Implementation Brief: Using Student Growth Percentiles

Tips, tools, and considerations for using median Student Growth Percentiles (SGPs) in the evaluation of teachers and administrators

Overview
This brief offers details regarding where median SGPs must be used as a measure to inform an educator’s Student Impact Rating and where districts have discretion. SGPs are measures of student growth based on the statewide growth model. These measures have been in place since 2008. Massachusetts measures growth for an individual student by comparing the change in his or her achievement on statewide assessments (e.g., MCAS, PARCC) to that of all other students in the state who had similar historical statewide assessment results, i.e., the student’s “academic peers.”

The median SGP for an educator represents the exact middle SGP score for that educator’s students. In other words, half of an educator’s students performed above (or below) the median SGP score. This video produced by the Massachusetts Teacher Association explains the process.

The educator evaluation regulations require that statewide growth measures be used in the determination of an educator’s Student Impact Rating “where available” (603 CMR 35.09(2)).

Prior to Using Median SGPs
Before using median SGPs, districts are strongly advised to have the following conditions in place:
- Identify the district team responsible for making decisions about the use of median SGPs in educator evaluation.
- Identify individual(s) responsible for managing student SGP data for use in educator evaluation.

Suggested Next Steps
The recommendations in this brief can be helpful to districts as they proceed through the following stages of using median SGPs:
- Determine the educators for whom median SGPs will be one of the measures used in determining their Student Impact Ratings.
- Determine additional uses of median SGPs.
- Compute median SGPs and make determinations of high, moderate, and low student growth using the parameters established in this brief.

Required Use of Median SGPs
Teachers: A district is required to use median SGPs as one measure to determine a teacher’s Student Impact Rating. This applies to all teachers who teach 20 or more students for which SGPs in the teachers’ content areas (ELA or math) are available. For teachers who are responsible for both math and ELA instruction in tested grades, the district is only required to use median SGPs from one subject area in the determination of these teachers’ Student Impact Ratings. They may choose, however, to use SGPs from both math and ELA. Districts are discouraged from combining median SGPs from ELA and math into a single measure.

Median Student Growth Percentiles must be used in the determination of Student Impact Ratings for 4-8th grade Math and ELA teachers.
Combining SGPs from different subject areas will not permit districts to ascertain how a teacher’s impact on student growth differed in each subject area. Districts that decide to use both ELA and math median SGPs for a set of educators – e.g., using ELA median SGPs as one measure and math median SGPs as another – may still supplement these measures with additional district-determined measures (DDMs).

For teachers, the use of median SGPs is only required when SGPs are based on the previous year’s statewide assessment results. As a result, 10th grade SGPs are not required to be used, since students do not participate in statewide testing in 9th grade. However, districts may use these scores in certain situations. For example, if a teacher is responsible for the ELA content in both 9th and 10th grade, SGP scores from 10th grade would reflect both years of teaching.

**Definition: Teacher of Record**

The district’s definition of which teachers are responsible for content covered by statewide testing, and the process for including students (e.g., requiring 90% attendance).

ESE recommends that districts create a Teacher of Record policy to be transparent about which students’ SGPs will be included in an educator’s median SGP. A good rule of thumb to guide the policy is that educators who share responsibility for specific students should share full responsibility for these students’ growth. In other words, SGPs for students for whom an educator has primary responsibility should count equally with results from students for whom the educator has shared responsibility. This approach recognizes that teaching is often a collaborative endeavor and team members’ efforts to support shared students are inextricably linked, whether the scenario involves team teaching, pull-out resource supports, or flexible grouping.

The Teacher of Record policy should address the process by which educators confirm the roster of students whose scores will be used. It should also address district guidelines related to minimum student attendance for scores to be included in a median SGP.

**Administrators:** A district is required to use median SGPs as one of the measures used to determine an administrator’s Student Impact Rating for all administrators who supervise educators responsible for ELA or math instruction when there are **20 or more**

**students with SGPs in the content area.** Tenth grade SGPs must be used for administrators whose responsibilities include supervising ELA or math instructors in grades 9 and 10, e.g., a high school principal.

Similar to teachers, districts need to define which administrators are responsible for academic content, i.e., supervise educators who deliver instruction in the content area. The job descriptions for administrators can vary dramatically across districts. However, there are certain educators who must be evaluated using median SGPs. See call out box below.

**Administrators required to use SGPs**

- Superintendent of Schools/Charter School Leader/Collaborative Director
- Principal/Headmaster/Headmistress/Head of School
- Supervisor/Director/Coordinator of Curriculum
- Supervisor/Director/Coordinator: Mathematics
- Supervisor/Director/Coordinator: English
- Supervisor/Director/Coordinator: Reading

**Examples:** A tenth grade English teacher with 60 students is not required to use median SGPs because the SGPs in tenth grade are not based on testing from a previous year.

A high school principal (9th grade – 12th grade) is required to use either median SGPs from 10th grade ELA or 10th grade math. There are no problems of attribution for an administrator, since he or she supervises the educational program for both years.

A middle school special education teacher who teaches math classes for 30 students who are pulled out of other classes or grades (10 students in each grade, grades 6-8) is required to use math median SGPs because he/she has a total of 30 students with math SGPs who meet the district’s definition of Teacher of Record. There is no requirement that the students are all in the same class or grade for educators as long as they are in the same subject area.

A 4th grade elementary classroom teacher with 15 students is not required to use median SGPs since he/she has fewer than 20 SGPs in any specific tested area. However, districts may choose to use median SGP for educators even with less than 20 students. See the next section for more information.
**Why 20 students?**

There are many factors that determine student’s median SGPs. One of those factors is the impact of the teacher on the student. The greater the number of students included in a median SGP, the greater the chance that differences in median SGPs reflect differences in teacher impact. When there are at least 20 students, ESE requires the use of median SGP.

Although median SGPs calculated using SGPs from 8-19 students have more error, ESE has confidence that the measure still provides meaningful information about a teacher’s impact. However, given the increased chance of error, districts have the flexibility to choose whether to use these median SGPs.

**Other uses for median SGPs**

**Fewer than 20 students:** Districts are not required to use median SGPs for educators with fewer than 20 students. However, districts may decide that median SGP is the best available measure for these educators. ESE has confidence that SGPs are a high quality measure of student growth. While the precision of a median SGP decreases with fewer students, median SGP based on 8-19 students still provides quality information that can be included in making a determination of an educator’s impact on students.

Districts are strongly encouraged to use median SGPs for all educators with the same job description. For example, if one 4th grade teacher in the district who has 22 students with SGPs and is therefore required to use median SGPs and three other 4th grade teachers who teach only 18 students with SGPs, the district is strongly encouraged to use the median SGP for all 4th grade teachers to promote fairness.

**Small number of students:** Districts may use student’s median SGP scores when a teacher has seven or fewer students. However, ESE recommends that SGP be used in combination with other information and not used as a stand-alone measure. Student’s SGPs can be combined with other measures of student growth.

For example, a teacher may work with a small group of five students in mathematics. A DDM for this teacher may combine results from a pre- and post-test with students’ SGPs to create a measure focused on growth in mathematics. The additional information gained from the pre- and post-test is necessary because of the small number of students.

**SGPs and Special Education Students:** Since SGPs are based on student growth, they provide a more fair assessment of an educator’s impact compared to measures of student achievement. One challenging area is around the use of median SGP with teachers who work with special education students. Based on analyses of historical SGP data, students with disabilities tend to have lower SGPs as a group, regardless of teacher, as compared to students who are not receiving special education services.

A special education teacher can still demonstrate both high and moderate impact on student learning, but educators who are responsible for students with disabilities will have an increased chance of demonstrating low impact on students.

ESE advises against changing the definition of high, moderate, low growth for these educators because this could be misinterpreted as a message that it is acceptable for teachers to set lower expectations for growth for students with disabilities. ESE’s recommendation is that evaluators and educators address this potential concern by using professional judgment when reviewing patterns and trends in student growth to determine Student Impact Ratings.

**Timing of release of SGPs**

ESE expects that SGPs will be released to districts late in the summer. Districts should complete the Summative Performance Rating prior to the release of SGP results. Educators with Summative Ratings of Needs Improvement or Unsatisfactory should immediately begin working on Directed Growth Plans or Improvement Plans.

Determinations of the length of an Educator Plan for educators with Summative Performance Ratings of Proficient or Exemplary who also use median SGPs as a measure to inform Student Impact Ratings may be delayed until the following fall. Districts will report final Student Impact Ratings to ESE in October, giving them enough time to use SGP results.

**Determining an Educator’s median SGP**

The following steps present one method for calculating educators’ median SGPs. First, the district creates student rosters for all educators for whom median SGPs will be used as a measure of student growth. These rosters can be created using tools, such as Edwin Analytics or Excel, and need to include students’ SASID numbers.
Once educators confirm rosters, the district runs the GR602 report in Edwin Analytics. A screenshot of the report prompt page appears below.

On the prompt page, the district selects “MCAS Students” under the “Select Students From” field and “SASID List Prompt” under the “Prompt Page” field. The district then cuts and pastes the list of SASIDs from each educator’s roster in the area labeled “SASID list,” selects the appropriate test administration, and runs the report.

The report will identify the median (or middle) score for all students included in the SASID list. If an educator has an even number of students, the median SGP will be the average of the two middle scores. For example, if an educator had students with SGP scores of 33, 52, 61, 63, 73, and 85, the educators’ median SGP would be 62. The evaluator can save the report as a PDF and repeat the process with additional educators.

**Making a Determination:** Districts should use the chart on this page to determine how an educator’s median SGP translates to a determination of high, moderate, or low growth. Unlike DDMs, which require the development of unique parameters for high, moderate, and low growth that may vary by DDM and by district, ESE has established statewide growth parameters for median SGPs.

For the purposes of school and district accountability, a median SGP of 60 points or higher is above target, while a median SGP of 40 or below is below target. As a result, growth parameters for administrators for Impact Rating match these determinations.

Since teachers are typically responsible for smaller numbers of students than administrators, the cut scores for teachers reflect the need for additional evidence to make a determination of high or low growth.

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**Median SGP Growth Parameters for Teachers and Administrators**

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<thead>
<tr>
<th></th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers</td>
<td>35 or lower</td>
<td>Greater than 35, but less than 65</td>
<td>65 or higher</td>
</tr>
<tr>
<td>Administrators</td>
<td>40 or lower</td>
<td>Greater than 40, but less than 60</td>
<td>60 or higher</td>
</tr>
</tbody>
</table>

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**MCAS Student Growth Roster**

- **Select Students**
  - Select Students From: MCAS Students
  - Prompt Page: SASID List Prompt

- **Select MCAS Test**
  - Test: Spring 2014
  - Test Grade: 10
  - Sort by: ELA Scaled Score
  - Group by: All Students

*Latest SMS collection loaded is October 2014-2015.*
student growth. Internal analysis by ESE has determined that these cut scores should identify a comparable percentage of teachers and administrators in each category statewide.

**Frequently Asked Questions**

*Are teachers required to use 10th grade SGPs?*
No. The use of median SGP is only required for educators of 4th-8th grade ELA or math. The use of median SGP is only required when students' median SGPs are based on results from the previous year.

*Can more than one educator be responsible for the same student's SGP?* Yes. Students who receive instruction from multiple teachers may be included in multiple teachers' median SGP. For example, a student who attends both a regular Language Arts class and participates in a pull-out program focused on learning those same skills could have his or her SGP included in both the regular education and pull-out teachers' median SGP.

*Which administrators are required to use median SGPs?* Principals and other administrators directly responsible for overseeing academic content are required to use median SGPs. Districts should clearly define which administrators will use median SGPs.

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http://www.doe.mass.edu/mcas/growth/