectory of going from grade 6 to 7 to 8 because all the “regular” eighth graders are in the high school; thus, these students and tests are the only grade 8 data attributed to this school.

- **Will the teacher get a grade 8 Science Value-Added report? If not, why?** If all inclusion rules are met (including adequate prior testing history for a sufficient student count), then yes, the teacher will receive a grade 8 Science report because Science Value-Added reports use the prediction-based univariate response model (URM), not the gain-based model (MRM).
- **Will the school get a grade 8 Science Value-Added report? If not, why?** If all inclusion rules are met, then yes, the school will receive a grade 8 Science report.
- **If the teacher and school get grade 8 Value-Added reports, are these students used in the calculation? If not, why?** Yes, the students are used in the calculation if all inclusion rules are met.
- **Will the students be used in the district’s grade 8 Science value-added report? If not, why?** Yes, the students will be used in the district’s grade 8 Science report if all inclusion rules are met.
- **What will the teacher, school, and district see (or not see) in their Diagnostic reports?** The teacher, school, and district will see the typical URM diagnostic reporting.

3. Students accelerate with an MRM test to a grade otherwise served in the school, and the teacher has no “regular” students in the class.

The students attend a K–6 elementary school. Students move to the junior high school for grade 7. Students are accelerated in math from grade 4 to grade 6 (skipping grade 5). It is the grade 5 Math teacher’s job to teach the accelerated students the grade 6 Math content, and the students take the grade 6 test at the elementary school. The teacher links for both grade 5 Math and grade 6 Math. The teacher has 12 equivalent students on their grade 6 linkage and all have usable tests. They do not teach any students who have a normal trajectory of going from grade 4 to 5 to 6 because all the “regular” sixth graders are in other teachers’ classes. Thus, these students and tests are the only grade 6 data attributed to this teacher. The school *does* have other sixth-grade tests because other students are in other regular classes for this course.

- **Will the teacher get a grade 6 Math Value-Added report? If not, why?** No, the teacher will not receive a grade 6 Math report because Math uses the MRM, which is a gain-based approach that requires traditional grade progression, and none of the students have grade 5 prior scores.

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- **Will the *school* get a grade 6 Math Value-Added report? If not, why?** Yes, the school will receive grade 6 Math reporting based on students with traditional grade progression if all inclusion rules are met. These students will also be used in the grade 6 gain calculation but will be treated as students with missing prior year scores.
 - **If the teacher and school get Value-Added reports, are these students used in the calculation? If not, why?** Under the MRM, gain calculations require traditional grade progression. Accelerated students do not have estimated gains because they do not have a score in the adjacent grade level in the prior year. The teacher does not receive a report, but the school does. These students are used in the school calculation for grade 6 Math.
 - **Will the students be used in the *district's* grade 6 Math Value-Added report? If not, why?** Yes, these students will be used in the grade 6 district reporting. District value-added reporting for grade 6 Math will be based on students with traditional grade progression as well as these students who were accelerated.
 - **What will the teacher, school, and district see (or not see) in their Diagnostic reports?** Students without gains from the previous grade to the next grade are not included in Diagnostic reports for MRM-based tests.

4. Students accelerate with a URM test to a grade otherwise served in the school, and the teacher has no “regular” students in the class.

The students attend a 6–8 middle school. Students move to the high school for grade 9. Students are accelerated in Science from grade 6 to grade 8 (skipping grade 7). It is the grade 7 teacher’s job to teach the accelerated students the grade 8 Science content, and the students take the grade 8 Science test at the middle school. The teacher links for *only* grade 8 Science because there is no test for grade 7. The teacher has 12 equivalent students on their grade 8 linkage and all have usable tests. They do not teach any students who have a normal trajectory of going from grade 6 to 7 to 8 because all the “regular” eighth graders are in other teachers’ classes; thus, these students and tests are the only grade 8 data attributed to this teacher. The school *does* have other eighth-grade tests because other students are in other regular classes for this course.

- **Will the *teacher* get a grade 8 Science Value-Added report? If not, why?** Yes, the teacher will receive a grade 8 Science report if all inclusion rules are met because the URM is used.
- **Will the *school* get a grade 8 Science Value-Added report? If not, why?** Yes, the school will receive a grade 8 Science report if all inclusion rules are met.
- **If the teacher and school get grade 8 Science Value-Added reports, are these students used in the calculation? If not, why?** Yes, the students are used in the calculation if all inclusion rules are met.
- **Will the students be used in the *district's* grade 8 Science Value-Added report? If not, why?** Yes, the students will be used in the district’s Value-Added report if all inclusion rules are met.
- **What will the teacher, school, and district see (or not see) in their Diagnostic reports?** The teacher, school, and district will see the typical URM diagnostic reporting.

5. Students accelerate with an MRM test to a grade otherwise served in the school and the teacher has “regular” students in the class.

The students attend a K–6 elementary school. Students move to the junior high school for grade 7. Students are accelerated in math from grade 4 to grade 6 (skipping grade 5). It is the grade 6 Math teacher’s job to teach the accelerated students the grade 6 Math content, and the students take the grade 6 test at the elementary school. The teacher links for grade 6 math. They have 50 equivalent students on their grade 6 linkage and all have usable tests. Of the 50 students, 12 are accelerated and 38 are “regular” students who moved from grade 4 to 5 to 6. Thus, the school *does* have other grade 6 tests because other students are on a regular trajectory for this course. The teacher also has other students who are on a regular trajectory.

- **Will the *teacher* get a grade 6 Math Value-Added report? If not, why?** Yes, the teacher will receive grade 6 Math reporting based on students with traditional grade progression if all inclusion rules are met. Students who were accelerated will be used in the model, but their impact is negligible on the teacher growth measure.
- **Will the *school* get a grade 6 Math Value-Added report? If not, why?** Yes, the school will get grade 6 Math reporting based on students with traditional grade progression if all inclusion rules are met. Students who are accelerated will be included but treated as having missing data in prior years.
- **If the teacher and school get grade 6 Value-Added reports, are these students used in the calculation? If not, why?** Yes, the students are used in the calculation, but they have negligible impact to the teacher growth measure and are treated as students with missing prior scores in both levels of the analysis.
- **Will the students be used in the *district’s* grade 6 Math Value-Added report? If not, why.** No, accelerated students will not be used in the district’s Value-Added report. Students included in this report are those with traditional grade progression if all inclusion rules are met.
- **What will the teacher, school, and district see (or not see) in their Diagnostic reports?** Students without gains from the previous grade to the next grade are not included in Diagnostic reports.

6. Students accelerate with a URM test to a grade otherwise served in the school, and the teacher has “regular” students in the class.

The students attend a 6–8 middle school. Students move to the high school for grade 9. Students are accelerated in Science from grade 6 to grade 8 (skipping grade 7). It is the grade 7 teacher’s job to teach the accelerated students their grade 8 Science content, and the students take the grade 8 Science test at the middle school. The teacher links for *only* grade 8 Science because that is the only course they are teaching. The teacher has 50 equivalent students on their grade 8 linkage and all have usable tests. Of the 50 students, 12 are accelerated and 38 are “regular” students who moved from grade 6 to 7 to 8. Thus, the school *does* have other grade 8 tests because other students are in regular classes for this course. The teacher also has other students who are on a regular trajectory.

- **Will the *teacher* get a grade 8 Science Value-Added report? If not, why?** Yes, the teacher will receive a grade 8 Science report. All students who meet all inclusion rules (including accelerated students) will be included because the URM is used for this test.

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- **Will the *school* get a grade 8 Science Value-Added report? If not, why?** Yes, the school will receive a grade 8 science report if all inclusion rules are met.
 - **If the teacher and school get grade 8 Science Value-Added reports, are these students used in the calculation? If not, why?** Yes, the students are used in the calculation if all inclusion rules are met.
 - **Will the students be used in the *district's* grade 8 Science Value-Added report? If not, why?** Yes, the students will be used in the district's Value-Added report if all inclusion rules are met.
 - **What will the teacher, school, and district see (or not see) in their Diagnostic reports?** The teacher, school, and district will see the typical URM diagnostic reporting.

7. Students accelerate with an EOC/URM test to a grade not served in the school.

The students attend a 6–8 middle school. Grade 9 is served in the high school. Students are accelerated from OST Math in grade 7 to Algebra I in grade 8. It is the grade 8 Math teacher's job to teach the accelerated students the Algebra I content, and the students take the Algebra I test at the middle school. The teacher links for both grade 8 Math and Algebra I. The teacher has 12 equivalent students on their Algebra I linkage and all have usable tests. They do not teach any students who have a normal trajectory of going from grade 7 to 8 to Algebra I because all the "regular" Algebra I students are at the high school; thus, these students and tests are the only Algebra I data attributed to this school.

- **Will the *teacher* get an Algebra I Value-Added report? If not, why?** Yes, the teacher will receive an Algebra I Value-Added report if all inclusion rules are met.
- **Will the *school* get an Algebra I Value-Added report? If not, why?** Yes, the school will receive an Algebra I Value-Added report if all inclusion rules are met.
- **If the teacher and school get Value-Added reports, are these students used in the calculation? If not, why?** Yes, the students will be used in the calculation if all inclusion rules are met.
- **Will the students be used in the *district's* Algebra I Value-Added report? If not, why?** Yes, the students will be used in the District Value-Added report if all inclusion rules are met.
- **What will the teacher, school, and district see (or not see) in their Diagnostic reports?** The teacher, school, and district will see the typical URM diagnostic reporting.

8. Students accelerate with an EOC/URM test in the school serving other "regular" students, and the teacher does *not* have "regular" students.

The students attend a 7–12 secondary school. Students are accelerated from OST Math in grade 7 to Algebra I in grade 8. It is the grade 8 Math teacher's job to teach the accelerated students the Algebra I content, and the students take the Algebra I test at the school. The teacher links for grade 8 Math and Algebra I. The teacher has 12 equivalent students on their Algebra I linkage and all have usable tests. They do not teach any students who have a normal trajectory of going from grade 7 to 8 to Algebra I, but the school does have "regular" students who take the course from other teachers.

- **Will the *teacher* get an Algebra I Value-Added report? If not, why?** Yes, the teacher will receive an Algebra I report if all inclusion rules are met.
- **Will the *school* get an Algebra I Value-Added report? If not, why.** Yes, the school will receive an Algebra I report if all inclusion rules are met.

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- **If the teacher and school get Value-Added reports, are these students used in the calculation? If not, why?** Yes, the students are used in the calculation if all inclusion rules are met.
 - **Will the students be used in the *district's* Algebra I Value-Added report? If not, why?** Yes, the students will be used in the district's Algebra I report if all inclusion rules are met.
 - **What will the teacher, school, and district see (or not see) in their Diagnostic reports?** The teacher, school, and district will see the typical URM diagnostic reporting.

9. Students accelerate with an EOC/URM test in the school serving other “regular” students, and the teacher *does* have “regular” students.

The students attend a 7–12 secondary school. Students are accelerated from OST Math in grade 7 to Algebra I in grade 8. It is the Algebra I Math teacher's job to teach the accelerated students the Algebra I content, and the students take the Algebra I test at the school. The teacher links for Algebra I. The teacher has 50 equivalent students on their Algebra I linkage and all have usable tests. Of the 50 students, 12 are accelerated from OST Math in grade 7 to Algebra I in grade 8 while 38 students are going from OST Math in grade 8 to Algebra I in grade 9.

- **Will the *teacher* get an Algebra I Value-Added report? If not, why?** Yes, the teacher will receive an Algebra I report if all inclusion rules are met.
- **Will the *school* get an Algebra I Value-Added report? If not, why?** Yes, the school will receive an Algebra I report if all inclusion rules are met.
- **If the teacher and school get Value-Added reports, are these students used in the calculation? If not, why?** Yes, the students are used in the calculation if all inclusion rules are met.
- **Will the students be used in the *district's* Algebra I Value-Added report? If not, why?** Yes, the students will be used in the district's Algebra I Value-Added report if all inclusion rules are met.
- **What will the teacher, school, and district see (or not see) in their Diagnostic reports?** The teacher, school, and district will see the typical URM diagnostic reporting.