

Tracking Student Achievement in Music Performance

Developing Student Learning Objectives for Growth Model Assessments

Abstract: Student achievement growth data are increasingly used for assessing teacher effectiveness and tracking student achievement in the classroom. Guided by the student learning objective (SLO) framework, music teachers are now responsible for collecting, tracking, and reporting student growth data. Often, the reported data do not accurately reflect the true teaching and learning that occurs in music classrooms due to insufficient teacher training and/or the use of district-suggested SLOs that do not fit the parameters of music teaching. This article discusses the development of objectives, benchmarks, and learning targets that are meaningful to music performance and satisfy state and district requirements. Several methods are provided to accurately and efficiently track and report student growth data.

Keywords: achievement, data, evaluation, measurement, model, music, SLO, standardized testing, student learning objective, teacher effectiveness, value-added

The landscape of educational assessment is rapidly changing with the adoption of growth measurement models, as reform policies are now tying student growth evidence to formal teacher evaluations.¹ For teachers of the common core subjects, student growth achievement data are gathered through high-stakes standardized testing combined with value-added measurement models.² For non-Common

Core subjects, such as music, student learning objective statements (SLOs) are gradually becoming one of the predominant methods for incorporating student growth and achievement measures into the teacher evaluation process.³ A growing number of states are piloting and implementing SLOs that incorporate a measure of student growth in the teacher evaluation process.⁴ In many instances, music teachers with minimal

How you track student progress can make a difference in their learning and your teaching.

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amounts of SLO training are developing SLOs for their classrooms and programs, resulting in data that do not reflect the true teaching and learning that occurs in music classrooms.⁵ As an example, according to a recent teacher effectiveness pilot study report conducted by the Georgia Department of Education,

student learning objectives (SLOs) were one of the areas of concern to district leaders, principals, and especially teachers. While there was an agreement from all groups that accountability should be equitable across all courses and disciplines, there was much trepidation about the SLO documents, targets, and process. . . . There were concerns about quality, standardization, consistency, and confidentiality. . . . Quality was viewed as an issue because of the number of SLOs that had to be developed in a very short time period, and the level of expertise among developers was inconsistent.⁶

This article offers (1) a discussion of the development of objectives, benchmarks, and learning targets that are meaningful to music performance and meet state/district expectations and (2) a method for efficiently tracking and reporting growth data.

Developing meaningful learning objectives and facilitating the growth assessment process can be guided by a series of four questions:

1. What is our most salient teaching in the classroom?
2. What do we want our student to know and be able to do?
3. How are we assessing our students?
4. How much have our students learned and improved over the course of instruction?

Choosing Content Areas to Assess

What is our most salient teaching in the classroom? According to clinician and music program consultant Tim Lautzenheiser,

as teachers, we pledge our efforts to prepare our students for what lies ahead in their personal and professional journey.

In the process of preparing for a concert, sight-reading new literature, teaching a musical concept, or listening to a quality performance, we are helping our students establish thinking habits that are immediately transferable to other academic areas, and we are teaching the life-skills that will support their healthy and prosperous future.⁷

Although these benefits are important music advocacy items and undoubtedly support student learning and development in and outside of music, districts are interested in *quantitative* assessment data that provide information on academic improvement and accountability.⁸ More specifically, districts want to know the following: (1) Are music students learning the skills and concepts set forth by national and state standards? and (2) How much are students learning and growing over time?

Music teachers intuitively give immediate feedback on student performance with great diagnostic power throughout the course of a given rehearsal. The ebb and flow of music rehearsals can lead to a teacher's intimate knowledge of student achievement and growth over the course of an instructional interval. According to author and past president of MENC (now the National Association of Music Education) Charles Hoffer, "based on what they see or hear, music teachers usually make decisions about how well a class or ensemble did on the particular activity and decide what further actions need to be taken."⁹ Mark Rhodes indicates, for example, that high school choral directors "do not simply enact a series of preconceived rehearsal strategies and routines. Choice of strategies is closely linked to actual, perceived needs as the rehearsal unfolds."¹⁰ The reactionary approach to music performance assessment has incredible value in the music-making process; however, its use as a single method for guiding instruction is a trap many music educators may fall into due to the significant time and effort needed to strategically plan for rehearsals. The challenge that music educators face is to methodically document and quantify the most important concepts and skills they want their students to know and

to be able to do at varied performance achievement levels. Another challenge is doing this in a manner that is convenient enough to handle large quantities of students without changing or disrupting the tradition of large ensemble music rehearsals and performance. In order to accomplish this, it is first important to consider assessing individual students using diagnostic areas that can underscore all warm-ups and selected musical repertoire. These areas of diagnosis can include tone, intonation, melodic accuracy, rhythmic accuracy, tempo, interpretation, technique, and articulation.¹¹ Second, it is important to select literature that complements the instructional objectives. SLO evaluators are interested in seeing growth on the most salient parts of student learning, not all learning in the classroom.¹² Music teachers will be able to accommodate the data needs of districts while tracking the growth and improvement of student learning by focusing on major diagnostic areas that underscore all performance elements of music rehearsals and concerts.

Understanding and Developing Objectives

Importance of Objectives-Based Teaching

What do we want our students to know and to be able to do? According to educational experts Gary R. Morrison, Steven M. Ross, Howard K. Kalman, and Jerrold E. Kemp, student learning objectives serve two purposes: (1) to offer a means for the educator to design specific, appropriate, and organized instructional activities that facilitate effective learning and (2) to provide a framework for devising ways to evaluate student learning.¹³ Using clearly defined objectives offers many benefits to teachers, students, and parents.¹⁴ The benefits to teachers include the following:

- Clear statements of what to assess
- Well-defined instructional activities
- A balanced direction of depth of instruction
- Documentation for accountability

The benefits to students include the following:

- Clear communication of teacher expectations
- An established framework for student self-evaluation

The benefits to parents include the following:

- Clear communication of the depth and breadth of student work
- A foundation for involving parents in the student learning process
- An understanding of the relationship between student performance and grades

Types of Objectives

Traditional educational theory has outlined three types of objectives that vary in specificity: global, educational, and instructional.¹⁵ The SLO frameworks now being utilized by states and districts throughout the United States call for all three types objectives, and therefore, it is important to understand the distinction between them. Global objectives are the broadest and are most commonly thought of as “goals.” Global objectives are considered to be the forethought of a course of study. Examples of global objectives in the field of music can include any of the 1994 National Standards for Arts Education (e.g., listening to, analyzing, and describing music) or the three artistic processes of the new National Coalition for Core Arts Standards (e.g., creating, performing, responding).¹⁶

Educational objectives are more moderate in scope and generally necessitate weeks or months to achieve. These objectives should be *observable* and *measurable*. According to Anderson et al., educational objectives define the performance element of learning expectations but do not identify the conditions or criterion of the learning outcome.¹⁷ Examples of educational objectives may be drawn from state achievement standards that parallel each of the nine content standards (e.g., “Demonstrate the

ability to adjust the instrument to play in tune independently”).

Instructional objectives are the most specific in scope. These objectives are to be developed by the teacher and generally guide daily and weekly teaching in the classroom.¹⁸ A well-crafted instructional objective includes three elements:¹⁹

- 1. Condition:** A description of the important conditions or limitations under which the performance is to occur (e.g., “At the conclusion of the lesson . . .”).
- 2. Performance:** The action that describes what a learner is expected to be able to do (e.g., “Students will be able to audibly differentiate between a major third interval performed in equal temperament tuning and a major third interval performed in just intonation”).
- 3. Criterion:** The standard of achievement for a performance to be considered acceptable (e.g., “Students must score with 80 percent accuracy on the assessment in order to successfully complete the learning activity”).

The following is an example of a complete and descriptive example of an instructional objective: “At the conclusion of the lesson, students will be able to audibly differentiate between a major third interval performed in equal temperament tuning and a major third interval performed in just intonation tuning. Students must score with 80 percent accuracy on the assessment in order to successfully complete the learning activity.”

The learning content of an appropriately developed SLO statement utilizes global, educational, and instructional objectives (see Figure 1). Global objectives should be drawn from the nine National Content Standards for Arts Education or three artistic process of the National Coalition for Core Arts Standards.²⁰ Educational objectives should be drawn from the state achievement standards that parallel each of standards. Instructional objectives are developed by the teacher and serve to document

the learning and teaching processes in the classroom that underscore the educational and global objectives.

Developing Instructional Objectives

Thinking SMART. Many state SLO handbooks use consultant and former director of corporate planning for Washington Water Power Company George Doran’s SMART acronym as a strategy for developing properly designed instructional objectives. Using the SMART acronym is beneficial for evaluating the appropriateness and feasibility of objectives throughout the development process. According to the Doran, instructional objectives should be as follows:²¹

- *Specific:* The objective is focused by content standards and by learners’ needs.
- *Measurable:* An appropriate instrument/measure is selected to assess the objective.
- *Appropriate:* The objective is within the teacher’s control to effect change and is a worthwhile focus for the students’ academic year.
- *Realistic:* The objective is feasible for the teacher and student.
- *Time limited:* The objective is contained within a single school year or instructional period.

Instructional objectives are the central focus of the SLO, specifically because they are measureable, classroom specific, and have the power to demonstrate evidence of growth according to cognitive rigor levels (e.g., levels of learning/thinking). In SLO terminology, the criterion is called a “benchmark.”²² In considering an appropriate benchmark score for the students, careful thought should be given to previous individual student and/or performance (if available), teacher expectations according to individual and/or group performance achievement level, and most important, the level of learning/thinking of the stated learning objective.

FIGURE 1

Utilization of Global, Educational, and Instructional Objectives

Target Population	Grade 9-12 Beginning Band (90 students)
Learning Content	MHSBB.2 – Performing on instruments, alone and with others through a varied repertoire of music
	MHSBB.2b: Demonstrate proper warm-up techniques through the use of long tones, lip slurs, chorales, and technical exercises
	1. At the end of 18 weeks, students will be able to <i>describe</i> the pedagogical utility of participating in daily warm-up drills
	From Week 1 to Week 18, 95% of the students comprising the beginning band will improve their pre test to post test scores as measured by short answer responses.
	2. At the end of 18 weeks, students will be able to <i>cite</i> examples of pedagogically appropriate, instrument-specific warm up techniques
	From Week 1 to Week 18, 95% of the students comprising the beginning band will improve their pre test to post test scores as measured by short answer responses.
	3. At the end of 18 weeks, students will be able to <i>distinguish</i> between effective and ineffective warm-up techniques
	From Week 1 to Week 18, 95% of the students comprising the beginning band will improve their pre test to post test scores as measured by short answer responses.
	4. At the end of 27 weeks, students will be able to <i>analyze</i> elements of effective and ineffective warm-up techniques
	From Week 1 to Week 27, 85% of the students comprising the beginning band will improve their pre test to post test scores as measured by short answer responses.
	5. At the end 36 weeks, students will be able to <i>demonstrate</i> pedagogically appropriate, instrument-specific warm up techniques with characteristic tone and intonation according to a pre-approved rating scale.
	From Week 1 to Week 36, 85% of the students comprising the beginning band will improve their pre test to post test scores as measured by a pre-approved rating scale.
	6. At the end 36 weeks, students will be able to <i>evaluate</i> their own warm-up performance according to a pre-approved rubric.
	From Week 1 to Week 36, 85% of the students comprising the beginning band will improve their pre test to post test scores as measured by short answer responses.
7. At the 36 weeks, students will be able to <i>diagnose</i> their own warm-up performance according to a pre-approved rubric.	
From Week 1 to Week 36, 75% of the students comprising the beginning band will improve their pre test to post test scores as measured by short answer responses.	

This is a global objective (“goal”) for the course (e.g. National Standard). Note that it is not measurable and does not provide evidence for growth.

This is an educational objective (e.g., State Achievement Standard). Note that it defines the performance element (e.g. demonstrate) but does not provide the conditions or criterion.

These are the instructional standards. Note that they define the condition and performance element and are measurable.

The criterion for each instructional standard has been described separately in order to call specific attention to where and how the growth will occur.

Educational Taxonomies and Benchmark Expectations. A variety of educational taxonomies have been adopted by districts and states nationwide. Examples of widely used taxonomies include but are not limited to Bloom's *Taxonomy of Educational Objectives*;²³ Bloom's revised *Taxonomy for Learning, Teaching, and Assessing*;²⁴ Marzano and Kendall's *New Taxonomy of Educational Objectives*;²⁵ and Webb's *Depth of Knowledge Levels*.²⁶ Using educational taxonomies to facilitate the development and guide the organization of learning objectives can improve content appropriateness, assessment effectiveness, and efficiency in learning and teaching. Additionally, taxonomies provide convenient ways to concretely describe the learning and skill development that occur in the music classroom (e.g., comparability across classrooms) and to gauge cognitive rigor (e.g., level of higher-order thinking skills).²⁷ Conceptually, taxonomies contain hierarchical levels of knowledge. The lowest level of the taxonomies often includes the recall and remembering of information. The middle levels of the taxonomies include the breaking down of information and developing understandings of relationships, and the upper levels of the taxonomies include independent thinking through problem solving, decision making, performance, and evaluation.

Sequencing of Instructional Objectives. Accurate measurement of performance achievement for each individual student in the ensemble can be obtained by strategically sequencing instructional objectives. This evidence can drastically improve the teacher's diagnostic power and guide future changes in teaching approaches, therefore improving learning of the individual students and ensemble. In planning the sequence of learning objectives for a given instructional interval, the following guidelines should be considered:

1. Lower level objectives should be planned earlier in the instructional

process to formulate a foundation for future cognitive development.

2. As the instructional process evolves throughout the instructional interval, objectives should increasingly move to a more demanding cognitive rigor level. (i.e., Students will be able to [SWBAT] aurally *identify* a quarter note (level 1, Bloom) should precede SWBAT aurally *discriminate* between a quarter note and eighth note (level 2, Bloom). SWBAT aurally *discriminate* between a quarter note and eighth note (level 2, Bloom) should precede SWBAT *order* a quarter note, eighth note, and sixteenth note in a hierarchical subdivision structure (level 3, Bloom).
3. Lower-level objectives may use less instructional time to demonstrate the planned growth.
4. The benchmarks for lower-level objectives should be set at a more rigorous level than higher-level objectives. As there is higher cognitive rigor, the benchmark should be lower.

Developing Appropriate Measures

How are we assessing our students? Two broad categories of assessment measures exist: selected response and constructed response. Selected-response measures require the student to select a response from available pool of options. Types of selected-response measures include multiple-choice, true/false, and matching items. Constructed-response assessment measures require students to construct a response to a prompt, which may be written or, often in the case of music performance, demonstrated on an instrument. In music performance, students are evaluated based upon predetermined constructs (e.g., criteria, task expectations, and degrees of proficiency outlined in a rubric or rating scale²⁸). Constructed-response measures have also been referred to as authentic assessments,²⁹ direct assessments,³⁰ and

performance assessments.³¹ According to a recent article on assessment published in *Music Educators Journal*, the best assessment devices to use in constructed-response assessments of musical performances are rubrics and/or rating scales.³²

The most recent trend in education is to combine selected-response assessments and constructed-response assessments in order to give a more complete and thorough picture of student performance.³³ Understandably, music educators favor performance assessments due to the performance nature of music-making. However, the addition of selected-response assessments to an assessment framework may provide a more holistic understanding of individual student learning and achievement.

The verbs used in instructional objectives can guide the teacher in selecting the appropriate type of assessment. Often, lower-level instructional objectives (e.g., SWBAT identify, match, differentiate, distinguish) use selected-response formats. Higher-level objectives, where the student is asked to create, evaluate, diagnose, or perform on an instrument, lend themselves to constructed-response assessments.

Tracking Growth

How much have my students learned and improved over the course of instruction?

What Is Growth Measurement?

Student growth can be defined as the change in student achievement as demonstrated by differences in scoring data between two points in time, specifically, by comparing differences between a pretest (e.g., evaluation prior to instruction) and a posttest (e.g., evaluation at the end of instruction).³⁴ As an example, if a teacher's educational objective is to assess individual students on their ability to modify individual intonation to eliminate beats, several instructional objectives can be developed that support the

educational objective (e.g., ability to identify beats, ability to identify flat versus sharp, ability to adjust instrument, etc.) and individually assess students on each objective using a rubric. The difference in the data gleaned from this rubric prior to instruction and after instruction will yield growth data.

Music ensembles often contain students with a wide range of performance achievement levels. This range is due to many factors, including aptitude, experience, effort, and even instrument difficulty. Is it fair to grade the principle clarinetist who is an all-state participant with five years' experience and takes weekly private lessons in the same manner as the student who was switched to bassoon last year in order to balance out the ensemble's instrumentation? If we are assessing these students using performance assessments, can we expect them to perform at the same ability level and demonstrate the same amount of growth? Growth target assessment systems can help accommodate for such differences while promoting fairness and equity in grading without sacrificing the validity of scores.

Choosing Growth Targets

Evaluating Pretest Data. The selection of the type of growth target and assigned scoring values should be based upon the analysis of pretest scoring data. First, calculate the average of the scores. How did the class perform as a whole? Was it higher or lower than expected? If the students did not meet expectations, reevaluate the appropriateness of the instructional objective being assessed. If the original objective was to "audibly differentiate between an equal temperament major triad and just tuned major triad performed harmonically" and the students on average performed lower than expected, consider changing the content (e.g., "SWBAT audibly differentiate between an equal temperament major third and just tuned major third performed harmonically") or lowering

the level of the objective ("SWBAT audibly identify beats in major third intervals performed harmonically").

Next, calculate the range of the scores (e.g., the distance between the lowest and highest scores). Are there any students who scored extremely high or extremely low compared to the average? What may have caused the students to perform this way? Possibly there are all state players that excel above the average of your ensemble. Or, a new student may have arrived in the classroom who recently relocated and lacks prerequisite skills. There could be a student learning a new instrument. Did a student just have braces put on? This information may pinpoint specific students that may need remediation throughout the school year. Additionally, this information may guide the selection of types of targets.

Last, look for patterns of scoring. Are there any naturally occurring clusters of scores? (e.g., groups of students centered around low, middle, or high scores). Are there similarities or differences between students, sections, or instruments? Obvious patterns may guide the decision of setting specific target scores for the posttest.

Selecting Types of Growth Targets. Based on district expectations and policies, growth targets can be differentiated in three manners: (1) whole-group growth targets, (2) tiered/grouped growth targets, and (3) individual growth targets (see Figure 2). The whole-group growth target includes one target for all students in the ensemble (e.g., 80 percent of students will demonstrate 50 percent or higher growth throughout the instructional interval). This may be an option for a beginning-level ensemble where all students have similar performance achievement levels and experience. This may also be an option if the range of scores on the pretest is small.

The tiered/grouped growth target categorizes students and sets varying targets for each category based upon pretest data. This may be the best option for most music ensemble teachers due

to the wide range of individual student performance achievement levels within performing groups.

Individual student growth targets use customized achievement goals for each individual student based upon his or her pretest scores. This may be an option for a music class with very few students, mismatched instrumentation, or individual students who require special accommodations. Also, students who demonstrated scores on the far ends of the range of group scores (e.g., extremely low or extremely high) might benefit from individualized student growth targets.

Setting Posttest Targets. Setting specific targets for students to meet is a highly personalized and subjective process. In some instances, the district may set growth targets. In other instances, administrators and district representatives may work closely with teachers to set feasible and appropriate targets. The state of New York states five helpful considerations when setting posttest standards:³⁵

1. Is the target rigorous enough to ensure that all students are on track to achieve college and career readiness?
2. To what extent does the target align with school and district goals and expectations?
3. How well do the targets prepare students for success in future progressions (e.g., next grade level or level of study) of the same content?
4. How is the current knowledge and skill of the targeted students informing the target?
5. What professional development, resources, and/or other supports are going to be used to meet the target?

Managing Growth Assessment Data. A major concern of teachers with implementing the SLO framework is the amount of time and effort needed to calculate and present class data for the purpose of accountability. Developing

FIGURE 2

Differentiation of Growth Targets

<p>Whole Group (adapted from the state of Georgia)</p>	<p>Minimum expectation is that all students will demonstrate 70% of potential growth.</p>
<p>Tiered Group (adapted from the state of Ohio)</p>	<p>Tier 1: Students scoring below 50% on all pretest will score between 51% and 74% on all posttests.</p> <p>Tier 2: Students scoring between 50% and 74% on all pretests will score between 75% and 89% on all posttests.</p> <p>Tier 3: Students scoring between 75% and 89% on all pretests will score above 90% on all posttests.</p> <p>Tier 4: Students scoring above 90% on all pretests will demonstrate a 2% increase in posttest scores.</p>
<p>Individual Student (adapted from the state of Arizona)</p>	<p>Student 1: 81.7%</p> <p>Student 2: 91.6%</p> <p>Student 3: 85.9%</p> <p>Student 4: 90.1%</p> <p>Student 5: 86.8%</p>

an automated Excel template that can calculate targets, tiers, and benchmarks can save vast amounts of time.³⁶ A data set and calculations are shown Figure 3 as a template example. The sample data set simulates the assessment of five high school-level brass performers. A total of four constructed response assessments (e.g., pretest, formative 1, formative 2, posttest) were given throughout the one-year instructional interval. The music director evaluated the students using a nine-item rubric with four degrees of proficiency (e.g., beginning, developing, proficient, accomplished).

Documenting True Learning

Measuring individual student growth is at the center of many modern educational

reform policies. The call for increased accountability in schools has compelled music educators to collect, track, and report individual student growth data as means for demonstrating music performance achievement. As a result, they are obligated to reevaluate their planning, instruction, and assessment strategies to focus greater attention on individual student achievement over the course of an instructional period. This article has provided a strategy for developing objectives, benchmarks, and learning targets in a manner that facilitates the assessment of individual student growth while still providing meaningful teaching in music performance. Looking forward, the music education profession should consider more effective, efficient, and clearly defined ways

to document true learning in the music classroom that aligns with district policies while enhancing the music-making and learning process.

“The word ‘orchestra’ comes from a Greek word meaning a dancing place [from *orcheisthai* = to dance]. Today, it means a large group of instruments, as distinct from smaller chamber ensembles with only one player to each part.”

—Christopher Headington, *The Illustrated Dictionary of Musical Terms* (1980), p. 106

FIGURE 3

Sample Data Set in Microsoft Excel with Growth Target Calculations, Benchmark Calculations, and Class Statistics for a Tiered/Grouped Growth Target Differentiation

Student	Assessment	Date	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Total Points	% Score	Total Possible Points	Pretest Tier	Posttest Tier	% Gained	Total Points Gained	Growth Expectation Met?	
1	Pretest	8.15.14	2	1	2	1	2	2	1	1	2	14	36	0.39						
	Formative 1	11.15.14	2	1	2	1	2	2	1	2	15	36	0.42							
	Formative 2	2.15.15	3	2	2	3	3	2	2	1	2	20	36	0.56						
2	Posttest	5.15.15	3	2	3	3	3	2	2	1	3	22	36	0.61	1	2	8.00	22%	YES	
	Pretest	8.15.14	3	3	3	3	2	3	3	3	3	26	36	0.72						
	Formative 1	11.15.14	3	3	4	4	3	3	3	2	28	36	0.78							
3	Formative 2	2.15.15	3	3	4	4	4	3	3	3	3	29	36	0.81						
	Posttest	5.15.15	3	4	4	4	4	4	4	3	4	34	36	0.94	2	4	8.00	22%	YES	
	Pretest	8.15.14	3	2	2	2	3	3	2	1	1	19	36	0.53						
4	Formative 1	11.15.14	2	2	1	2	2	3	3	2	1	18	36	0.50						
	Formative 2	2.15.15	3	3	2	3	3	2	2	1	3	22	36	0.61						
	Posttest	5.15.15	3	2	3	2	3	2	3	1	3	22	36	0.61	2	2	3.00	8%	NO	
5	Pretest	8.15.14	2	2	3	2	3	2	3	3	4	24	36	0.67						
	Formative 1	11.15.14	3	3	3	3	3	3	3	4	28	36	0.78							
	Formative 2	2.15.15	4	3	3	4	3	4	4	4	4	33	36	0.92						
5	Posttest	5.15.15	4	3	3	4	4	4	4	3	4	33	36	0.92	2	4	9.00	25%	YES	
	Pretest	8.15.14	3	2	2	3	3	2	2	1	2	20	36	0.56						
	Formative 1	11.15.14	2	1	2	2	2	2	1	2	16	36	0.44							
5	Formative 2	2.15.15	2	2	3	3	3	3	3	1	3	23	36	0.64						
	Posttest	5.15.15	3	3	3	4	4	3	3	2	3	28	36	0.78	2	3	8.00	22%	YES	

Lookup Values		Tier Values	
Score	Tier	0 to 50%	>50 to <75%
0	1		
0.50	2		
0.75	3		
0.9	4		

Class Statistics			Percentage		
Tier	Pre-Test	Post-Test	Pre-Test	Post-Test	Post-Test
4	0	2	0.00%	40.00%	
3	0	1	0.00%	20.00%	
2	4	2	80.00%	40.00%	
1	1	0	20.00%	0.00%	
80% Growth Met?			YES		
Percentage of Growth			80.00%		

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