Dr. John D. Barge, State School Superintendent
"Making Education Work for All Georgians"

Teacher Keys Effectiveness System

The Teacher Keys Effectiveness System (TKES) materials have been organized into four chapters. Throughout Chapter 1, the Teacher Keys Effectiveness System Implementation Handbook, the user will find electronic links (blue) to documents in Chapters 2, 3, 4, the GaDOE TLE Electronic Platform (https://tle.gadoe), and GaDOE website (www.doe.k12.ga.us).

Chapter 1: Teacher Keys Effectiveness System Implementation Handbook

Chapter 2: Teacher Keys Effectiveness System Fact Sheets

Chapter 3: Teacher Keys Effectiveness System Research Synthesis

Chapter 4: Teacher Keys Effectiveness System Endnotes for Handbook, Fact Sheets, and Research Synthesis

**Office of School Improvement
Teacher and Leader Effectiveness Division**

Dr. John D. Barge, State School Superintendent
"Making Education Work for All Georgians"

Chapter I

Teacher Keys Effectiveness System Implementation Handbook

2013-14

Table of Contents

Introduction to Teacher Keys Effectiveness System (TKES)

Part I. Teacher Assessment on Performance Standards (TAPS)

Part II. Surveys of Instructional Practice

Part III. Student Growth and Academic Achievement

Part IV.   Implementation Procedures

Appendices

Appendix I: TKES Performance Standards and Rubrics   130

Performance Standard 1: Professional Knowledge
Performance Standard 2: Instructional Planning
Performance Standard 3: Instructional Strategies
Performance Standard 4: Differentiated Instruction
Performance Standard 5: Assessment Strategies
Performance Standard 6: Assessment Uses
Performance Standard 7: Positive Learning Environment
Performance Standard 8: Academically Challenging Environment
Performance Standard 9: Professionalism
Performance Standard 10: Communication

Appendix II: TKES Evaluation Cycle Documents and Templates   141

GaDOE TLE Electronic Platform Quick Reference Guides
      Self-Assessment
      Pre-Evaluation Conference
      Walkthrough/Formative Assessment
      SLO Teacher Implementation Plan
      Mid-Year Conference
      Summative Assessment
      Summative Conference
      Professional Development Plan
      Additional Conferences
      GaDOE TLE Electronic Platform Reports

Appendix III: TKES Support Documents   144

TAPS Reference Sheet (Standards and Indicators)
TAPS Reference Sheet (Standards and Rubrics)
Examples of Documentation Evidence
Student Learning Objectives Operations Manual
Student Learning Objectives *"A Guide for District Leadership"*
Student Learning Objectives *"A Guide for Principals"*
Student Learning Objectives *"The Basics for Classroom Teacher"*
Student Learning Objectives (SLO) List of Courses with Assessment Support
Student Learning Objectives (SLO) Public Domain Assessments
Effective Teacher and Principal Induction Programs
TKES and LKES Professional Learning Resources

Appendix IV: TKES Support Documents   161

TAPS and Class Keys Crosswalk
TAPS and National Virtual School Teaching Standards Crosswalk
Ongoing Teacher and Leader Effectiveness Cycle

Appendix V: TKES Implementation Handbook Figures   169

Appendix VI: TKES Acronyms and Glossary   171

Teacher Keys Effectiveness System (TKES) introduces language unique to the system. The acronyms and glossary provide further insight about the processes for the three components of TKES.

Acknowledgments

Teacher Keys Effectiveness System Usage Statement

The TKES Handbook was developed on behalf of the Georgia Department of Education to assist with implementation of Georgia's Race to the Top (RT3) plan. School systems involved in the pilot/full year implementation are required to use this handbook.

Introduction to the Teacher Keys Effectiveness System

Georgia's Race to the Top (RT3) Overview

The Race to the Top fund is a $4 billion grant opportunity provided in the American Recovery and Reinvestment Act of 2009 (ARRA) to support new approaches to school improvement. In 2010, Georgia applied for and was awarded $400 million to implement its Race to the Top (RT3) plan and the State Board of Education has direct accountability for the grant.

 The funds are made available in the form of competitive grants to encourage and reward states that are creating conditions for education innovation and reform, specifically implementing ambitious plans in four education reform areas:

- Recruiting, preparing, rewarding, and retaining effective teachers and principals, especially where they are needed most;
- Adopting standards and assessments that prepare students to succeed in college and the workplace and to compete in the global economy;
- Building data systems that measure student growth and inform teachers and principals about how they can improve instruction;
- Turning around our lowest-achieving schools.

Georgia's vision is as follows:

"To equip all Georgia students, through effective teachers and leaders and through creating the right conditions in Georgia's schools and classrooms, with the knowledge and skills to empower them to 1) graduate from high school, 2) be successful in college and/or professional careers, and 3) be competitive with their peers throughout the United States and the world."

Georgia's application was prepared through a partnership among the Governor's Office, the Georgia Department of Education, and the Governor's Office of Student Achievement and education stakeholders. Four working groups and a fifth critical feedback team consisting of teachers, principals, superintendents, higher education faculty, non–profit and informal education organizations, state policy makers, and members of the business and philanthropic communities developed the ideas for inclusion in the state's winning application.

Georgia has partnered with 26 school systems around the state to implement its RT3 plan. Half of the awarded funds remain at the state level and half will go directly to partnering local education authorities (LEAs)/school districts via their Title I formula. All funds will be used to implement Georgia's RT3 plan. A Memorandum of Understanding (MOU) was signed by each district superintendent and board chair. These districts, which make up 40 percent of public school students, 46 percent of Georgia's students in poverty, 53 percent of Georgia's African American students, 48 percent of Hispanics and 68 percent of the state's lowest achieving

schools, are: Atlanta, Ben Hill, Bibb, Burke, Carrollton City, Chatham, Cherokee, Clayton, Dade, DeKalb, Dougherty, Gainesville City, Gwinnett, Hall, Henry, Meriwether, Muscogee, Peach, Pulaski, Rabun, Richmond, Rockdale, Griffin-Spalding, Treutlen, Valdosta City and White. These schools districts began full implementation of Teacher Keys and Leader Keys Effectiveness Systems for the 2012-2013 school year. These partner districts are also referred to as Cohort I for implementation.

During the 2012-2013 school year, additional schools and districts throughout the state opted to pilot the Teacher Keys and Leader Keys Effective Systems as well. These districts followed either a full implementation model, mirroring that of the partnering districts, or a modified implementation model in which a designated percentage of teachers and administrators piloted the systems. When a modified implementation model was followed, teachers and principals were selected randomly for inclusion by a computer generated sample. Data from both the partnering districts and the volunteer districts was collected during the 2012-2013 school year and continues to be analyzed and applied to the appropriate system models. Any reference to pilot or pilot data in this handbook refers to data collected during the 2011-2012 school year from Georgia's RT3 partners and during the 2012-2013 school year from both the RT3 partners and volunteer districts. Schools and districts that piloted TKES, but were not part of the initial Race to the Top partnership, are also referred to as Cohort II for implementation.

Research indicates the most important factor in a student's education is first and foremost the teacher. When students are assigned to ineffective teachers for three years in a row, insurmountable academic losses occur. The goal of Georgia's Teacher Keys Effectiveness System (TKES) is to provide teachers with meaningful feedback and support opportunities which lead to improved teacher performance and consequently, improved student outcomes. The new evaluation system offers clear and precise indicators and resources to guide teachers and evaluators through the process. This document outlines the TKES framework, as well as the initiative's procedures which apply to full implementation years beginning 2012-2013, unless otherwise specified during a pilot year for the district.

Primary Purposes of the Teacher Keys Effectiveness System (TKES)

As part of the Race to the Top Initiative (RT3) in 2012-13, Georgia conducted a full year implementation of the Teacher Keys Effectiveness System (TKES), a common evaluation system that allowing the state to ensure consistency and comparability across districts, based on a common definition of teacher effectiveness[1].

The primary purposes of TKES are to:

- Optimize student learning and growth.
- Improve the quality of instruction by ensuring accountability for classroom performance and teacher effectiveness.
- Contribute to successful achievement of the goals and objectives defined in the vision, mission, and goals of Georgia Public Schools.

- Provide a basis for instructional improvement through productive teacher performance appraisal and professional growth.
- Implement a performance evaluation system that promotes collaboration between the teacher and evaluator and promotes self-growth, instructional effectiveness, and improvement of overall job performance.
- Focus on student learning as outlined in Figure 1.

Figure 1: Theory of Action Part I

If educators have specific performance standards for effective teaching, and

If educators are provided professional learning support to develop classroom behaviors that meet the performance standards, then

The professional capacity of teachers to positively impact student learning will increase.

Also, then, teachers will hold higher expectations for student learning, and

Students will learn more and achieve at higher levels.

Components of the Teacher Keys Effectiveness System (TKES)

The Teacher Keys Effectiveness System (TKES) consists of three components which contribute to an overall Teacher Effectiveness Measure (TEM): Teacher Assessment on Performance Standards (TAPS), Surveys of Instructional Practice (student perception surveys) and Student Growth and Academic Achievement.

All documents referenced in the handbook can be found within the GaDOE TLE Electronic Platform, in both the teacher and leader views, and at the GaDOE Teacher and Leader Effectiveness webpage.

The Georgia Department of Education has designed the Teacher Keys Effectiveness System with multiple components that provide data and feedback regarding teacher performance from

different sources and perspectives. The evaluation system is designed to provide information that will guide professional growth and development for each teacher, as well as to provide information that will be used in the calculation of the annual Teacher Effectiveness Measure (TEM). The collection of educator effectiveness data and feedback to educators will occur throughout the process for the TKES as the effectiveness system is designed to provide another forum for ongoing instructional dialogue.

These three components are outlined below, but discussed in further detail in Parts I, II, III, and IV of the TKES Implementation Handbook. Teacher Keys Effectiveness System (TKES) Performance Standards and Rubrics, TKES Evaluation Cycle Documents and Templates, TKES Resources, TKES Support Documents, TKES Implementation Figures, and the TKES Acronyms/Glossary are located in the Appendices I to VI. The three components include:

Teacher Assessment on Performance Standards (TAPS):

- TAPS provides evaluators with a qualitative, rubrics-based evaluation method by which they can measure teacher performance related to quality performance standards.
- Observations, including four a limited number of standards (1 to 4 recommended) and two formative observations (on all ten standards), as well as documentation of a teacher's practice, will inform two *Formative Assessments* and one *Summative Assessment* each year.
- All ten standards will be rated on the two *Formative Assessments* and the one *Summative Assessment*.

Student Surveys of Instructional Practice (student perception surveys):

- Student surveys are administered annually to gather perception data regarding teacher practice.
- The survey component provides data that is used as documentation for the corresponding TAPS performance standards and supplements the observations and other documentation.
- Student survey results will inform the rating of standards 3, 4, 7, and 8 in the *Formative Assessment* and *Summative Assessment* (inform an overall TAPS score).

Student Growth and Academic Achievement:

- **Student Growth Percentile Measures:** For teachers of tested subjects (4th-8th grade CRCT and high school EOCT), this component consists of a student growth percentile/value-added measure which will be calculated annually for student growth based on state assessment data.
- **Student Learning Objective Measures:** For teachers of non-tested subjects whose students are not assessed using state assessments, this component consists of district-developed and GaDOE-approved Student Learning Objectives utilizing district achievement growth measures which will be calculated annually for student growth based on the Student Learning Objective.
- For teachers of both tested and non-tested subjects, this component will be a blended measure in which both types of courses contribute.

As shown in Figure 2, the Teacher Keys Effectiveness System (TKES) consists of three components which contribute to an overall Teacher Effectiveness Measure (TEM): Teacher

Assessment on Performance Standards (TAPS), Surveys of Instructional Practice (student perception surveys) and Student Growth and Academic Achievement.

Figure 2: **Components of** *Teacher Keys Effectiveness System*

**Teacher Keys
Effectiveness System**
(Generates a Teacher Effectiveness Measure)

Teacher Assessment on Performance Standards
(Observations and Documentation)

Surveys of Instructional Practice
(Grades 3-5, Grades 6-8, Grades 9-12)

Student Growth and Academic Achievement

Teachers of Tested Subjects
- Student Growth Percentile
- Achievement Gap Reduction

Teachers of Non-Tested Subjects
- DOE-Approved, District-Developed
  Student Learning Objectives

Teacher Keys Effectiveness System (TKES) General Processes

During 2012-2013, the first full implementation year of TKES, RT3 teachers were evaluated using the full TKES evaluation cycle as set forth in the GaDOE TLE Electronic Platform. For the 2013-14 school year, all teachers in participating school districts from Cohort I will be in one of the following TKES evaluation cycles:

- **The full TKES evaluation cycle** requires a minimum of four walkthroughs, two formative observations, two *Formative Assessments* and a *Summative Assessment*, and a *Summative Conference*.

- **An adjusted TKES evaluation cycle** is utilized if a teacher is employed for 90 days or less. It requires two walkthroughs and one formative observation and one *Formative Assessment*, a *Summative Assessment*, and a *Summative Conference*.

Positions to be Evaluated

The TKES evaluation cycle is designed for use with all teachers, grades Pre-K through 12, who are full-time or part-time. The teachers, or Teachers of Record, must be providing direct instruction to students. TKES is **not** designed to be used with personnel in positions identified as *Contributing Professionals* unless they are required by the district, to provide direct instruction to students for part of the school day. In general, *Contributing Professionals* are credentialed with teaching or service certificates or are licensed therapists who are not directly involved in providing instruction for students. Districts should continue to use appropriate instruments identified by the district to evaluate the following positions designated as *Contributing Professionals* until new instruments are developed and recommended by the GaDOE.

Contributing Professionals include but are not limited to:

- Behavior Interventionists
- Behavior Specialists
- Graduation Coaches
- Guidance Counselors
- In-school Suspension Teachers
- Instructional Coaches / Instructional Lead Teachers / Academic Coaches who do **not** have responsibility for direct instruction
- Instructional Technology Specialists
- Interpreters (sign language and other language)
- Media Specialists
- Mobility Training Specialists
- Occupational Therapists
- Paraprofessionals, even if they also have a valid teaching certificate
- Physical Therapists
- Psychologists
- School Social Workers
- Special Education Coordinators / Case Managers who do **not** provide direct instruction
- Speech Language Pathologists
- Teachers on Special Assignment who do **not** have responsibility for direct instruction
- Translators
- Virtual School Teachers who do not provide Direct Instruction to Students

Evaluator Credentialing

Beginning with the 2012-2013 pilot/full implementation year, all evaluators must be fully trained and credentialed by a state and/or district credentialed trainer in using the components of Teacher Keys Effectiveness System (TKES). All administrators who are responsible for evaluating

teachers must be credentialed prior to using TKES. Credentialing is a process of establishing the qualifications and proficiency of evaluators to utilize TKES. The credentialing assessment is a minimal competency assessment that measures participants' understanding of the information and practice provided during training. It includes both recall of specific TKES information and practice of all the TKES processes. It is a bridge to ongoing learning as evaluators work with TKES. All evaluators MUST pass the credentialing assessment prior to using the Teacher Keys Effectiveness System (TKES). The expectation is that evaluators continue to familiarize themselves with the TKES process as they work within their districts.

The credentialing process provides calibration and further increases the alignment of evaluation ratings. Currently, the only trainers providing full TKES training and leading the credentialing for administrators are members of the Teacher and Leader Effectiveness (TLE) Division of the GaDOE. Opportunities for becoming a state certified trainer will be available.

As the instructional leader in the school, the principal serves as the model for appropriate evaluation practices, coordinates all evaluation activities within the school, and has ultimate responsibility for all evaluation activities within the school. Following the TKES training and credentialing, evaluators are encouraged to review classroom observation videos, observe lessons in classrooms and discuss ratings along with judgment of practice based on the TKES standards rubric. In addition to these discussions, establishing activities within schools and districts to strengthen inter-rater reliability is also recommended.

Other evaluators may include members of the school and/or district leadership teams who have been appropriately trained and credentialed as evaluators in the TKES. The district may designate assistant principals, department chairs, assistant/associate/area superintendents, district or school department heads, etc., as evaluators. Whenever possible, mentors and instructional coaches should not evaluate teachers whom they serve in these capacities. School districts have the option to include credentialed evaluators from outside the school, but employed in the school district. The principal may assign multiple evaluators to any teachers participating in TKES.

Teacher Assessment on Performance Standards (TAPS) Processes

TKES Teacher Orientation
All teachers must receive an orientation regarding the requirements of TKES prior to the beginning of the evaluation cycle. Orientation materials and guides are provided by GaDOE and should be used by the district and/or building principal to orient teachers. The orientation must take place prior to the first observation. Documentation of the orientation for each teacher must be maintained within the GaDOE TLE Electronic Platform.

TAPS Familiarization
Teacher familiarization consists of ongoing professional learning utilizing GaDOE-provided materials on each of the ten performance standards which are the basis of the evaluation system. These activities may occur and/or be repeated at any time during the school year. In addition to materials provided by GaDOE, districts are encouraged to design activities that are imbedded

within established routines and meetings which build understanding and consistency of instructional practices.

Teachers who participate in familiarization activities earlier in the year will have a clearer understanding of the ten performance standards and the expectations for classroom practice and performance. The GaDOE TLE Electronic Platform will be used to record the teacher's participation in activities related to familiarization.

TAPS Self-Assessment

In a full implementation year, all teachers shall complete a self-assessment on the ten TKES standards as soon as possible following orientation. Teachers will complete the *Self-Assessment* within the GaDOE TLE Electronic Platform, and it will be available to both the teacher and the school evaluator for review and professional learning planning. The *Self-Assessment* will be used to guide discussion during the *Pre-Evaluation Conference*. The aggregated self-assessment data from a staff or group within the school can be used to make decisions regarding appropriate professional learning for individuals or groups.

TAPS Walkthroughs

A walkthrough is defined as a more frequent, brief observation that focuses on a limited number (typically 1 to 4) of TAPS performance standards. The purpose of these walkthroughs is to help establish the frequency and consistency of appropriate classroom practices as identified within TAPS. *Walkthroughs* provide glimpses into the regular practices of teachers and should be reflective of observations and of documentation that teachers provide. Data from the *Walkthrough* observations will be used to support and enhance performance ratings on the *Formative Assessment* and in the *Summative Assessment*.

TAPS Formative Observations and Assessments

As evaluators conduct observations in a teacher's classroom, they continually build a portrait of that teacher's approach to and implementation of instructional practices. Over time, these observations should demonstrate the consistency of a teacher's performance. Although many practices and instructional strategies should be directly observed both in the walkthroughs and in the formative observation, other information can and should be considered in the ratings for the formative assessment (i.e. walkthroughs, lesson plans, student work samples and other forms of documentation).

Each *Formative Assessment* will be directly tied to a formative observation. Once the formative observation has occurred, evaluators will consider the full scope of a teacher's practices that have been observed and documented up to and including the formative observation. Following the formative observation, if sufficient evidence is not present to rate a teacher's performance on a given standard or standards, evaluators can request specific documentation relevant to the aligned standard(s). Documentation should supplement evidence and practices observed in the course of a teacher's professional practice, but documentation alone should not account for a rating on the formative assessment. Practices cited in documentation should be supported by observed practices. Following the first *Formative Assessment*, the cycle of observing practice and collecting documentation should begin again for the second *Formative Assessment* cycle.

TAPS Summative Assessment

After collecting information throughout the evaluation process, evaluators will provide a *Summative Assessment* of a teacher's performance. Evaluators will use the performance appraisal rubrics to rate the teacher's overall performance on the ten standards for the year. Evaluators will use the *Summative Assessment* in the GaDOE TLE Electronic Platform to record and share ratings, along with strongly recommended commentary for the *Summative Assessment*.

TAPS Required Conferences

Throughout the TKES evaluation process cycle, conferencing with the teacher at the following designated times is required and important to the feedback process. All conferences should be documented using the Documentation of Conference for the Record in the GaDOE TLE Electronic Platform. Figure 3 reflects a suggested timeline for TKES conferences.

Figure 3: Suggested Timeline for TAPS Conferences

Date	Meeting Focus Materials	Meeting Description
August/September	**Pre-Evaluation Conference** *Orientation (signed off)* *Self-Assessment completed in the GaDOE TLE Electronic Platform* *Pre-Evaluation Conference in the GaDOE TLE Electronic Platform*	Teacher and evaluator follow-up on any questions from the Orientation and review the Teacher's *Self-Assessment*. The conference may be held individually or in a group setting (e.g., grade level, content groups). The conference must occur before observations begin in the teacher's classroom.
December/January	**Mid-Year Conference** *Student Growth and Academic Achievement data for Review* *Teacher SLO Implementation Plan* *Mid-Year Conference*	Teacher and evaluator review the *Formative Assessment* ratings and recommended commentary to date and discuss the progress with the SLO using the *Teacher SLO Implementation Plan*. The conference may be held individually or in a group setting (e.g., grade level, content groups).
April/May	**Summative Assessment Conference** *Formative and Summative Assessments and Documentation in the GaDOE TLE Electronic Platform* *Summative Conference in the GaDOE TLE Electronic Platform*	Teacher and evaluator review the *Summative Assessment* ratings and recommended commentary, results of the Surveys of Instructional Practice for standards 3, 4, 7 and 8 and any other pertinent information. The conference is to be held individually. Ratings will be used to contribute to the Teacher Effectiveness Measure (TEM).

Teacher Effectiveness Measure (TEM) Calculations

General Guidelines for Teacher Effectiveness Measure (TEM)

Teachers will receive a Teacher Effectiveness Measure (TEM) based on documentation and data from the three components of the TKES:

Teacher Assessment on Performance Standards (TAPS)
Surveys of Instructional Practice (student perception surveys)
Student Growth and Academic Achievement

As teachers engage in the challenging work of enabling and empowering students to learn, the use of multiple measures for a teacher's performance will provide a more accurate picture of a teacher's professional practice and his/her impact on student growth. The use of performance standards to rate teacher performance allows for more precision about professional expectations, identifies teachers in need of improvement, and recognizes performance that is of *Proficient* or *Exemplary* quality. In TKES all teachers will receive a Teacher Effectiveness Measure (TEM) based on the three components of the TKES.

During the 2012-13 full implementation year, the Teacher Assessment on Performance Standards (TAPS) component was fully implemented for the purpose of annual evaluation ratings at the district level for contract purposes. The Surveys of Instructional Practice component was used as documentation to inform the ratings of Standards 3, 4, 7, and 8. TAPS will continue to be fully implemented in 2013-14 and teachers will receive a TAPS score as part of the Teacher Effectiveness Measure (TEM).

The Georgia Legislature passed House Bill 244 during the 2012-13 legislative session. The passage of House Bill 244 mandates use of a single state-wide evaluation system for teachers. It further establishes guidance for the implementation of Teacher Keys Effectiveness System across the state of Georgia in 2014-15. The evaluation system will be based on a four-point rubric using the terms *Exemplary, Proficient, Needs Development,* and *Ineffective*. Multiple observations are required with rating feedback and recommended commentary provided for all observations within 5 business days. The feedback and commentary to teachers ensures support for ongoing improvement of instructional practices to teachers following observations. The five business days period also allows for teacher submission of supporting documentation that has been used or created during the course of normal practice.

To ensure that an evaluator has qualifications to perform the duties of administering the Teacher Keys Effectiveness System, all evaluators must be trained and credentialed in order to perform any observations or complete any component of the TKES process. All aspects of a teacher's evaluation remain confidential including individual component scores and results in TKES. School districts will be required to report summative assessment TAPS *Ineffective* ratings to the

Georgia Department of Education
Teacher Keys Effectiveness System
Georgia Professional Standards Commission at the end of the 2013-14 school year.

Teachers will receive a TEM score based on documentation and data from the three TKES components as indicated by Figure 2 in the handbook. Throughout the 2011-12 and 2012-13 years, data was collected and analyzed in order to establish an appropriate calculation for this score. GaDOE will continue to analyze data from the 2013 and 2014 implementation years and make revisions, adjustments, or additions as necessary.

GaDOE will also continue to refine its method of combining scores for teachers who have student growth measures from both Student Learning Objectives (SLOs) and Student Growth Percentiles (SGPs) so that an appropriate balance is determined between the growth measures by taking into account the number of students taught in courses measured by both the SLO and SGP courses. GaDOE staff is currently engaged in analyzing possible scenarios and developing detailed processes for these calculations with technical assistance from external experts.

The Student Growth and Academic Achievement components of the TKES (SGPs and SLOs) will be fully implemented in 2013-14. Both measures will be lagging measures, meaning that results will count toward a teacher's rating in the year *following* their collection. These components were not used for Human Resources contract decisions during the 2012-13 implementation year at the district level, but the components may be used in 2013-14 if it is the only evaluation system being used by the district.

Student growth data will be calculated into TEM for districts in Cohort I in July 2014 using data from 2012-2013 school year. The TEM calculation will be a tentative score based on available data and will only be reported for districts in Cohort I.   Data will continue to be collected and analyzed on this component and TEM for all teachers will be calculated and reported in July 2015 for all districts based on available data. Districts, administrators, and teachers will receive the TEM score reports when the TEM data is finalized as follows in Figure 4:

Figure 4: Teacher Effectiveness Measure (TEM) Data Timeline

Teacher Assessment on Performance Standards (TAPS) Score	**May**
Student Surveys of Instructional Practice (student perception surveys)	**May**
Student Growth and Academic Achievement Score **The data will be lagging data and will be used in calculating the TEM score for the following school year.**	**July**

Within the GaDOE TLE Electronic Platform, data reports regarding performance on the components of TKES will be available and updated in an ongoing manner throughout the school year.

Teachers who receive a Teacher Effectiveness Measure (TEM) of *Needs Development* or *Ineffective* must be placed on a formal Professional Development Plan (PDP) that includes specific guidelines and timelines for improvement in the area(s) rated below *Proficient*. If a teacher does not receive a score on all components of the TKES, the remaining components will be used to inform the TEM.

The following information is designed to assist evaluators in making decisions about the participation of teachers in the TKES, TAPS, Surveys, and Student Learning Objectives/Student Growth Percentile based on their teaching position and the program delivery model used with students. The following paragraphs describe scenarios related to teachers and the TEM.

- **Teachers employed for the full school year** will have a Teacher Effectiveness Measure (TEM). Teachers employed and present for at least 65% of instructional days shall be evaluated using at least one student growth measure. In some situations, a TEM score may not be utilized for the purpose of annual evaluation ratings. Teachers who take leave for more than half of the minimum time equivalent of 65% of the instructional days will not receive a TEM score. Additionally, contributing professionals, teachers with fewer than 15 students, teachers in a virtual school setting not providing direct instruction, teachers not having an SGP or SLO course, and long term substitutes will not receive a TEM.

- **Itinerant teachers** who serve students in more than one school will be designated a home school/lead evaluator by the school district. The lead evaluator will complete the *Summative Assessment* and *Summative Conference*. The arrangement will require collaboration among school administrators and school district leaders to make appropriate decisions for the summative assessment.

- **Teachers, who are not employed for a full year**, or for a minimum time equivalent to 65% of the instructional days, will be evaluated using the TKES components as determined by the district to be appropriate, depending upon the time and length of employment. GaDOE recommends that teachers employed 90 days or less be evaluated using a Teacher Assessment on Performance Standards TAPS process of one formative cycle which includes a minimum of one formative observation, 2 walkthroughs, a summative assessment, and a summative conference. Student Surveys of Instructional Practice results will be incorporated as documentation for standards 3, 4, 7 and 8 in the formative assessment, if available, and in the summative assessment. Teachers hired mid-year shall receive feedback on TAPS and student surveys, but may not have adequate time for SLO and/or SGP components of the TKES.

In describing the general guidelines for a Teacher Effectiveness Measure (TEM) calculation, the length of time a student is taught by a teacher for their participation in the TEM calculation is considered. For either student growth measure - Student Growth Percentile (SGP) or Student

Learning Objective (SLO) - a student must be enrolled 65% of course instructional days for his or her score to count toward the teacher's score.

Data will be collected during the appropriate window for each component of the TKES for all teachers employed at the time designated for the specific measure. The following student guidelines will be used in calculating the teacher's TEM score:

- A teacher must have a minimum of 15 student scores for the measure to be calculated in the TEM score.
- A Roster Verification Model which links students to each of their teachers will be utilized. The growth scores of students who are enrolled for 65% of the school year and who have growth measures will be incorporated into a teacher's TEM score.
- Utilizing a Roster Verification Model, transient students' attendance will be monitored for inclusion according to the TEM score guidelines given above.
- Retained students will be weighted the same as non-retained students.

Teacher Effectiveness Measure (TEM) Research and Annual Reports

There are many reasons for including student academic progress and achievement information as part of the teacher evaluation process. Despite evidence that the most important school related factor in a student's education is the quality of his or her teacher, teacher evaluation models frequently ignore the results of student learning. Using student academic progress to inform teacher evaluation is realistic because the most direct measure of teacher quality appears to be student achievement.

Based on this compelling information, the following rules and requirements have been established for the TEM calculation annual reports.

- Teachers of tested courses will be measured by the Georgia Criterion-Referenced Competency Tests (CRCT) in grades 4-8 reading, English/language arts, math, science and social studies and End of Course Tests, (EOCTs) in Biology, Physical Science, 9th-Grade Literature/Composition, American Literature/Composition, US History, Economics/Business/Free Enterprise, Mathematics I, Mathematic II, GPS Algebra, Coordinate Algebra, GPS Geometry, and Analytic Geometry. Teachers of these tested courses will be measured through student attainment of growth expectations with the Student Growth Percentile (SGP). Teachers of non-tested courses will be measured through student attainment of growth expectations outlined by the GaDOE/District-determined SLO for that course. Teachers will receive a TEM score based on documentation and data from the three components of the TKES. The TEM will be reported as a rating of *Exemplary, Proficient, Needs Development, or Ineffective*.

- Teachers of multiple non-tested subjects will be measured using the 52 GaDOE/District-determined SLOs developed in 2012-13 and district-developed SLOs for the 2013-2014 school year. The TEM will be reported as a rating of *Exemplary, Proficient, Needs Development, or Ineffective*.

- Teachers of both tested and non-tested subjects will be measured using the results of the SGP and GaDOE/District-determined SLOs. GaDOE will continue to work on decision tables for teachers who have student growth measures from both SLOs and SGPs so that an appropriate balance is determined between the growth measures, taking into account the number of courses taught with SLOs and the number of courses for which the teacher has SGP measures. GaDOE staff is currently engaged in analyzing possible scenarios and developing detailed processes with technical assistance from external experts. The TEM will be reported as a rating of *Exemplary, Proficient, Needs Development, or Ineffective.*

GaDOE Teacher Leader Effectiveness (TLE) Electronic Platform

Georgia's electronic platform for the Teacher and Leader Keys Effectiveness Systems will provide web-based access to multiple components. This platform will communicate with existing GaDOE data and information systems to pull data for personnel, student records, student course schedules, and roster verification. Other data may also be pulled from the system. The GaDOE TLE Electronic Platform will be provided by the GaDOE to school districts and schools implementing or piloting the Teacher or Leader Keys Effectiveness System.

PART I

TEACHER ASSESSMENT ON PERFORMANCE STANDARDS (TAPS)

PART I: Teacher Assessment on Performance Standards (TAPS)

Teacher Assessment on Performance Standards (TAPS) Overview

The Teacher Assessment on Performance Standards (TAPS) component of the Teacher Keys Effectiveness System provides evaluators with a qualitative, rubrics-based evaluation method by which they can measure teacher performance related to quality performance standards. TAPS offers a balance between structure and flexibility. It is prescriptive in that it defines common purposes and expectations, thereby guiding effective instructional practice. At the same time, it provides flexibility by allowing for creativity and individual teacher initiative. The overarching goal of TKES is to support the continuous growth and development of each teacher by monitoring, analyzing, and applying pertinent data compiled within a system of meaningful feedback that will contribute to increasing student achievement. The GaDOE TLE Electronic Platform will be used for the collection and management of data for the TAPS processes.

Distinguishing Characteristics of the Teacher Assessment on Performance Standards

The TAPS component has several distinctive characteristics. It provides:

- A focus on the relationship between professional performance and improved learner academic achievement.

- Sample performance indicators for each of the teacher performance standards.

- A system for documenting teacher performance based on multiple data sources.

- A procedure for conducting performance reviews that stresses accountability, promotes professional improvement, and increases the involvement of teachers in the evaluation process.

Foundational Documents of the Teacher Assessment on Performance Standards:

- Georgia Department of Education. (2010). *CLASS Keys^SM: Classroom Analysis of State Standards: The Georgia Teacher Evaluation System.* Atlanta, GA: Author.

- Georgia Department of Education. (2011). *Quantitative analysis addendum for the selection of potential CLASS Keys^SM power elements connecting student achievement growth and teacher evaluation.* Atlanta: Author.

- Haynes, L., Randel, B., Allen, J., Englert, K., Cherasaro T., & Michaels, H. (2011). *Analysis and recommendations for CLASS Keys^SM power elements*. Atlanta: Georgia Department of Education.

- Stronge, J. H., & Tonneson, V. C. (2011). *CLASS Keys^SM Teacher Evaluation System recommendations for improvement.* Atlanta, GA: Georgia Department of Education.

- Stronge, J. H., & Xu, X. (2011). *State Evaluation Steering Committee focus group report*. Atlanta, GA: Georgia Department of Education.

- Stronge, J. H., & Xu, X. (2011). *Research synthesis of Georgia teacher evaluation standards*. Atlanta, GA: Georgia Department of Education

Essential Components of the Teacher Assessment on Performance Standards (TAPS)

Clearly defined professional responsibilities for teachers constitute the foundation for TAPS. A fair and comprehensive evaluation system provides sufficient detail and accuracy so that both teachers and evaluators (*e.g.,* principal or assistant principal) will fully understand their job expectations. TAPS uses a three-tiered approach to define the expectations for teacher performance consisting of 5 domains, 10 standards, and multiple performance indicators. Teachers will be rated on the performance standards using performance appraisal rubrics. The relationship between these components is depicted in Figure 5.

Figure 5: Relationship between Essential Parts of the Teacher Assessment on Performance Standards (TAPS)

DOMAIN

PERFORMANCE STANDARD

PERFORMANCE INDICATORS

PERFORMANCE APPRAISAL RUBRIC

INSTRUCTIONAL STRATEGIES

Standard 3: Instructional Strategies
The teacher promotes student learning by using research-based instructional strategies relevant to the content to engage students in active learning and to facilitate the student's acquisition of key knowledge and skills.

3.1 Engages students in active learning and maintains interest.

Exemplary *In addition to meeting the requirements for Proficient…*	Proficient *Proficient is the expected level of performance.*	Needs Development	Ineffective
The teacher continually facilitates students' engagement in metacognitive learning, higher-order thinking skills, and application of learning in current and relevant ways. (*Teachers rated Exemplary continually seek ways to serve as role models or teacher leaders.*)	The teacher consistently promotes student learning by using research-based instructional strategies relevant to the content to engage students in active learning and to facilitate the students' acquisition of key skills.	The teacher inconsistently uses research-based instructional strategies. The strategies used are sometimes not appropriate for the content **or** for engaging students in active learning **or** for the acquisition of key skills.	The teacher does not use research based instructional strategies nor are the instructional strategies relevant to the content area. The strategies do not engage students in active learning **or** acquisition of key skills.

Domains
Domains describe the major categories under which a teacher's duties and responsibilities are comprised. There are five domains in TAPS: Planning, Instructional Delivery, Assessment of and for Learning, Learning Environment, and Professionalism and Communication.

Performance Standards

Performance standards refer to the major duties and responsibilities performed by a teacher.
The Teacher Assessment on Performance Standards (TAPS) component of the TKES, comprised of five domains and ten performance standards, is outlined in Figure 6. The overarching goal of TKES is to support the continuous growth and development of each teacher by monitoring, analyzing, and applying pertinent data compiled within a system of purposeful feedback. TAPS includes observation and documentation of a teacher's practice and utilizes ten standards-based performance appraisal rubrics to guide multiple formative assessments and one summative assessment.

Figure 6: Domains and Performance Standards

PLANNING

1. **Professional Knowledge**
   The teacher demonstrates an understanding of the curriculum, subject content, pedagogical knowledge, and the needs of students by providing relevant learning experiences.

2. **Instructional Planning**
   The teacher plans using state and local school district curricula and standards, effective strategies, resources, and data to address the differentiated needs of all students.

INSTRUCTIONAL DELIVERY

3. **Instructional Strategies**
   The teacher promotes student learning by using research-based instructional strategies relevant to the content area to engage students in active learning and to facilitate the students' acquisition of key knowledge and skills.

4. **Differentiated Instruction**
   The teacher challenges and supports each student's learning by providing appropriate content and developing skills which address individual learning differences.

ASSESSMENT OF AND FOR LEARNING

5. **Assessment Strategies**
   The teacher systematically chooses a variety of diagnostic, formative, and summative assessment strategies and instruments that are valid and appropriate for the content and student population.

6. **Assessment Uses**
   The teacher systematically gathers, analyzes, and uses relevant data to measure student progress, to inform instructional content and delivery methods, and to provide timely and constructive feedback to both students and parents.

LEARNING ENVIRONMENT

7. **Positive Learning Environment**
   The teacher provides a well-managed, safe, and orderly environment that is conducive to learning and encourages respect for all.

8. **Academically Challenging Environment**
   The teacher creates a student-centered, academic environment in which teaching and learning occur at high levels and students are self-directed learners.

PROFESSIONALISM AND COMMUNICATION
9. Professionalism The teacher exhibits a commitment to professional ethics and the school's mission, participates in professional growth opportunities to support student learning, and contributes to the profession.
10. Communication The teacher communicates effectively with students, parents or guardians, district and school personnel, and other stakeholders in ways that enhance student learning.

Performance Indicators

Performance indicators provide some examples of observable behaviors for each standard as noted in *Appendix III.* The performance indicators are **examples** of the types of performance that may occur if a standard is being performed at the proficient level. The list of performance indicators is underlined not exhaustive, is not intended to be prescriptive, and is not intended to be used as a checklist. Further, **all teachers are not expected to demonstrate each performance indicator.** Using Standard 3: Instructional Strategies as an example, a set of teacher performance indicators is provided in Figure 7.

Figure 7: Performance Indicators

PERFORMANCE STANDARD

PERFORMANCE INDICATORS

Performance Standard 3: Instructional Strategies
The teacher promotes student learning by using research-based instructional strategies relevant to the content to engage students in active learning and to facilitate the students' acquisition of key knowledge and skills.

Sample Performance Indicators
Examples may include, but are not limited to:

The teacher:

3.1 Engages students in active learning and maintains interest.

3.2 Builds upon students' existing knowledge and skills.

3.3 Reinforces learning goals consistently throughout the lesson.

3.4 Uses a variety of research-based instructional strategies and resources.

3.5 Effectively uses appropriate instructional technology to enhance student learning.

3.6 Communicates and presents material clearly, and checks for understanding.

3.7 Develops higher-order thinking through questioning and problem-solving activities.

3.8 Engages students in authentic learning by providing real-life examples and interdisciplinary connections.

The performance indicators are provided to help teachers and their evaluators clarify job expectations. Districts are encouraged to fully discuss their expectations in relation to the standard and the indicators to establish a common language for the standards. Feedback should be directed at the behaviors observed in classroom performance and not in terms of whether certain indicators have been met. The performance indicators are provided to help teachers and their evaluators clarify job expectations. *Ratings are made at the performance standard level,*

NOT at the performance indicator level. Feedback should address specific behaviors or evidence that contributed to the rating and should provide clear guidance for improvement of practice or maintenance of appropriate behaviors. Feedback should not be based on whether particular indicators have or have not been observed. As feedback is provided, the use of the language of the indicators to describe observed behaviors is appropriate, but the use of the indicators alone as feedback is not. For example, the use of an indicator (or its corresponding number) is not sufficient for providing feedback.

Performance Appraisal Rubrics
The performance appraisal rubric is a behavioral summary scale that guides evaluators in assessing *how well* a standard is performed. It states the measure of performance expected of teachers and provides a qualitative description of performance at each level. In some instances, quantitative terms are included to augment the qualitative description. The resulting performance appraisal rubric provides a clearly delineated step-wise progression, moving from highest to lowest levels of performance. Evaluators will use the performance appraisal rubric to rate a limited number of standards on walkthroughs and all ten standards on the formative and summative assessments.

Each level is intended to be qualitatively superior to all lower levels. **The description provided in the *Proficient* level of the performance appraisal rubric is the actual performance standard, thus *Proficient* is the expected level of performance.** Teachers who earn an *Exemplary* rating must meet the requirements for the *Proficient* level and go beyond it. Performance appraisal rubrics are provided to increase reliability among evaluators and to help teachers focus on ways to enhance their teaching practice. *Appendix III* includes performance appraisal rubrics related to each performance standard. An explanation of each rating level is provided on the performance appraisal rubric. Figure 8 shows an example of a performance appraisal rubric for Standard 3: Instructional Strategies.

Figure 8: Performance Appraisal Rubric for Standard 3: Instructional Strategies

Exemplary* *In addition to meeting the requirements for Proficient…*	Proficient *Proficient is the expected level of performance.*	Needs Development	Ineffective
The teacher continually facilitates students' engagement in metacognitive learning, higher-order thinking skills, and application of learning in current and relevant ways. (*Teachers rated Exemplary continually seek ways to serve as role models or teacher leaders.*)	The teacher consistently promotes student learning by using research-based instructional strategies relevant to the content to engage students in active learning, and to facilitate the students' acquisition of key skills.	The teacher inconsistently uses research-based instructional strategies. The strategies used are sometimes not appropriate for the content area or for engaging students in active learning **or** for the acquisition of key skills.	The teacher does not use research-based instructional strategies, nor are the instructional strategies relevant to the content area. The strategies do not engage students in active learning **or** acquisition of skills.

Responsibilities of Site Administrators

The term *site administrator* will be used for principals/supervisors. A site administrator may designate an evaluator to collect information on employee job performance. The site administrator remains informed of the assessment process and is required to sign off on the summative assessment of the teachers.

The process by which participating school districts will implement the TAPS portion of the Teacher Keys Effectiveness System is depicted in Figure 9 This flow chart provides broad guidance for the TAPS process and its timeframe, but districts should consider developing internal timelines for completion of steps at the district and school level. A more detailed timeline for completion of the steps is available in Part IV Implementation Procedures of the handbook.

Figure 9: Teacher Assessment on Performance
Standards Process Flow

Orientation	Familiarization	Self-Assessment	Observations & Documentation Collection	Formative Assessment	Summative Assessment
July-August	**Ongoing throughout the year**	**July - August**	**September - April**		**May 15**

Detailed explanations of each step including suggestions for implementation and useful resources are provided on the following pages.

Step 1: Orientation

Explanation

To ensure both teachers and evaluators have a clear understanding of expectations, building administrators will conduct a TKES Teacher Assessment on Performance Standards (TAPS) orientation. This orientation should be scheduled as soon as possible once school begins or within the first month of hiring a new teacher. During the orientation, evaluators should stress that TAPS is only one portion of the Teacher Keys Effectiveness System for evaluating both teachers of tested and of non-tested subjects and is to be used to evaluate all teachers who provide direct instruction to students. Teachers of tested subjects (grades 4-8 CRCT tested subjects and high school EOCTs) are considered to be those who teach subjects with state standardized tests, and teachers of non-tested subjects teach subjects without state standardized tests.

Suggestions

A video is available to assist with the TKES orientation. In addition, evaluators will be provided with an electronic version of the TKES Implementation Handbook as a reference source for the implementation of TKES. There are helpful resources available from GaDOE to assist evaluators in developing an orientation that is informative and engaging for the teachers.

The GaDOE has created a *Frequently Asked Questions* document that is beneficial to share with teachers. Evaluators are encouraged to make teachers aware of the various resources available from the GaDOE, such as fact sheets on each of the performance standards, samples of completed forms, and an annotated bibliography.

Useful Resources

- *TAPS Orientation* Video
- *RT3 Frequently Asked Questions*
- Fact Sheet   1: TKES Pilot
- Fact Sheet   2: Why Evaluate?
- Fact Sheet   3: Standard   1: Professional Knowledge
- Fact Sheet   4: Standard   2: Instructional Planning
- Fact Sheet   5: Standard   3: Instructional Strategies
- Fact Sheet   6: Standard   4: Differentiated Instruction
- Fact Sheet   7: Standard   5: Assessment Strategies
- Fact Sheet   8: Standard   6: Assessment Uses
- Fact Sheet   9: Standard   7: Positive Learning Environment
- Fact Sheet 10: Standard   8: Academically Challenging Environment
- Fact Sheet 11: Standard   9: Professionalism
- Fact Sheet 12: Standard 10: Communication
- *TKES Handbook Scavenger Hunt* Activity

GaDOE TLE Electronic Platform

Orientation & Familiarization	**Orientation** Teacher acknowledges completion of an orientation to the Teacher Keys Effectiveness System.
	Familiarization Teacher accesses additional professional learning resources for Teacher Assessment on Performance Standards (TAPS).

Step 2: Familiarization

Explanation

Once teachers are initially exposed to the TAPS portion of the Teacher Keys Effectiveness System, it is important that they be provided with an opportunity to become more familiar with exactly how they will be evaluated. As soon as feasible following the orientation, evaluators should meet with teachers to continue the TAPS familiarization process. This process is not intended to be a single event; rather, ongoing conversations and activities which clarify expectations while engaging teachers and administrators in discussions centered on effective instructional practices should occur throughout the TAPS process.

Suggestions

During the evaluation familiarization session(s), evaluators are strongly encouraged to engage teachers in various activities designed to help them learn more about TAPS. The GaDOE provides evaluators with an orientation PowerPoint presentation on rating teacher performance that explains the formative and summative evaluation processes, forms, and use of performance appraisal rubrics. Additionally, videos on proficient performance for each of the ten standards are available on the GaDOE TLE Electronic Platform. The following activities will also help teachers build a more in-depth understanding of how they will be evaluated and what skills and competencies indicate successful performance. Evaluators may wish to compile the results that teachers create from these activities to produce a content-specific, grade-specific, or school-specific listing. Suggested activities include:

- *Look-Fors and Red Flags*: Participants explore the ten performance standards to determine the indicators of successful performance and the warning signs of potential difficulty.

- *Documentation of Performance*: Participants generate a list of documentation sources that provide evidence of proficiency in each of the ten performance standards.

- *Matching Observation and Documentation with Performance Standards*: Participants generate a list of possible ways that observation and documentation can provide evidence of a teacher's proficiency within the ten performance standards.

- *A Clean Room*: Participants explore the creation of rubrics and the distinction between levels within a rubric.

- *What's in a Rubric*: Participants generate a description of teacher performance among the various rating levels for each performance standard.

Useful Resources

- [Fact Sheet 3: Standard 1: Professional Knowledge](#)
- [Fact Sheet 4: Standard 2: Instructional Planning](#)
- [Fact Sheet 5: Standard 3: Instructional Strategies](#)
- [Fact Sheet 6: Standard 4: Differentiated Instruction](#)
- [Fact Sheet 7: Standard 5: Assessment Strategies](#)

- [Fact Sheet 8: Standard 6: Assessment Uses](#)
- [Fact Sheet 9: Standard 7: Positive Learning Environment](#)
- [Fact Sheet 10: Standard 8: Academically Challenging Environment](#)
- [Fact Sheet 11: Standard 9: Professionalism](#)
- [Fact Sheet 12: Standard 10: Communication](#)
- [Fact Sheet 19: Performance Rubrics in Evaluation](#)
- *Look-Fors and Red Flags* Activity
- *Matching Observation and Documentation with Performance Standards* Activity
- *Documentation of Performance* Activity
- *A Clean Room* Activity
- *What's in a Rubric* Activity

GaDOE TLE Electronic Platform

Orientation & Familiarization	**1. Orientation** Teacher acknowledges completion of an orientation to Teacher Keys Effectiveness System.
	2. Familiarization Teacher accesses additional professional learning resources for Teacher Assessment on Performance Standards.

Step 3: Self-Assessment

Explanation

Understanding one's own strengths and weaknesses is an important part of developing a teacher's instructional skills and competencies. By reflecting on areas where a teacher might be able to assist peers or areas where he or she needs additional development, a teacher is better able to focus professional learning. As part of the reflective process, all teachers are required to complete and electronically submit a *Self-Assessment* to their evaluators prior to the *Pre-Evaluation Conference* each year.

Suggestions

The *Self-Assessment* results may be used as a source of information for developing an individualized plan for professional growth. Aggregated data from a group of teachers, or from the full faculty, could show a more widespread professional learning need within a school, team, or department. The data can be used to provide targeted professional learning activities as appropriate at the individual, team or school level.

Useful Resources

- *Self-Assessment*
- *Pre-Evaluation Conference*
- *TAPS Standards and Indicators Reference Sheet*
- *TAPS Standards and Rubrics Reference Sheet*
- Fact Sheet 3: Standard 1: Professional Knowledge
- Fact Sheet 4: Standard 2: Instructional Planning
- Fact Sheet 5: Standard 3: Instructional Strategies
- Fact Sheet 6: Standard 4: Differentiated Instruction
- Fact Sheet 7: Standard 5: Assessment Strategies
- Fact Sheet 8: Standard 6: Assessment Uses
- Fact Sheet 9: Standard 7: Positive Learning Environment
- Fact Sheet 10: Standard 8: Academically Challenging Environment
- Fact Sheet 11: Standard 9: Professionalism
- Fact Sheet 12: Standard 10: Communication

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Self-Assessment	**1. Self-Assessment** Teacher reflects on areas of strength and growth related to each standard and completes a Self-Assessment. Teacher shares Self-Assessment with evaluator.
	2. Pre-Evaluation Conference Conference may be conducted with small groups or individuals. Evaluator and teacher contribute to conference content, including a review of the Self-Assessment, student growth data, or other TKES processes.

Step 4: Pre-Evaluation Conference

Explanation
Conferencing is an integral part of the TKES process. During the *Pre-Evaluation Conference*, as well as throughout the school year, the evaluator should ask guiding questions that allow teachers to review and reflect on their work, ensuring a balance between accountability for student growth and academic achievement and professional growth discussions. Conferencing provides evaluators and teachers time to develop clear expectations regarding the ten performance standards and to design appropriate professional development as needed.

Throughout the TKES evaluation cycle, conferencing with the teacher at the following designated times is required and important to the feedback process. The *Pre-Evaluation Conference* (beginning of school year) is the follow-up to the completion of the Orientation and *Self-Assessment* by the teacher. It is the beginning of the familiarization process and should include a review of the *Self-Assessment* along with discussion related to SLO implementation for teachers of non-tested subjects. It shall occur before any observations are conducted for the teacher.

The *Pre-Evaluation Conference* may be held individually or in a small group setting (e.g. grade level, content groups). It should be recorded electronically via the GaDOE TLE Electronic Platform using the *Pre-Evaluation Conference* step.

Suggestions
Prior to the *Pre-Evaluation Conference*, the evaluator should review the teacher's completed self-assessment to determine areas of strength and potential areas for professional development. In conferencing with the teacher (s), evaluators may find it useful to refer to the *TAPS Reference Sheets*. This document provides a one-page listing of the performance standards and performance indicators. If more specific guidance is needed on a standard the self-assessment checklist provided in each fact sheet offers a very detailed breakdown of each standard.

Useful Resources
- *Self-Assessment*
- *Pre-Evaluation Conference*
- *TAPS Standards and Indicators Reference Sheet*
- *TAPS Standards and Rubrics Reference Sheet*
- Fact Sheet   3: Standard   1: Professional Knowledge
- Fact Sheet   4: Standard   2: Instructional Planning
- Fact Sheet   5: Standard   3: Instructional Strategies
- Fact Sheet   6: Standard   4: Differentiated Instruction
- Fact Sheet   7: Standard   5: Assessment Strategies
- Fact Sheet   8: Standard   6: Assessment Uses
- Fact Sheet   9: Standard   7: Positive Learning Environment
- Fact Sheet 10: Standard   8: Academically Challenging Environment

- Fact Sheet 11: Standard 9: Professionalism
- Fact Sheet 12: Standard 10: Communication

GaDOE TLE Electronic Platform

Self-Assessment	**1. Self-Assessment** Teacher reflects on areas of strength and growth related to each standard and completes a Self-Assessment. Teacher shares Self-Assessment with evaluator.
	2. Pre-Evaluation Conference Conference may be conducted with small groups or individuals. Evaluator and teacher contribute to conference content, including a review of the Self-Assessment, student growth data, or other TKES processes.

Step 5: Documenting Performance for Formative and Summative Assessments

Explanation

A fair and equitable performance evaluation system for an educational professional acknowledges the complexities of the job. Thus, multiple data sources are necessary to provide a comprehensive and authentic performance portrait of a teacher's work. The Teacher Keys Effectiveness System (TKES) takes into account several data sources. The Teacher Assessment on Performance Standards (TAPS) focuses on two data sources, in particular - observations and documentation.

Observations

Classroom observations provide key information on the performance standards. Credentialed evaluators are required to conduct **two** formative observations of each teacher. These observations may be announced or unannounced (based on district decision) and must be at least 30 minutes in duration. In addition, a minimum of four walkthroughs/frequent brief observations (at least 10 minutes in duration) of a limited number of standards (typically 1 to 4) must be conducted for each teacher. Additional observations may be conducted at the building administrator's discretion.

It is strongly recommended that all observations include commentary on all of the rated standards. The feedback will be recorded in the GaDOE TLE Electronic Platform within five business days. If an observation is not shared with the teacher within five school days, it will be invalid as a formative observation or walkthrough. As evaluators conduct observations in a teacher's classroom, they continually build a portrait of the teacher's approach to and implementation of instructional practices. Over time, these observations should demonstrate the consistency of a teacher's performance. Although certain practices may not be observed on every visit, observed practices should be reflective of those noted in other sources (i.e. lesson plans, student work samples and other forms of documentation).

Walkthroughs are frequent brief observations which provide glimpses into those practices which occur regularly and should help establish the consistency of those practices. Formative observations provide a more complete picture of a teacher's approach to and execution of strategies, but **the formative observation alone is not the sole basis for the formative assessment.** Although many practices and instructional strategies should be directly observed both in the walkthroughs and in the formative observation, other information can and should be considered in the ratings for the *Formative Assessment*.

Each formative assessment will be directly tied to a formative observation. Once the formative observation has occurred, evaluators will consider the full scope of a teacher's practices that have been observed and documented up to and including the formative observation. Following the formative observation, if sufficient evidence is not present to rate a teacher's performance on the aligned standard or standards, evaluators should request specific documentation relevant to

that standard(s). Documentation should supplement evidence and practices observed in the course of a teacher's professional practice, but documentation alone should not account for a rating on the formative assessment. Practices cited in documentation should be supported by observed practices. Knowledge gained through the use of professional interaction should also be considered as evidence in the formative assessment ratings. This knowledge can be documented in commentary for the appropriate standard(s), but not require an additional source of documentation.

Following the first Formative Assessment, the cycle of observing practice and collecting documentation should begin again for the second formative assessment cycle. Evaluators are required to keep their observation notes pertaining to various standards on the *Formative Assessment.* To assist evaluators, *TAPS Reference Sheets* for standards, indicators and rubrics are provided in *Appendix III*.

Evaluators should keep in mind that the indicators are merely examples of the behaviors teachers might display if they are proficient in the standards. **The indicators are not to be used as a checklist**, and they should not be used as the sole method of providing feedback. While using the language associated with selected indicators is appropriate, feedback should provide guidance for improvement or for sustaining effective practices and should reflect the language of the standard.

Evaluators will conduct a *Pre-Evaluation Conference*, *Mid-Year Conference* and *Summative Conference* for all teachers evaluated by the TKES. The evaluator is also responsible for providing timely feedback to the teacher on observations, whether recorded as walkthroughs, or as part of a formative assessment on the *Formative Assessment* through the GaDOE TLE Electronic Platform. Feedback and commentary from both types of observations will be shared with the teacher via the GaDOE TLE Electronic Platform. A formal conference after each formative observation is optional.

Documentation

Documentation of teacher practice and process is the second required data source for TAPS. Documentation provides evaluators with specific evidence related to performance standards. Evaluators may request documentation from a teacher when a standard is not observed during an announced or unannounced observation or when the consistency of a teacher's practice cannot be established with the evidence collected to that point. The request will also provide the teacher with an opportunity for self-reflection, demonstration of quality work, and a basis for two-way communication with an evaluator. The teacher is responsible for submitting requested documentation in a timely manner either prior to or after the actual classroom observation, and prior to the completion of the *Formative Assessment* and *Summative Assessment* by the evaluator.

Although teachers are only **required** to submit documentation when additional information is requested by an administrator, they have the **option** to do so at any time during the formative cycle. Documentation should be submitted for review via the Notes Library in the GaDOE TLE Electronic Platform and should be tagged to the appropriate standard(s). When considering documentation for submission, teachers should choose meaningful and relevant evidence that

demonstrate practices that occur regularly in the classroom or which might not be readily observable. This type of evidence should be created through the course of normal instructional practice and should not consist of materials that were created specifically for the purposes of documentation. Evidence collected from documentation and observations should fit seamlessly together, and one should be reflective of the other. The *Examples of Documentation Evidence* document, noted in *Appendix III,* provides examples of the types of material an evaluator might consider requesting to show evidence of proficiency in any of the ten performance standards.

The site administrator will determine whether teachers should provide documentation through the GaDOE TLE Electronic Platform. The emphasis should be on the need to document a standard when it was not observed during an observation and the quality of the documentation. Documentation is not required for all ten standards.

An additional source of documentation to inform ratings for standards 3, 4, 7, and 8 will be the results from the Surveys of Instructional Practice. Results can inform both the formative and summative ratings, but commentary directly related to the Surveys of Instructional Practice must be included in the *Summative Assessment*. If the TAPS rating on any of these four standards differs significantly from the rating indicated by the survey data, the evaluator is required to provide written justification to explain why the performance rating on the standard is not aligned with the survey data.

Suggestions
When it is time to conduct the *Formative Assessments* and the *Summative Assessment*, evaluators must rate teachers on all ten performance standards. Consequently, as evaluators conduct observations and review documentation, it is important that they keep all ten standards in mind. When conducting walkthroughs, evaluators should focus on a limited number of performance standards (typically 1 to 4). Evaluators may find it useful to annotate the *TAPS Reference Sheet* as to which data source (observation and/or documentation) is likely to provide evidence related to a particular standard. Evaluators also may find it useful to review the teacher-generated listings from the *Look-Fors and Red Flags* activity, and the *Matching Observation and Documentation with Performance Standards* activity used during the Orientation and Familiarization sessions with the teachers.

Evaluators should consider the three characteristics of good commentary as follows:
- ✓ Use of the language of the standards or rubrics
- ✓ Specificity
- ✓ Identification of strengths and suggestions for growth.

Useful Resources
- *Formative Assessment*
- *TAPS Standards and Indicators Reference Sheet*
- *TAPS Standards and Rubrics Reference Sheet*
- *Examples of Documentation Evidence*
- Fact Sheet 14: Observation
- Fact Sheet 15: Documentation

GaDOE TLE Electronic Platform

Teacher Assessment on Performance Standards	**Documenting Performance** Evaluator and teacher upload documentation as evidence of performance of the standards.
	Walkthroughs & Formative Assessments Evaluator uses multiple sources of data to determine teacher's formative ratings for ten performance standards.
	Teacher Sign-off on Formative Assessments Teacher acknowledges receipt of and provides comments about the formative assessments.
	Surveys of Instructional Practice Evaluator and teacher review the survey results which become available after 15 completed surveys.

Step 6: Mid-Year Conference

Explanation

Conferencing is an integral part of the TKES process. During the *Mid-Year Conference* the evaluator should ask guiding questions that allow all teachers to review and reflect on their work, ensuring a balance between accountability for student growth and academic achievement and professional growth discussion.

Throughout the TKES evaluation process cycle, conferencing with the teacher at the following designated times is required and important to the feedback process. The *Mid-Year Conference* is the second of three required conferences in the TKES process and should be held in December or January of the evaluation cycle. The conference shall focus on Student Learning Objective (SLO) data, other student growth indicators, performance standards feedback and student progress toward mastery of the standards for a course. The discussion should reflect the effectiveness of the selected strategies and supporting documentation in the *Teacher SLO Implementation Plan*. It should be determined if data and evidence collected thus far indicates a need for instructional modifications for the remainder of the year.

The *Mid-Year Conference* may be held individually or in a small group setting (e.g. grade level, content groups). It should be recorded electronically via the GaDOE TLE Electronic Platform using the *Mid-Year Conference* step.

Suggestions

When it is time to conduct the *Mid-Year Conference*, evaluators may find it useful to review the *TAPS Reference Sheets* as a resource for completing walkthroughs, formative observations, and the formative assessments. The conference should focus on discussing of the TAPS standards and the review of teacher and student progress utilizing the Teacher SLO Implementation Plan. Prior to the *Mid-Year Conference*, evaluators should become familiar with the Teacher SLO Implementation Plan so the appropriate questions will be used during the conference. Evaluators will use the *Mid-Year Conference* document in the GaDOE TLE Electronic Platform to record a summary of the conference.

Useful Resources
- *Teacher SLO Implementation Plan*
- *Self-Assessment*
- *TAPS Standards and Indicators Reference Sheet*
- *TAPS Standards and Rubrics Reference Sheet*
- Fact Sheet 3: Standard   1: Professional Knowledge
- Fact Sheet 4: Standard   2: Instructional Planning
- Fact Sheet 5: Standard   3: Instructional Strategies
- Fact Sheet 6: Standard   4: Differentiated Instruction
- Fact Sheet 7: Standard   5: Assessment Strategies

- Fact Sheet 8: Standard   6: Assessment Uses
- Fact Sheet 9: Standard   7: Positive Learning Environment
- Fact Sheet 10: Standard   8: Academically Challenging Environment
- Fact Sheet 11: Standard   9: Professionalism
- Fact Sheet 12: Standard 10: Communication

GaDOE TLE Electronic Platform

Student Growth and Academic Achievement	**Teacher Student Learning Objective Data** Teacher reviews and analyzes the pre-assessment SLO data in order to complete the Teacher SLO Implementation Plan for each course taught for which as SLO is applicable.
	Teacher Student Learning Objective Implementation Plan Teacher accesses the District SLO Statement and completes a corresponding Teacher SLO Implementation Plan for each course taught for which an SLO is applicable.
	Mid-Year Conference Conference may be conducted with small groups or individuals. Evaluator and teacher contribute to conference content including documentation and performance for ten standards, review of student growth targets, Teacher SLO Implementation Plans, and other TKES processes.

Step 7: Rating Performance for Formative and Summative Assessments

Explanation

To assist with data collection for TAPS, evaluators will be required to complete two formative assessment cycles on each teacher. Each formative assessment cycle is comprised of data from walkthroughs, a formative observation and other appropriate forms of evidence.

Throughout the course of the year, evaluators are required to complete four walkthroughs (frequent brief observations lasting a minimum of ten minutes each) focusing on a limited number of standards (typically 1 to 4), and two formative observations (lasting a minimum of thirty minutes each) focusing on all ten standards. Following each required formative observation, a *Formative Assessment* will be completed based on all evidence collected during the formative assessment cycle. A rating must be provided for each of the ten performance standards on the *Formative Assessment*. It is strongly recommended that evaluators provide specific commentary to acknowledge performance strengths as well as areas for improvement as related to the standards. At the end of the year, a *Summative Assessment* will be completed that reflects the teacher's overall performance in relation to all ten performance standards. On all of these types of assessments, teacher ratings, comments, and documentation are tied directly to one of the ten standards as assessed on the associated performance appraisal rubrics. It is strongly recommended that evaluators provide commentary along with the standard rating.

The performance appraisal rubric is a behavioral summary scale that describes acceptable performance levels for each teacher performance standard. The scale states the measure of performance expected of teachers and provides a general description of what a rating entails. Teachers are expected to perform at the ***Proficient*** level. Figure10 explains the four levels of ratings.

Figure 10: Rating Categories

Cat.	Description	Definition
Exemplary	The teacher performing at this level maintains performance, accomplishments, and behaviors that continually and considerably surpass the established performance standard and does so in a manner that exemplifies the school's mission and goals.	Exemplary performance: • continually meets the standards • empowers students and exhibits continuous behaviors that have a strong positive impact on student learning and the school climate • acquires and implements new knowledge and skills and continually seeks ways to serve as a role model to others

Proficient	The teacher meets the performance standard in a manner that is consistent with the school's mission and goals.	Proficient performance: • consistently meets the standards • engages students and exhibits consistent behaviors that have a positive impact on student learning and the school climate • demonstrates willingness to learn and apply new skills
Needs Development	The teacher inconsistently performs at the established performance standard or in a manner that is inconsistent with the school's mission and goals. The teacher may be starting to exhibit desirable traits related to the standard, but due to a variety of reasons, has not yet reached the full level of consistency of practice expected or the teacher's performance is lacking in a particular area.	Needs Development performance: • requires frequent support in meeting the standards • results in less than expected quality of student learning • needs guidance in identifying and planning the teacher's professional growth
Ineffective	The teacher performs below the established performance standard or in a manner that inadequately supports the school's mission and goals.	Ineffective performance: • does not meet the standards • results in minimal student learning • may contribute to a recommendation for the employee not being considered for continued employment

The specific language in the TAPS rubrics should be used to determine the rating for each standard. Figure 11 gives some general guidance related to specific terms like "Consistently" and "Continually".   There are distinct differences.   When thinking about Professional Knowledge, a teacher who continually demonstrates professional knowledge would do this in every class every day. Continually demonstrating assessment uses might be at intervals that exceed every day and every class. In this situation, the evaluator must look at how the teacher uses assessments and determine if the regularity is appropriate. Figure 11 helps clarify the frequency terminology that is used throughout the TAPS rubrics.

Figure 11: Frequency Terminology

Terms ranked by degree of frequency	Definition	Example
Consistently	Occurs at regular intervals	Every Week *(Regular intervals will vary depending on the standard and the task.)*
Continually	Occurs with high frequency, appropriately, and over time	Every Day, Every Class *(Frequency will vary depending on the standard and the task.)*

When finalizing the formative assessment, evaluators make decisions about performance on the ten performance standards based on all available evidence including walkthroughs and formative observations, collected documentation and anecdotal evidence that may be collected during team meetings, examination of student work, conferences, etc. For the TAPS portion of the Teacher Keys Effectiveness System (TKES), this will consist of observation and documentation. Evaluators will use the *Formative Assessment* in the GaDOE TLE Electronic Platform to record comments from the observation and subsequent documentation reviews. Using this information, evaluators will then provide a formative assessment rating on each of the ten performance standards using the performance appraisal rubrics. It is strongly recommended that evaluators provide specific commentary on the standards in the *Formative Assessment* to acknowledge performance strengths as well as areas for improvement.

At every point that a rating is given, that rating should by tied directly to the performance appraisal rubric, a behavioral summary scale, for that particular standard. The scale states the measure of performance expected of teachers and provides a qualitative description of each rating entails. The description of **Proficient** practice is written to mirror the language of the standard, and **Proficient** is the expected level of performance for all teachers on all standards.

Evaluators are required to conduct two formative observations (announced and/or unannounced) for teachers evaluated through TKES. Each of these observations in connection with evidence collected from walkthroughs, documentation and other appropriate sources will inform a formative assessment as noted in Figure12.

Figure 12: Formative Assessment Cycle

The Formative Assessment Cycle
(2 cycles required)

Formative Assessment
produces a rating for all ten standards

Walkthrough(s)

Formative Observation

Documentation

60

The GaDOE TLE Electronic Platform will have a [Professional Development Plan (PDP)](#) and an [Additional Conferences](#) template to assist evaluators in providing growth and development opportunities for teachers. These documents are located in *Appendix II* for evaluators to use during the evaluation cycle. Additionally, a [TKES and LKES Evaluation Cycle Timeline](#) is provided for school districts and the local schools.

Summative Assessment Cycle

After collecting information throughout the evaluation process, evaluators will provide a summative assessment of a teacher's performance. Evaluators will use the *Summative Assessment* in the GaDOE TLE Electronic Platform to record and share ratings, along with recommended commentary for the summative assessment. Evaluators will use the performance appraisal rubrics to rate the teacher's overall performance on the ten standards for the year. As noted in Figure 13, this *Summative Assessment* will provide a portrait of the teacher's performance for the entire evaluation cycle.

Figure 13: Summative Assessment Cycle

In making judgments for the *Summative Assessment* on each of the ten teacher performance standards, the evaluator should determine where the **totality of evidence and consistency of practice** exists during the evaluation cycle. The judgment should be based on observations, documentation of practice and process provided by the teacher or collected by the evaluator, and the Surveys of Instructional Practice results. Commentary specifically related to the surveys of instructional practice must be included in the feedback for standards 3, 4, 7 and 8.

Totality of evidence and consistency of practice as used here is intended to mean the overall weight of evidence. In other words, as applied to the four-point rating scale on the performance appraisal rubric, the evaluator should ask, "In which rating category does the totality of the evidence fall?" In many instances, there will be performance evidence that fits in more than one category. To reach a decision for aggregating the total set of data to reach a summative decision, the evaluator should ask "In which rating category does the evidence best fit?" The summative ratings are not averages of the ratings previously assigned. Rather, the rating for each standard should reflect the level of consistency reached and maintained by a teacher in relation to each standard.

In addition to the ten separate ratings, the teachers will receive an overall TAPS point score. *Exemplary* ratings are worth 3 points, *Proficient* ratings are worth 2 points, and *Needs Development* ratings are worth 1 point. *Ineffective* ratings have no point value. Through the GaDOE TLE Electronic Platform, evaluators will receive a point value for all ten standards which will produce a final TAPS score. Figure 14 illustrates the connections between the observations and the ratings that are associated with them.

A *Summative Assessment* shall be completed by May 15 for each teacher which establishes a final rating on all ten standards. These ratings and commentary should take into account ALL data sources available and should reflect the totality of the teacher's practice for the year (i.e. observations, documentation, surveys of instructional practice). Figure 14 illustrates the connections between the observations and the ratings that are associated with them. The Teacher Assessment on Performance Standards (TAPS) Overall Rating Scale provides further details about the score ranges.

Figure 14: Example of Overall Summative Rating

Rating/Overall Point Value	Point Value	Number of Standards Rated at that Level	Computation
Exemplary (27-30)	3	2	3 x 2 = 6 pts
Proficient (17-26)	2	6	2 x 6 = 12 pt
Needs Development (7-16)	1	1	1 x 1 = 1 pt
Ineffective (0-6)	0	1	0 x 1 = 0 pts
			Total = 19 pts Proficient

This score (19 points) will determine the overall rating for the TAPS component as specified in the first column of Figure 14. It will be appropriately scaled so that it counts for 50% of the overall Teacher Effectiveness Measure (TEM). Evaluators will provide standard ratings and recommended commentary to teachers on the *Summative Assessment* at a *Summative Conference* and will share the *Summative Assessment* using the GaDOE TLE Electronic Platform. The *Summative Assessment* and *Summative Conference* must be completed by May 15th of the school year.

Suggestions
The site administrator has the ultimate responsibility for ensuring that the TAPS component of the TKES is executed faithfully and effectively in the school. However, for TAPS to be meaningful, it must provide teachers with relevant and timely ratings and commentary. To help with time constraints, the district may designate other TKES credentialed administrators employed in the school district to assist as evaluators. The site administrator should remain informed of the assessment process and is responsible for signing-off on the *Summative Assessment* of the teachers.

Useful Resources
- *Formative Assessment*
- *Summative Assessment*
- Fact Sheet 20: Using Teacher Evaluation to Improve Performance
- Fact Sheet 21: Evaluation Conferences
- Samples of Completed Forms during the Training

GaDOE TLE Electronic Platform

Teacher Assessment on Performance Standards	**Documenting Performance** Evaluator and teacher upload documentation as evidence of performance of the standards.
	Walkthroughs & Formative Assessments Evaluator uses multiple sources of data to determine teacher's formative ratings for ten performance standards.
	Teacher Sign-off on Formative Assessments Teacher acknowledges receipt of and provides comments about the formative assessments.
	Surveys of Instructional Practice Evaluator and teacher review the survey results which become available after 15 completed surveys.
Teacher Effectiveness Measure	**Summative Assessment** Evaluator uses multiple sources of data to determine teacher's summative ratings for ten performance standards.
	Summative Conference An individual conference is required. Evaluator and teacher acknowledge the summative assessment and contribute to conference content including the summative assessment, survey data, student growth data or other TKES processes.
	Principal Summative Sign-off The principal signs off that the summative assessment, including results from the Survey of Instructional Practice, has been shared and finalized with the teacher.
	Student Growth and Academic Achievement Rating Teacher reviews the summary data for Student Growth Percentile measures and Student Learning Objective data.
	Teacher Effectiveness Measure The teacher reviews the Teacher Effectiveness Measure.

Step 8: Summative Assessment

Explanation
The *Summative Assessment* finalizes the TAPS evaluation cycle. Throughout the evaluation cycle, evaluators should ask guiding questions that allow teachers to participate in ongoing reviews and reflection of their work, ensuring a balance between accountability for student growth and academic achievement and professional growth. The communication and data collection that occurs during the evaluation cycle provides the foundation for the **totality of evidence and consistency of practice** for the evaluator to rate the ten performance standards for TAPS.

In making judgments for the summative assessment on each of the ten teacher performance standards, the evaluator should determine where the **totality of evidence and consistency of practice** exists during the evaluation cycle. The judgment should be based on observations, documentation of practice and process provided by the teacher or collected by the evaluator, Surveys of Instructional Practice, and Student Growth and Academic Achievement data to date. A *Summative Conference* will be held individually with the teacher to discuss the results of the Summative Assessment.

Commentary specifically related to the surveys of instructional practice must be included in the feedback for standards 3, 4, 7 and 8 in the summative assessment. If the TAPS rating on any of these four standards differs significantly from the rating indicated by the survey data, the evaluator is required to provide written justification to explain why the performance rating on the standard is not aligned with the survey data.

Suggestions
Evaluators should review the *TAPS Reference Sheets* for Standards, Indicators and Rubrics in preparation for completing the *Summative Assessment*. The *Summative Assessment* provides judgment on the overall success of the teacher toward meeting proficiency on the ten performance standards by using a behavioral summary scale on the performance appraisal rubric which describes acceptable performance levels for each performance standard. The scale states the measure of performance expected of teachers and provides a general description of what a rating entails. Additional review of the 4 walkthroughs, the 2 formative assessments and other documentation for the teacher will assist the evaluator in appropriately rating the ten standards on the *Summative Assessment*.

Evaluators should review the three characteristics of good commentary as follows:
- ✓ Use of the language of the standards or rubrics
- ✓ Specificity
- ✓ Identification of strengths and suggestions for growth.

Georgia Department of Education
Teacher Keys Effectiveness System

- *Summative Assessment*
- *TAPS Standards and Indicators Reference Sheet*
- *TAPS Standards and Rubrics Reference Sheet*
- Fact Sheet 3: Standard   1: Professional Knowledge
- Fact Sheet 4: Standard   2: Instructional Planning
- Fact Sheet 5: Standard   3: Instructional Strategies
- Fact Sheet 6: Standard   4: Differentiated Instruction
- Fact Sheet 7: Standard   5: Assessment Strategies
- Fact Sheet 8: Standard   6: Assessment Uses
- Fact Sheet 9: Standard   7: Positive Learning Environment
- Fact Sheet 10: Standard 8: Academically Challenging Environment
- Fact Sheet 11: Standard 9: Professionalism
- Fact Sheet 12: Standard 10: Communication

GaDOE TLE Electronic Platform

Teacher Effectiveness Measure	**Summative Assessment** Evaluator uses multiple sources of data to determine teacher's summative ratings for ten performance standards.
	Summative Conference An individual conference is required. Evaluator and teacher acknowledge the summative assessment and contribute to conference content including the summative assessment, survey data, student growth data or other TKES processes.
	Principal Summative Sign-off The principal signs off that the summative assessment, including results from the Survey of Instructional Practice, has been shared and finalized with the teacher.
	Student Growth and Academic Achievement Rating Teacher reviews the summary data for Student Growth Percentile measures and Student Learning Objective data.
	Teacher Effectiveness Measure The teacher reviews the Teacher Effectiveness Measure.
Professional Development Plan & Additional Conferences	**Professional Development Plan** Evaluator uses a variety of resources to complete a development plan for the teacher. Evaluator and teacher contribute to the conference.
	Additional Conferences Evaluator and teacher contribute to conference content including documentation and performance for ten standards, review of survey data, review of student growth targets, or other TKES processes.

Step 9: Summative Conference

Explanation

The *Summative Conference* finalizes the TAPS evaluation cycle. Throughout the evaluation cycle, evaluators should ask guiding questions that allow teachers to participate in ongoing reviews and reflection of their work, ensuring a balance between accountability for student growth and academic achievement and professional growth. The communication and data collection that occurs during the evaluation cycle provides the foundation for the **totality of evidence and consistency of practice** for the TKES ten standard ratings. The ratings and highly recommended commentary will be shared during the *Summative Assessment Conference*.

Throughout the TKES evaluation process cycle, conferencing with the teacher at the following designated times is required and important to the feedback process. The *Summative Conference* is the third of three required conferences in the TKES process. A *Summative Conference* should be held no later than May 15th of the evaluation cycle. The school district shall determine the designated date for the *Summative Conference* using the May 15th deadline.

The conference will be held to provide written and oral feedback to the teacher regarding the *Summative Assessment*. TAPS, student achievement data trends, and student perception surveys shall be included in the *Summative Conference* discussion. The *Summative Conference* should be held individually with each teacher so that specific feedback on the performance standards and Surveys of Instructional Practice can be provided during the conference.

Suggestions

When it is time to conduct the *Summative Conference*, evaluators may find it useful to review the *TAPS Reference Sheets* as it relates to walkthroughs, formative observations, formative assessments and the summative assessment. The *Summative Conference* provides the teacher and evaluator with an opportunity to review the *Summative Assessment* and the Surveys of Instructional Practice results. At this time, the evaluator and teacher can make plans/next steps for the upcoming year and determine what changes, if any, need to be made on designated standards. A *Professional Development Plan (PDP)* may be developed during the conference, as needed, or at any other time during the school year. If a teacher is placed on a PDP, additional conferences should be scheduled as follow-up to the PDP and recorded in the GaDOE TLE Electronic Platform.

Useful Resources

- *Summative Conference*
- *Professional Development Plan*
- *TAPS Standards and Indicators Reference Sheet*
- *TAPS Standards and Rubrics Reference Sheet*
- Fact Sheet 3: Standard 1: Professional Knowledge
- Fact Sheet 4: Standard 2: Instructional Planning
- Fact Sheet 5: Standard 3: Instructional Strategies

GaDOE TLE Electronic Platform

Teacher Effectiveness Measure	**Summative Assessment** Evaluator uses multiple sources of data to determine teacher's summative ratings for ten performance standards.
	Summative Conference An individual conference is required. Evaluator and teacher acknowledge the summative assessment and contribute to conference content including the summative assessment, survey data, student growth data or other TKES processes.
	Principal Summative Sign-off The principal signs off that the summative assessment, including results from the Survey of Instructional Practice, has been shared and finalized with the teacher.
	Student Growth and Academic Achievement Rating Teacher reviews the summary data for Student Growth Percentile measures and Student Learning Objective data.
	Teacher Effectiveness Measure The teacher reviews the Teacher Effectiveness Measure.
Professional Development Plan & Additional Conferences	**Professional Development Plan** Evaluator uses a variety of resources to complete a development plan for the teacher. Evaluator and teacher contribute to the conference.
	Additional Conferences Evaluator and teacher contribute to conference content including documentation and performance for ten standards, review of survey data, review of student growth targets, or other TKES processes.

Summary of TAPS Process

Figure 15 provides a summary of the steps, useful materials located on the GaDOE TLE Electronic Platform for administrators to use during the TAPS component of TKES.

Figure 15: Summary of the Teacher Assessment on Performance Standards (TAPS) Process

Step	Description	Materials Needed	Timeline
1: Orientation	• Building administrators conduct a TAPS orientation session for classroom teachers using the *TAPS Orientation* video. • During this session, all teachers should receive the electronic *TKES Implementation Handbook*. • To help teachers become familiar with the contents of the electronic *TKES Implementation Handbook*, administrators may use activities received during the TKES training. • Administrators should make teachers aware of the support resources available from the GaDOE	*Required* • *TAPS Orientation* • *TKES Implementation Handbook* *Optional* • *Scavenger Hunt Activity* • *Fact Sheets* • *RT3 Frequently Asked Questions*	August 2013
2: Self-Assessment	• Teachers will complete a required *Self-Assessment* to reflect on their areas of strength and growth related to each standard. Teachers should be encouraged to use the results of the self-assessment to inform their strategies for professional growth.	*Required* • *Self-Assessment* • *Pre-Evaluation Conference*	August 2013
3: Familiarization	• Building administrators conduct familiarization session(s) on TAPS to answer questions and to help teachers understand what administrators will be looking for in the evaluation. • Administrators should provide time for ongoing familiarization sessions which utilize resources available from the GaDOE. • A *Pre-Evaluation Conference* (August/September) is a follow-up to the Orientation and the beginning of the Familiarization process, as well as a review of the self-assessment. • Familiarization will be an ongoing process throughout the year as needed. Teachers will not be required to sign-off on this container in the GaDOE TLE Electronic Platform since the familiarization is ongoing throughout the year.	*Required* • *Fact Sheets* *Optional* • *TAPS Rating Teacher Performance PowerPoint Presentation* • *Look-Fors and Red Flags* Activity • *Matching Observation and Documentation with Performance Standards* Activity • *Documentation of Performance* Activity • *A Clean Room* Activity • *What's in a Rubric* Activity • *Pre-Evaluation Conference* • *TKES Implementation Handbook*	August 2013 to May 2014

4. Documenting Performance and Required Conferences	Observations and Documentation	- To help collect data for the TAPS, evaluators will be required to conduct **two** formative observations (announced or unannounced) and a minimum of four walkthrough visits (for a limited number of standards (typically 1 to 4) during the school year. - Each formative observation will be a minimum of 30 min and walkthroughs will be a minimum of 10 min. - Evaluators may find it useful to use the *TAPS Reference Sheets* as a resource for the types of behaviors that may indicate a teacher is performing at the proficient level. - Evaluators will provide feedback to the teacher concerning the evidence related to designated standards observed during walkthroughs by using the *Formative Assessment* through the GaDOE TLE Electronic Platform. - Evaluators will provide feedback to the teacher concerning the evidence related to each standard using the *Formative Assessment* through the GaDOE TLE Electronic Platform. A formative conference is optional. - Evaluators will be required to conduct a *Pre-Evaluation Conference*, *Mid-Year Conference*, and a Summative *Conference*. These conferences may not always coincide with the formative observations. The *Mid-Year Conference* ((December/January) should focus on Student Learning Objective (SLO) data, *Teacher SLO Implementation Plan*, performance standards feedback and other relevant student achievement data. The *Mid-Year Conference* can be held individually or in a small group setting (*e.g.*, grade level, content groups). - Evaluators should use a combination of observation and documentation to determine teacher ratings on the ten performance standards. - Evaluators may request documentation from a teacher when a standard is not observed during an announced or unannounced observation or when the consistency of a teacher's practice cannot be established with the evidence collected to that point. - Teachers are responsible for submitting requested documentation in a timely manner within the 5 business days required for the evaluator to complete the *Formative Assessment* and *Summative Assessment.* - Teachers are only required to submit documentation when additional information is requested by the administrator, but they have the option to do so at any time during the evaluation cycle. The documentation evidence should have been created through the course of normal instructional practice and should not include materials that were created specifically for the purposes of documentation. - Evaluators and teachers should submit documentation for review via the Notes Library in the GaDOE TLE Electronic Platform.	*Required* • *Formative Assessment* • *Mid-Year Conference* • *Teacher SLO Implementation Plan* *Optional* • *TAPS Reference Sheets* • *TKES Implementation Handbook*	August 2013 to April 2014

5: Rating Performance	**Formative Assessment**	• Evaluators must complete two formative assessments for each teacher using the *Formative Assessment*. • Each formative assessment is connected to a formative observation, but the ratings for each standard will include consideration of other appropriate data sources (i.e. previous walkthroughs, documentation, etc.). • Evaluators should use a combination of observation and documentation to determine teacher ratings on each of the ten performance standards. • Evaluators are responsible for providing formative feedback through the GaDOE TLE Electronic Platform. A formative conference is optional.	*Required* • *Formative Assessment* *Optional* • *TAPS Reference Sheets* • *TKES Implementation Handbook*	August 2013-March 2014
	Summative Assessment	• Evaluators will use data collected via observation and documentation to determine summative ratings for teachers. • Evaluators should use a combination of observation and documentation to determine teacher ratings on each of the ten performance standards on the *Summative Assessment*. • Evaluators should provide a comprehensive and authentic performance portrait of the teacher's work. The Electronic platform will give a TAPS score for the teacher which will count as 50% of the Teacher Effectiveness Measure (TEM). • A *Summative Conference* (March to May) will be held to provide written and oral feedback to the teacher regarding the *Summative Assessment*. TAPS, student achievement data trends, and student perception surveys shall be included in the *Summative Conference* discussion.	*Required* • *Summative Assessment* • *Summative Conference* *Optional* • *TAPS Reference Sheets* • *TKES Implementation Handbook*	May 15, 2014

PART II

Surveys of Instructional Practice

PART II: Surveys of Instructional Practice

Surveys of Instructional Practice Overview

Another component of the Teacher Keys Effectiveness System consists of Surveys of Instructional Practice. These surveys provide a means for collecting client (in this case student) perception data and will be administered through the GaDOE TLE Electronic Platform. Student Surveys of Instructional Practice will be administered in grades 3-5, 6-8, and 9-12. Students in K-2 grades will not participate in the survey.

Among the advantages of using this survey design are the rapid turnaround in data collection, the limited cost in gathering the data, and the ability to infer perceptions of a larger population from smaller groups of individuals. In the Teacher Keys Effectiveness System, student Surveys of Instructional Practice will be used as a measure of teacher effectiveness and documentation in that they will provide support for four of the TAPS standards.

These four standards (Standard 3- Instructional Strategies, Standard 4- Differentiated Instruction, Standard 7- Positive Learning Environment, & Standard 8- Academically Challenging Environment) reflect the direct experience of students in classrooms. Data from student Surveys of Instructional Practice must be used to inform the rating of a teacher's performance on these standards on the *Formative Assessment* (when data is available) and on the *Summative Assessment*. Commentary specifically related to the surveys of instructional practice must be included in the feedback for standards 3, 4, 7 and 8 in the summative assessment. If the TAPS rating on any of these four standards differs significantly from the rating indicated by the survey data, the evaluator is required to provide written justification to explain why the performance rating on the standard is not aligned with the survey data.

Multiple data sources enable the evaluator to obtain a more accurate picture of performance and assist the teacher in increasing student success. These data sources do not stand alone but are complementary to each other and should be integrated into the process of evaluation to provide a richer portrait of teacher performance. The flaws of one data source are often the strengths of another, and by combining multiple methods, evaluators can make more solid judgments regarding teacher performance and make decisions that are supported by multiple types of data.

Student surveys may help the teacher set goals for continuous improvement and may provide feedback directly to the teacher that helps identify the need for professional growth and development. Student surveys may also be used to provide information to evaluators that may not be accurately obtained during observation or through other types of documentation.

Student surveys of instructional practice ask students to report on items they have directly experienced by responding to statements that are directly tied to a specific performance standard.

Three different versions of the student Surveys of Instructional Practice (grades 3-5, 6-8, and 9-12) are provided. The versions are designed to reflect developmental differences in students' ability to provide useful feedback regarding their teacher. All surveys are to be completed anonymously to promote honest feedback. In addition, all surveys are examined to ensure they are written at an appropriate readability level using the Flesch-Kincaid Readability Scale.

An example of a survey question is shown in Figure 16. The first question is focused on Standard 3: Instructional Strategies and the second question focuses on Standard 8: Academically Challenging Environment.

Figure 16: Sample Survey Prompts for Grades 6-8

	Strongly Agree	Agree	Disagree	Strongly Disagree
My teacher frequently checks to see if we understand what is being taught.	3	2	1	0
The work assigned in this class challenges me.	3	2	1	0

Survey Sample

Teachers who teach self-contained classes (*e.g.,* elementary teachers, special education teachers) will have all the students in their class surveyed. For departmentalized teachers (*e.g.,* middle and high school teachers, elementary PE and music teachers), designated classes of students will be surveyed. To gain valid survey results, a minimum of 15 students shall complete the survey for Teachers of Record.

The local school site administrator will determine the selection of the classes and the selection must consist of a minimum of two sections of students. There is a possibility that students may be selected to complete surveys on more than one teacher, but it is recommended that no student should be sampled to respond to surveys on more than two teachers in any given survey administration period. The sections selected for surveying a teacher should reflect the diversity of the teacher's content and student population.

Administration of the Survey

Classroom teachers will not be involved in administering the survey to their own students. The survey will be administered in secure conditions outside the presence of the teacher. Students will complete the surveys online within the GaDOE TLE Electronic Platform while under the supervision of a professional with a valid teaching certificate, service certificate, or leadership certificate. Consistent with state testing requirements, paraprofessionals may not administer the student surveys unless they also have a valid teaching certificate. The survey will be administered in a common media center or computer lab, if at all possible. If a common media

center or computer lab is not available, the survey administrator will need to identify a location where the survey can be administered to small groups of students based on the available computers or other electronic devices. All surveys will be administered using the GaDOE TLE Electronic Platform. The surveys will be accessed through a web-based portal. There will be no option for students to type in comments.

Students are able to comprehend at a higher level when listening to the survey questions read aloud. Therefore, it is considered appropriate for the readability of 3-5 surveys to be written at a slightly higher readability level. All students in Grades 3-5 will have the surveys read aloud. Survey items for **all** students will have read aloud capability within the GaDOE TLE Electronic Platform. Figure 17 will provide the Lexile reading measures used by the GaDOE for the student perception surveys once the redesign and development of the survey items are complete.

Figure 17: Updated Common Core Lexile Reading Measures

Grade Band	Lexile Measures 25th to 75 Percentile IQR	
	Current Lexile Band	"Stretch" Lexile Band*
K–1	N/A	N/A
2–3	450L–725L	420L–820L
4–5	645L–845L	740L–1010L
6–8	860L–1010L	925L–1185L
9-10	960L–1115L	1050L–1335L
11–CCR	1070L–1220L	1185L–1385L

All appropriate accommodations will be made for students with disabilities and English Language Learners, based on Individual Education Plans (IEPs) or language instruction education plans (extended time, read aloud, dual language dictionaries, etc.). Severe/Profound special education students, may or may not participate with needed accommodations, as determined to be appropriate by the IEP committee.

Surveys will be read to Visually Impaired students. A secure protocol for entering the student responses from a Braille survey into the electronic platform is provided for educators.
Auditory devices may also be utilized. The use of a toggle switch within the electronic platform will allow the survey to be read through headphones for any students requiring the accommodation. Additionally, the electronic platform will provide translation into other languages through use of a drop box allowing the selection from a list of multiple languages.

Districts will have multiple options for selecting survey windows. From October to March an open survey window will be available for schools to select a time frame that does not interfere with testing or other uses of computer labs. The multiple survey options will accommodate courses taught only during first semester, only during second semester, all year, or for shorter segments within the school year. The appropriate survey window for a course and/or teacher sample will be selected by the district and/or principal. Surveys may also be administered

multiple times during the year at the district's or principal's discretion. Surveys will be administered in the following manner:

- Departmentalized settings (*e.g.,* some upper elementary, middle and high school teachers, elementary PE and music teachers) - Principals will select students to be surveyed by class periods. There is a possibility that students may be selected to complete surveys on more than one teacher, but it is recommended that no student should be sampled to respond to surveys on more than two teachers in any given survey administration period.
- Self-contained classes (*e.g.,* elementary teachers, special education teachers) - All students will be surveyed unless otherwise determined by the student's IEP committee.
- Non-departmentalized elementary staff and self-contained teachers - All students will be surveyed.
- Departmentalized elementary and multi-class (art, music, PE, etc.) teachers - Principals shall choose at least two class periods consisting of different students during which all students in these class periods will complete the survey.
- Special Education, inclusion, ESOL, etc. teachers - The principal shall schedule a time when all students taught by these teachers can complete the survey.
- Middle school and high school teachers - Principals shall choose at least two class periods consisting of different students during which all students will complete the survey so that those surveyed are representative of the students the teacher is teaching.

Survey Results

Survey results will be compiled within the GaDOE TLE Electronic Platform and must be utilized as documentation to support annual performance ratings. A summary of results for each question will be provided to individual teachers as noted in Figure 18. The Survey Results Summary Sheet will include:

- The number of students with valid responses for each question.
- The number of responses for each question that were rated at each level of the response scale (*Yes, Sometimes, No* for Grades 3-5; *Strongly Agree, Agree, Disagree, Strongly Disagree* for Grades 6-12).
- The teacher, district, and state mean.
- The median and the standard deviation are compared to all other teachers at that grade level band (3-5, 6-8, and 9-12) for each question.

Figure 18: Survey Results Summary Sheet (Sample for Grade 7 teacher)

Question	Number of Valid Responses	Percentage of Ratings				Mean	District Mean	State Mean	Median	Standard Deviation
		Strongly Agree (3 pts)	*Agree* (2 pts)	*Disagree* (1 pts)	*Strongly Disagree* (0 pt)					
My teacher uses different ways to teach and help me learn.	30	3%	50%	47%	0%	2.57	2.2	2.1	3	0.57
My teacher sets high learning standards for the class.	28	0%	25%	68%	7%	2.18	2.3	2.2	2	0.55

Survey data will provide documentation for Standards 3, 4, 7, and 8. This documentation should be used by evaluators to inform formative and summative assessment ratings for those standards. Evaluators and teachers will be provided with a summary for each standard with a mean score through the GaDOE TLE Electronic Platform.   Figure 19 shows a partial survey results table for each standard by mean. Immediately after completion of the survey, the site administrator will have access to the mean score results report.

Figure19: Survey Results for Each Standard by Mean

	3. Instructional Strategies	4. Differentiated Instruction	7. Positive Learning Environment	8. Academically Challenging Environment
	0.9	2.1	3.0	1.7

If the TAPS rating on any of the standards for which survey data is provided differs significantly from the rating that would be indicated by those data, the evaluator is required to provide written justification within the GaDOE TLE Electronic Platform to explain why the performance rating on the standard is not aligned with the survey data.

To gain valid survey results, a minimum of 15 students shall complete the survey for their Teacher of Record; student data cannot be disaggregated for groups smaller than 15 for confidentiality purposes to protect the anonymity of respondents. Teachers (i.e. collaborative gifted teacher), who **cannot** utilize the Surveys of Instructional Practice based on the procedures established for the students he or she teaches, will not have this type of data to supplement the documentation or inform the ratings on the TAPS performance Standards 3, 4, 7, and 8.

GaDOE TLE Electronic Platform

Teacher Assessment on Performance Standards	**Documenting Performance** Evaluator and teacher upload documentation as evidence of performance of the standards.
	Walkthroughs & Formative Assessments Evaluator uses multiple sources of data to determine teacher's formative ratings for ten performance standards.
	Teacher Sign-off on Formative Assessments Teacher acknowledges receipt of and provides comments about the formative assessments.
	Surveys of Instructional Practice Evaluator and teacher review the survey results which become available after 15 completed surveys.
Teacher Effectiveness Measure	**Summative Assessment** Evaluator uses multiple sources of data to determine teacher's summative ratings for ten performance standards.
	Summative Conference An individual conference is required. Evaluator and teacher acknowledge the summative assessment and contribute to conference content including the summative assessment, survey data, student growth data or other TKES processes.
	Principal Summative Sign-off The principal signs off that the summative assessment, including results from the Survey of Instructional Practice, has been shared and finalized with the teacher.
	Student Growth and Academic Achievement Rating Teacher reviews the summary data for Student Growth Percentile (SGP) measures and Student Learning Objective (SLO) data.
	Teacher Effectiveness Measure The teacher reviews the Teacher Effectiveness Measure.

Part III
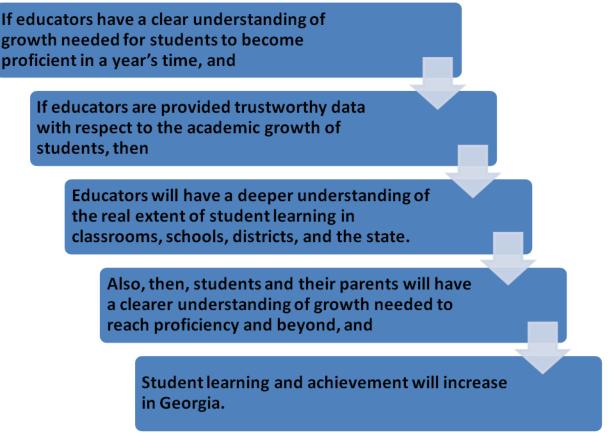
Student Growth and Academic Achievement

PART III: Student Growth and Academic Achievement

Student Growth and Academic Achievement Overview

The second component of the Teacher Keys Effectiveness System is Student Growth and Academic Achievement. For teachers of tested subjects, this component consists of a Student Growth Percentile (SGP). For teachers of non-tested subjects, this component consists of GaDOE approved Student Learning Objectives (SLOs) which utilize district-identified achievement growth measures.

The Theory of Action illustrated in Figure 20 outlines the actions necessary to achieve successful student growth.

Figure 20: Theory of Action Part II

If educators have a clear understanding of growth needed for students to become proficient in a year's time, and

If educators are provided trustworthy data with respect to the academic growth of students, then

Educators will have a deeper understanding of the real extent of student learning in classrooms, schools, districts, and the state.

Also, then, students and their parents will have a clearer understanding of growth needed to reach proficiency and beyond, and

Student learning and achievement will increase in Georgia.

Because of the differences in scheduling and course assignments, models are in development that will guide how data from both tested and non-tested subjects will contribute to the TEM calculation. Student Learning Objectives (SLOs) will be used to assess student growth in non-

tested courses and will contribute performance data to the calculation of the TEM for teachers of those courses. After all district SLOs are developed and implemented, teachers will be evaluated using one district-determined SLO for each non-tested course they teach. Teachers of non-tested subjects will be evaluated by district-determined SLOs for their non-tested courses. Teachers of tested subjects will be evaluated by the Student Growth Percentile (SGP) measure for the tested courses. Teachers who teach a combination of tested and non-tested subjects will use a combined measure which incorporates both SLO and SGP data.

GaDOE will continue to work on matrices and/or decision tables for teachers who have student growth measures from multiple SLOs, or from both Student Learning Objectives and Student Growth Percentiles, so that an appropriate balance is determined between the growth measures, taking into account the number of courses taught with SLOs and the number of courses for which the teacher has SGPs. GaDOE staff is currently engaged in analyzing possible scenarios and developing detailed processes with technical assistance from external experts.

Due to the limitations on data analysis and development of state reports created by the differences in SLOs and SLO goals developed in each district, the state reports will be limited to the percent of teachers who met the SLO growth goals and the percent of students who met SLO goals. Districts will have the option to review SLO performance data at the student, teacher, school, and district level to ensure consistency of the SLO goals across the district.

Student Growth Percentiles (SGP) Overview

Student Growth Percentiles (SGPs) will be used as the student growth component of the Teacher Effectiveness Measure (TEM) for teachers of tested subjects. SGPs describe a student's growth relative to his/her academically similar peers - other students with a similar prior achievement (*i.e.,* those with similar history of scores). A growth percentile can range from 1 to 99. Lower percentiles indicate lower academic growth and higher percentiles indicate higher academic growth. From the 1st to the 99th percentile, growth is possible for all students regardless of previous achievement scores. Annual calculations of student growth are based on state assessment data (grades 4-8 CRCT and high school EOCT).

Most commonly, a group's SGP is the median growth percentile for each student in the group. The median is obtained by rank ordering the percentiles for all students in the group and selecting the middle percentile (50% of the group would have a higher percentile and 50% a lower percentile). SGPs can be compared across grade levels and across subject areas, meaning summary measures also can be aggregated across grade levels and content areas.

SGPs do not require a vertical or developmental scale (a continuous scale spanning multiple grades in the same content area) in order to describe student growth. This growth model does not calculate how many scale score points a student improved from year to year. Rather, this growth model describes growth in terms of how a student performed this year relative to other students who have a similar academic history.

The Criterion-Referenced Competency Tests (CRCT) in grades 4-8 reading, English/language arts, math, science and social studies and End of Course Tests (EOCTs) in Biology, Physical

Science, 9th Grade Literature/Composition, American Literature/Composition, US History, Economics/Business/Free Enterprise, Mathematics I, Mathematic II, GPS Algebra, Coordinate Algebra, GPS Geometry, and Analytic Geometry will be included in the growth model. Other standardized tests which may be implemented to replace current state mandated standardized tests will also be utilized for the student growth model. As Georgia transitions to the implementation of common assessments developed by the Partnership for Assessment of Readiness for College and Careers (PARCC), the new assessments will be utilized in the growth model.

The growth model uses two years of prior test data as pretest scores (one year is used when multiple years are not available). For example, growth percentiles for 5th grade students on the 5th grade CRCT are generated using 3rd and 4th grade CRCT results as priors. At least one prior test score is necessary to model growth. Therefore, students in grades 4-8 will receive growth scores. Students in 3rd grade will not have a prior year CRCT score to determine a growth percentile score. Courses with EOCTs will receive growth percentile scores.

The SGP model will provide a wealth of rich information on student, classroom, school, district, and state growth based on Criterion-Referenced Competency Tests (CRCT) and End of Course Tests (EOCT) and, eventually, on the common assessments developed by the Partnership for Assessment of Readiness for College and Careers (PARCC). SGPs are an accurate and fair way to capture the progress students make throughout the course of an academic year. This model provides Georgia with a comprehensive indicator system that can be used at multiple levels (class, school, system, and state).

Student Learning Objectives (SLO) Overview

Student Learning Objectives describe how students will grow in their learning of the selected content over the instructional interval, as measured by the pre-assessment(s) and post-assessment(s). The expected growth for students must reflect the learning that would occur over the entire duration of the course. Expectations must be rigorous and attainable. Expected growth is the amount students are expected to grow over the course of the instructional period.
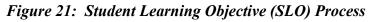
District-determined SLOs are course specific, grade level learning objectives that are measureable, focused on growth in student learning, and aligned to curriculum standards. As a measure of teachers' impact on student learning, SLOs give educators, school systems, and state leaders an additional means by which to understand, value, and recognize success in the classroom.
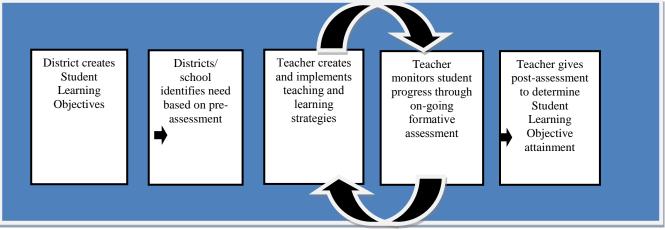
The primary purpose of SLOs is to improve student achievement at the classroom level. An equally important purpose of SLOs is to provide evidence of each teacher's instructional impact on student learning. The process of setting and using SLOs requires teachers to use assessments to measure student growth. This allows teachers to plan for student success by providing diagnostic assessment data for the purpose of instructional design in order to directly impact instruction in moving students, teachers, and schools toward the common vision of exemplary instruction and high levels of student academic growth. As noted in *Appendix III*, the *Student*

Learning Objectives Operations Manual, *Student Learning Objectives Guide for District Leadership, Student Learning Objectives Guide for Principals*, *Student Learning Objectives.. The Basics for Classroom Teachers,* and additional helpful resources are located in the GaDOE TLE Electronic Platform and the GaDOE TLE Division Student Learning Objective (SLO) webpage. These documents have detailed information and forms regarding student learning objectives (SLO) development.

SLO Process: Districts must follow the SLO development process set forth in the GaDOE training materials for TKES, and districts must submit each SLO for GaDOE audit review. Districts will submit SLOs on the GaDOE TLE Electronic Platform. GaDOE will review and request revisions, as necessary.

Districts may set their own pre-assessment and post-assessment windows, making sure that all data will be compiled within the GaDOE TLE Electronic Platform no later than June 14, 2014. Students must be enrolled in a course for 65% of the instructional period, and have both a pre- and post-assessment score, in order for the student's data to be included in the SLO measures. The district should ensure that students who enroll after the pre-assessment window, but who will be enrolled for 65% of the instructional period, have the opportunity to take the pre-assessment. Pre- and post-assessments must be administered to all students enrolled in applicable SLO courses. Figure 21 provides a flow chart of the SLO development process.

Figure 21: Student Learning Objective (SLO) Process

Stronge, J. H. & Grant, L. H. (2009). Adapted from *Student achievement goal setting: Using data to improve teaching and learning.* Larchmont, NY: Eye on Education.

The narrative listed below outlines the Student Learning Objective Process currently being implemented in Georgia.

1. Districts, in collaboration with teachers and school leaders, examine current data and historical data to determine the focus of the SLO for specified course and determine appropriate pre- and post-assessment measures for each course.
2. Prior to the instructional period, district teams develop an SLO based on the needs of students and/or school academic goals as they relate to the specified course. GaDOE audits and approves SLOs. Districts will be notified concerning SLO approval no later than August 16, 2013. If extensive modifications to the SLOs are needed, GADOE personnel will visit districts and provide on-site support for modifications. All revisions

and approvals involving modifications will be completed by August 30, 2013. If modifications to the SLO growth targets are needed based on pre-assessment data all revisions and approvals will be completed by September 27, 2013.

3. Using the approved district SLO for the specified course, teachers monitor progress towards the SLO for their particular class(es) and complete the Teacher SLO Implementation Plan located on the GaDOE TLE Electronic Platform. The Teacher SLO Implementation Plan is required for teachers and used during the TKES process to guide conferencing and feedback related to student progress towards attainment of SLO targets. Teachers and evaluators discuss the teacher's SLO and modify implementation plans as necessary during the *Mid-Year Conference*.

4. Steps 3 and 4 are part of a recursive process, whereby the teacher continues to monitor student progress toward the given target while teachers and evaluators remain in continuous dialog regarding student progress toward obtainment of Student Learning Objectives.

5. During the required *Mid-Year Conference*, teachers and their evaluators will meet at the mid-point of the instructional period to review student progress. The purpose of this review is to determine if all students are on track to meet their growth targets or whether instructional interventions are warranted. This conference should identify the need and type of additional interventions necessary for student success. At this stage, evaluators have the opportunity to add required strategies to the teacher's SLO plan if appropriate student progress is not evident.

6. During the required *Summative Conference*, the evaluator and teacher will meet to review student data and progress.

Essential SLO Components

Focus on student learning: SLOs require teachers, principals, and districts to pay close attention to the annual academic progress made by students in non-tested courses. District objectives are determined baseline data and are written with the expectation that student learning in each classroom will be measured against baseline data.

Alignment with curriculum standards: SLOs must correlate with the Georgia Performance Standards (GPS), Common Core Georgia Performance Standards (CCGPS), and/or other national standards for the courses taught during the school year. The standards selected by the district for the SLO should warrant the year-long or course-long focus of students and teachers. They should be rigorous, measureable, and should deepen and extend knowledge for all students in the class/group/course. Each SLO must specify the exact course, subject, grade level, and set of standards for which it was designed.

Interval of instructional time: The interval of instructional time is the length of time during which the SLO will be completed. Districts will determine the pre and post-assessment administration windows for each SLO. The majority of SLOs should be written for the entire length of the course being taught. The instructional period, for most teachers, is the full academic year. However, for teachers with courses that span only part of the academic year, the instructional period will be the duration of that course (*e.g.,* a semester). The interval cannot change once approved.

Scope of SLOs: It is a district decision as to whether the SLOs comprehensively address all standards taught in or if it addresses a prioritized set of standards. If a district chooses a set of prioritized standards, teachers are expected to provide instruction for the entire state-mandated curriculum and not exclude standards not assessed in the SLO.

Measureable objective: A measureable objective is one that quantifies growth in student learning based upon the administration of pre- and post-assessments. Pre-and post-assessment scores are reported for each student in each teacher's class.

Assessment and measures: An assessment is the instrument used to measure student learning of the objectives chosen. Each SLO must have a pre-assessment and post-assessment measure. Appropriate measures of student learning gains differ substantially based on the learners' grade level, content area, and ability level. Therefore, the type and format of assessments will vary based on the standards to be measured. Careful attention must be paid to how progress in relation to a given set of standards can most effectively be measured.

Commercially developed and validated assessments that correlate with the standards selected for a specific subject SLO may be used. [Examples of externally developed assessments include Advanced Placement tests, Lexile Framework for Reading, Dynamic Indicators of Basic Early Literacy Skills (DIBELS), etc.)] Externally developed assessments are selected, procured, and used at each district's discretion. The GaDOE does not recommend any particular assessments nor does the GaDOE endorse any particular product or assessment.

If aligned with the SLOs selected standards, the following measurement tools may be appropriate for assessing student progress:
- Criterion-referenced tests, inventories, and screeners (*e.g.,* Scholastic Reading Inventory, Phonological Awareness Literacy Screening)
- School-adopted interim/common/benchmark assessments (*e.g.,* county benchmark tests based on selected state standards, Career and Technical Education competency assessments, President's Physical Fitness Test)
- Authentic measures (*e.g.,* learner portfolio, recitation, performance) using district-developed performance scoring rubrics (*e.g.,* writing rubrics) to document the performance
- Regionally/locally developed common assessments
- If other measures do not exist, groups of teacher/district representatives with notable content expertise should develop common assessments (test, rubrics, etc.).

All locally/regionally developed common assessments must be locally or regionally constructed, using the GaDOE approved Assessment Development Process, including the Content Alignment Form, Table of Specifications and the Criteria Table. The purpose of these tools is to enable local districts to examine the rigor, alignment and proper construction of items on a given assessment. District/regional assessment teams need to have proficiency in:

- Aligning assessments with course standards using the Content Alignment Form.
- Completing or evaluating an assessment using the Table of Specifications and the Criteria Table.
- Assessing cognitive demand for each standard and assessment item.
- Analyzing the assessment construction characteristics.

SLO Development Resources Available:
- Public Domain Assessments (PDAs)
- GaDOE Item Bank
- SLO Assessment Development Tools

The resources listed above, along with other student learning objectives resources, are designed to support districts in the development of assessments for student learning objectives (SLO).

Additional SLO Details

The primary purpose of student learning objectives (SLO) is to improve student achievement at the classroom level. An equally important purpose of student learning objectives (SLO) is to provide evidence of each teacher's instructional impact on student learning. The Student Learning Objectives Operations Manual has detailed information and forms regarding Student learning objective (SLO) development. It is located on the GaDOE TLE Student Learning Objectives (SLO) webpage.

Student learning objectives (SLO) will be utilized for all non-tested subject areas Pre-K through grade 12. This includes:

  a. All subjects in Pre-K through grade 2 (*e.g.*, language arts/reading, mathematics, science, social studies, fine arts, etc.) are non-tested subjects.
  b. All subjects in grade 3 are considered non-tested because there is no prior test score on which to determine Student Growth Percentile (SGP).

2. Teachers will be evaluated by one district SLO for each non-tested subject/course that they teach. SLOs are designed for the course, not individual teachers.
3. SLOs will contribute to the Student Growth and Academic Growth component and the TEM score.
4. If a teacher teaches the same non-tested course multiple periods/sections during the day, all students are included in the same SLO.
5. District leaders will collect and review all SLOs to determine that each SLO is complete, aligned with content standards, and has rigor that is comparable to the standardized measures for tested subjects. Each superintendent or his/her designee will verify that all district SLOs are complete prior to submission to the GaDOE. A copy of pre-assessment and post-assessment must be maintained at the district level. GaDOE personnel will collect these documents on flash drives during October. If Content Alignment Forms were completed during the development of pre and post assessments, these will also be collected.
6. Districts will submit SLOs on the GaDOE TLE Electronic Platform. The fields of information required for the electronic submission are organized in the same manner as the SLO District Form. This form should serve as a framework for compiling the needed information. The GaDOE will review and request revisions, as necessary.
7. If necessary, districts may revise growth targets after the collection of pre-assessment data. SLOs utilizing the percentage of potential growth formula should not need to be re-submitted. SLOs utilizing pre-assessment data for setting growth targets with tiers may re-submit if growth targets require adjustments beginning on August 19 through September 13, 2013.
8. Once SLOs are shared with teachers, teachers will use their students' pre-assessment scores along with other diagnostic information and complete the Teacher SLO Implementation Plan

within the GaDOE TLE Electronic Platform. The *Teacher SLO Implementation Plan* is required for teachers and used during TKES process to guide conferencing and feedback related to student progress towards attainment of SLO targets. At the end of the instructional period, teachers will administer the SLO post-assessments and data will be compiled into the GaDOE TLE Electronic Platform.

9. Teachers and evaluators will meet mid-year for a review to determine if students are on track to achieve SLO learning targets. During the required *Mid-Year Conference*, teachers and their evaluators will meet at the mid-point of the instructional period to review student progress. The purpose of this review is to determine if all students are on track to meet their growth targets or whether instructional interventions are warranted. This conference should identify the need and type of additional interventions necessary for student success. At this stage, evaluators have the opportunity to add required strategies to the teacher's SLO plan if appropriate student progress is not evident.

10. During the required *Summative Conference*, the evaluator and teacher will meet to review student data and progress.

Evaluating SLO Attainment

SLO results are reported at the student and class/group level. As teachers work with the district designated SLOs, they should maintain a record of each student's pre-assessment score and post-assessment score, as well as any other data needed to ascertain attainment of the SLO for the mid-year conference and summative assessment conference.

District teachers will use their students' pre-assessment scores, along with other diagnostic information, and complete the Teacher SLO Implementation Plan within the GaDOE TLE Electronic Platform. The Teacher SLO Implementation Plan is required for teachers and used during the TKES process to guide conferencing and feedback related to student progress toward attainment of SLO targets.

Individual teachers will implement strategies and monitor progress while making adjustments to the teaching and learning strategies as needed. By the *Mid-Year Conference,* teachers should utilize one or more appropriate formative measures to determine individual student progress toward attainment of the SLOs. Teachers will meet with their evaluators to review student progress during the mid-year conference. The teacher and evaluator shall discuss whether adjustments to classroom instruction, etc. should be made to increase the probability of students achieving or exceeding the target levels of growth as determined in the SLOs. When the final growth targets have been finalized by the school district, there will be no changes made to the SLO growth targets during the instructional period.

At the end of the instructional period and during the district determined post-administration window, teachers will administer post-assessments and will compile their class/group data. Each teacher is responsible for reporting results of the post-assessment measure as determined by the district and for assessing the students' growth toward the SLO.

During the required *Summative Conference*, the evaluator and teacher will meet to review student data and progress. The GaDOE TLE Electronic Platform will generate the teacher's end-

of-year rating using an evaluation rubric with the following levels: *Exemplary, Proficient, Needs Development*, and *Ineffective* as shown in Figure 22.

Figure 22: Student Learning Objective (SLO) Evaluation Rubric

Exemplary (3 pts)	Proficient (2 pts)	Developing/Needs Improvement (1 pt)	Ineffective (0 pts)
The work of the teacher results in extraordinary student academic growth beyond expectations during the school year.	The work of the teacher results in acceptable, measurable, and appropriate student academic growth.	The work of the teacher results in student growth that does not meet the established standard and/or is not achieved with all populations taught by the teacher.	The work of the teacher does not result in acceptable student academic growth.
Fifty percent (50%) or more students exceeded the Student Learning Objective, at least 40% met the Student Learning Objective, and no more than 10% did not meet the Student Learning Objective	Eighty percent (80%) or more students met or exceeded the Student Learning Objective and no more than 20% did not meet the Student Learning Objective	Fifty percent (50%) or more students met or exceeded the Student Learning Objective	Forty nine percent (49%) or less of students did not meet the Student Learning Objective

Students must be enrolled in a course for 65% of the instructional period, and have both a pre- and post-assessment score, in order for the student's data to be included in the SLO measures. The district should ensure that students who enroll after the pre-assessment window, but who will be enrolled for 65% of the instructional period, have the opportunity to take the pre-assessment. The SLO then will be weighted so that it counts for 50% of the overall Teacher Effectiveness Measure (TEM).

GaDOE will continue to research the most effective SLO performance goals that should be used for the purpose of the teachers' annual evaluation ratings as analysis of the 2012 pilot data and the 201-13 data continues. Student Learning Objectives are written so that local school evaluators can successfully use the SLO Evaluation Rubric example in Figure 22 to determine if the teacher's students met the SLO at the end of the 2013-14 school year. Data will be used to determine the final percentages associated with each level of performance before the SLO Evaluation Rubric is finalized for future years.

Making the SLO Process Meaningful at the School Level

Once evaluators have a good understanding of the SLO development process as shared in the *Student Learning Objectives-A Guide for District Leadership* and the *Student Learning Objectives Operations Manual* located in the GaDOE TLE Electronic Platform and GaDOE TEL Student Learning Objectives (SLO) webpage, local leaders need to apply that learning at the local school level. The Student Learning Objective timeline in Figure 23 will be of assistance in making the SLO process meaningful at the school level. The *Student Learning Objectives-A Guide for Principals* and *The Basics for Classroom Teachers* located in the GaDOE TLE Electronic Platform and the GaDOE website has background information which can be helpful in

understanding SLOs. The Teacher SLO Implementation Plan is required for teachers and used during the TKES process to guide conferencing and feedback related to student progress towards attainment of SLO targets.

Local evaluators are encouraged to think about the following questions:

- In what ways can I ensure this is meaningful to the teachers and for students in my school?
- How can our leadership team help guide teachers in using their pre-assessment results / SLOs to help improve student achievement and growth?

Consider the following questions. How will you**:**

- Introduce teachers to the process?
- Incorporate these assessments into your school-wide assessment calendar?
- Help teachers plan for implementation and complete the Teacher SLO Form (or comparable district approved form)?
- Encourage collaboration among teachers as they work to attain SLO results?
- Help guide teachers in using pre-assessment results to inform instruction?
- Check progress throughout the year?
- Ensure completion and collect data?
- Use the end of the year results for reflection?

Student Learning Objectives (SLO) Timeline

Figure 23: Student Learning Objectives (SLO) Timeline

Summer	- Districts review the end of the year data and analyze the growth targets. - Districts begin work on SLOs and SLO measures for 2013-2014 school year. - Each SLO submission must include SLO form with statement, **growth targets**, and a Table of Specification and a Criteria Table referencing the pre/post assessments.
June 3, 2013 through August 2, 2013	- The approval process will begin as soon as SLOs are submitted to the GaDOE. - Districts must submit ALL SLOs together – not course by course. - All SLOs must be submitted during this window - including 2nd semester courses. - If the GaDOE approval process results in revision requests, the revisions must be submitted by August 30, 2013.
	- If necessary, districts may revise growth targets after the collection of pre-assessment data in August, 2013 and resubmit the revisions by September 27, 2013. - SLOs utilizing the percentage of potential growth formula should not need to be re-submitted. - SLOs utilizing pre-assessment data for setting growth targets with tiers may re-submit if growth targets require adjustments beginning on August 19 through September 13, 2013.

Fall	• Teachers administer the District's SLO pre-assessment during district-determined pre-assessment window(s). The results are recorded in the GaDOE TLE Electronic Platform.
Fall (Specific dates determined by district.)	• Teachers complete a spreadsheet with student pre-assessment scores to analyze the class/group data, • Teachers complete the Teacher SLO Implementation Plan located in the TLE Electronic Platform and implement the plan's teaching strategies.
Mid-Year Conference	• Evaluators meet with teacher to review interim results and to ascertain if students are on track to meet SLO growth targets.
End-of-course Assessment Window	• Teachers administer post-assessment during district determined post-assessment window.
Spring (Specific dates determined by the district.)	• Teachers submit class/group data to building level evaluator or district.
June 14, 2014	• The district submits the data to the GaDOE

GaDOE TLE Electronic Platform

Student Growth and Academic Achievement	**Teacher Student Learning Objective Data** Teacher reviews and analyzes the pre-assessment SLO data in order to complete the Teacher SLO Implementation Plan for each course taught for which an SLO is applicable.
	Teacher Student Learning Objective Implementation Plan Teacher accesses the District SLO Statement and completes a corresponding Teacher SLO Implementation Plan for each course taught for which an SLO is applicable.
	Mid-Year Conference Conference may be conducted with small groups or individuals. Evaluator and teacher contribute to conference content including documentation and performance for ten standards, review of student growth data, Teacher SLO Implementation Plans, and other TKES processes.

Part IV

IMPLEMENTATION PROCEDURES

TKES Program Delivery Models and Accountability

Human Resources Guidance

Implementation Timelines for Cohort I, II, and III

GaDOE TLE Electronic Platform Sequence

Part IV: TKES Implementation Procedures

TKES Implementation Procedures Overview

The Teacher Keys Effectiveness System (TKES) is designed to provide a common definition of teacher effectiveness throughout the state. TKES is designed for use with teachers who are full-time or part-time teachers for a given school year. Implementation of TKES will require fidelity to all TKES processes outlined in the system.   In the TKES implementation procedures there are four major topics:

- TKES Program Delivery Models and Accountability
- Human Resources Guidance
- TKES Implementation Timelines
- GaDOE TLE Electronic Platform

The information in these sections will assist district and school leaders in making important decisions regarding the TKES processes.

TKES Program Delivery Models and Accountability

A foundation has been established to designate the level of participation of teachers in the three components of TKES. The information below is designed to assist evaluators in making decisions about the participation of teachers in Teacher Assessment on Performance Standards (TAPS) and Surveys, Student Learning Objectives/Student Growth Percentile based on their teaching position and the program delivery models. Participation guidelines for the three components of TKES for various delivery models are shown in Figures 24-38.

Teaching Positions and Program Delivery Models

The delivery model descriptions of the following programs are listed alphabetically in chart form. Unique to the following program delivery models is co-teaching. In most of these programs, co-teachers will be accountable for all students in the Teacher of Record's classroom.

In Georgia, there are two instructional program delivery models that use terms relating to collaboration.   For the Special Education Collaborative, teachers who provide direct instruction to a student or students for less than a full segment (who are not co-teaching with the Teacher of Record) will be accountable for students' academic performance. For the Gifted Collaborative Delivery Model, Gifted Instructional Facilitators, who plan only with the Teacher of Record, will

not be accountable for student performance. Rather, the Teacher of Record, who provides direct instruction to students, will be accountable for student performance. Figures 24-30 will indicate the teacher's participation in the components of the TKES for the following program models.

- Alternative Education Program Models
- Career, Technical and Agricultural Education Program Model
- Early Intervention Program (EIP) Models
- English Language Learners (ELL) Program Models
- Gifted Program Models
- Remedial Education Program (REP) Models
- Special Education Program Models

Alternative Education Delivery Models

Alternative/Non-Traditional Education Program: Alternative/Non-traditional Education Programs operate in affiliation with a school(s). A program does not report Full-Time Equivalent (FTE) or receive an Adequate Yearly Progress (AYP) designation. Achievement data for students enrolled in the program are reported back to the school where the student is reported for FTE. The program may be housed within any school, the same site, or at a different location. Adherence to all requirements as stated in SBOE Rule 160-4-8-17 Case Management Consultation for Agency Placed Transfer Students is required. Programs may include Attendance Recovery, Credit Recovery, Disciplinary Program, Early College, Evening School, and Open Campus.

Alternative/Non-Traditional Education School: An Alternative/Non-traditional Education School has an official school code and serves as the home school for enrolled students. The school receives an AYP designation, reports FTE counts for all enrolled students and earns Quality Basic Education (QBE) formula funds directly. Adherence to all requirements as stated in SBOE Rule 160-3-8-17 Case Management Consultation for Agency Placed Transfer Students is required. If a student does not meet the 65% enrollment in the instructional period at the alternative school or the home school, but the teacher administers the SLO pre and post-assessment, the data will not be used to inform the TEM of the teacher at the alternative school or the teacher at the home school. To inform the TEM, the teacher must have more than 15 students in the class and be enrolled in the course for 65% of the instructional period in one school

Attendance Recovery Program: An Attendance Recovery Program designed to allow students the opportunity to make up an absence(s) by attending a program outside the normal school day (*e.g.*, Saturday School).

Community-based Alternative Education/Non-Traditional Program: A Community-based Alternative Education/Non Traditional Program engages students in educationally relevant and meaningful learning experiences in the school and larger community. The academic curriculum is integrated into work-based learning and structured work experiences utilizing partnerships among business, industry, government, community, and school, including Performance Learning Centers.

Credit Recovery Program: A Credit Recovery Program is designed to allow students the opportunity to retake a course for the purpose of earning credits toward graduation. If the teacher provides direct instruction to the students for 65% of the course and has a class of 15 or more students, the teacher will receive a TEM. If the teacher serves as a facilitator, the teacher is identified as a contributing professional and will not participate in a SLO; therefore, a TEM will not be received.

Education Management Organization: An Education Management Organization is operated by a private vendor. The program or school may operate on or off campus.

Figure 24: Alternative Education Delivery Models with Participation Guidelines

Delivery Models for Teachers of Alternative Education Programs with 15 or more Students in the Classroom	TAPS	Survey	SLO/SGP (if SLO developed for course)
Alternative Programs	Y	Y	Y
Alternative Schools	Y	Y	Y
Attendance Recovery Program	TBD	TBD	TBD
Community-Based Alternative Education Program (*i.e.,* Performance Learning Centers)	N	N	N
Credit Recovery Program	Y (Only full time Certified Teacher)	Y (Only full time Certified Teacher)	Y (Only full time Certified Teacher)
Educational Management Organization	N	N	N

Key: Y indicates participation in TKES Component; N indicates non-participation in TKES Component

Career, Technical and Agricultural (CTAE) Program

Career, Technical and Agricultural Education (CTAE): The Career, Technical and Agricultural Education (CTAE) program provides direction in the development of the CTAE high school and middle school curricula, assessment, work-based learning experiences, professional learning, and instructional resources to enhance student achievement. The work-based learning model will involve district decisions based on the structure for the work-based learning course. For example, if the teacher provides direct instruction to students, the components of TKES are applicable.

Figure 25: Career, Technical and Agricultural Education (CTAE) Program Participation
Guidelines

Delivery Models for CTAE	TAPS	Survey	SLO/SGP (if SLO developed for Level I course only)
Career	Y	Y	Y
Technical	Y	Y	Y
Agricultural Education	Y	Y	Y
Work-Based Learning	TBD	TBD	TBD

Key: Y indicates participation in TKES Component; N indicates non-participation in TKES Component

Early Intervention Program (EIP) Delivery Models

Augmented: The augmented model incorporates EIP services into the regular group class size by providing an additional early childhood certified teacher to reduce the teacher/pupil ratio while providing EIP services.

Self-Contained: The self-contained model is used to reduce the class size in order to provide more emphasis on instruction and increased academic achievement. The teacher has a limited number of students, all of whom qualify for EIP services. This may be a multi-grade class.

Pull-Out: In the pull-out model, EIP students are removed from the classroom for instruction by an additional certified teacher. This model may serve a maximum of 14 students at a time. The teacher may, and usually does, serve multiple groups of 14 or fewer students throughout the school day.

Reduced Class Model: The reduced class model allows for the combination of EIP students with regular education students in smaller classes. The reduced class model uses a sliding scale in which the class size reduces as the number of EIP students increases.

Reading Recovery Program: In the Reading Recovery Program students are removed from the classroom for one segment of reading. One segment of Reading Recovery is defined as a minimum of 30 minutes. Students must be served a minimum of 45 days. Students served by Reading Recovery may be counted for one segment of EIP instruction for the entire year.

Figure 26: Early Intervention Program (EIP) Delivery Models with Participation Guidelines

Delivery Models for Teachers of Early Intervention Program (EIP) Students	TAPS	Survey	SLO/SGP (if SLO developed for course)
Augmented	Y	Y	Y
Self-Contained	Y	Y	Y

Pull-out	Y	Y	Y
Reduced Class	Y	Y	Y
Reading Recovery Program	Y	Y	Y

Key: Y indicates participation in TKES Component; N indicates non-participation in TKES Component

English Language Learners (ELL) Delivery Models

ACCESS: Districts may choose to use ACCESS to measure student growth in any of the following models in which ACCESS is utilized. The post-assessment score from the previous year may serve as the next year's pre-assessment score.

Pull Out Model: Students are taken out of a non-academic class for the purpose of receiving small group instruction.

Push in Model: Students remain in their general education class where they receive content instruction from their content area teacher along with language assistance from the ESOL teacher.

Scheduled Class Model: Students at the middle and high school levels receive language assistance and/or content instruction in a class composed of ELLs only.

Cluster Center Model: Students from two or more schools are grouped in a center designed to provide intensive language assistance.

Resource Center/Laboratory Model: Students receive language assistance in a group setting supplemented by multimedia materials.

Monitored Model: Students who score at the proficient level on both the state-adopted English proficiency measure and on the state reading assessment shall be considered English proficient. These students shall not be eligible for continued language assistance services and shall be exited from language assistance services and mainstreamed. For two years after exit from language assistance services, these students shall be considered ELL Monitored, and coded ELL-M in Student Records. Monitoring during these two years shall consist of review of report card grades, state assessment results, classroom performance and teacher observations for the purpose of ensuring the successful transition to the mainstream classroom.

Other Alternative Models Approved by GaDOE: Alternative models that are approved in advance by the GaDOE through a process described in state guidance. Two examples are the following:

> **Immersion Model**: Instruction takes place in an environment in which only one language is used; however, there are attempts made to adjust the learning experience for the student.

Dual Language Model: Two-way immersion (TWI) is an instructional approach that integrates native English speakers and native speakers of another language (usually Spanish) and provides instruction to both groups of students in both languages.

Figure 27:   English Language Learners (ELL) Delivery Models with Participation Guidelines

Delivery Models for Teachers of English Language Learner Students	TAPS	Survey	SLO/SGP (if SLO developed for course)
Pull-Out	Y	Y	Y
Push-In	Y	Y	Y
Monitored	N	N	N
Scheduled Class	Y	Y	Y
Cluster Center	Y	Y	Y
Resource Center Laboratory Model	Y	Y	Y
Alternative Models Approved by GaDOE/ Immersion	TBD	TBD	TBD
Alternative Models Approved by GaDOE/ Dual Language	TBD	TBD	TBD

Key: Y indicates participation in TKES Component; N indicates non-participation in TKES Component

Gifted Program Delivery Models

Advanced Content Class: (6-12) Students are homogeneously grouped on the basis of achievement and interest in a specific academic content area. The district may elect to include students who are not identified as gifted but who have demonstrated exceptional ability and motivation in a particular content area. In that case the local district must establish criteria and guidelines that identify students who will be successful with the advanced curriculum to be offered in these classes. These classes include Advanced Placement (AP) courses, International Baccalaureate (IB) courses, and Honors courses.

Cluster Grouping: (K-12) Identified gifted students are placed as a group into an otherwise heterogeneous classroom, rather than being dispersed among all of the rooms/courses at that grade level. To count any gifted student at the gifted weight when this delivery model is used, the regular classroom teacher must have the gifted endorsement. One or two segments per day provided in this setting may be counted at the gifted weight if the teacher documents the curriculum modifications he/she has made for the gifted students by way of separate lesson plans and individual student contracts.

Collaborative Teaching: (K-12) Direct instruction may be provided by a regular classroom teacher, but there must be substantial, regularly scheduled collaborative planning between the content area teacher and the gifted specialist (the teacher with the gifted endorsement who is serving as the instructional facilitator). There are specific requirements for release time for the gifted instructional facilitator to plan with the regular classroom teacher.

Joint Enrollment/Postsecondary Options: (9-12) High school students may be enrolled in college, university, or technical school courses. Students enrolled in such courses receive both high school and college credits, and the instruction may serve as the gifted instruction local districts are required to provide for qualified students.

Mentorship/Internship: (9-12) A gifted student works with a mentor to explore a profession of interest. The gifted education specialist maintains close contact with both the participating student(s) and the selected mentor(s) to ensure acceptable progress toward the student's individual learning goals. One or two instructional segments per day may be counted at the gifted weight for students participating in a gifted mentorship/internship with the appropriate documentation.

Resource Class: (K-12) All students must have been identified as gifted by GA SBOE criteria. The class size is limited to the maximum size specified in SBOE rules. The teacher must have gifted endorsement. The curriculum must have an academic content foundation but it should focus on interdisciplinary enrichment activities. The content and pacing should be differentiated to the degree that the activities are clearly not appropriate for more typical students at that grade level. Gifted students may receive no more than ten segments per week of resource class service.

Figure 28: Gifted Delivery Models with Participation Guidelines

Delivery Models for Teachers of Gifted Program Students	TAPS	Survey	SLO/SGP (if SLO developed for course)
Resource Class	Y	Y	Y
Advanced Content Class	Y	Y	Y
Cluster Grouping	Y	Y	Y
Collaborative Teaching	N	N	N
Mentorship/Internship	N	N	N
Joint Enrollment/Post-Secondary Options	N	N	N
Other Models Approved by GaDOE	TBD	TBD	TBD

Key: Y indicates participation in TKES Component;   N indicates non-participation in TKES Component

Remedial Education Program (REP) Delivery Models

Augmented Class: An additional state certified teacher, referred to as a REP augmented teacher, will work in the same classroom with the regular classroom teacher and provide instruction for 50-60 minutes per segment a day to no more than 15 REP students. Student instruction under this model cannot exceed two instructional segments per day per student. Core credit may be earned at the high school level for this model if the course content follows the 9-12 state adopted curriculum.

Parallel Block Scheduling: In this model, students are provided daily instruction in two-hour (minimum) blocks. These blocks of instruction include the following components:
- Students will be heterogeneously grouped.
- Students are in small groups (15 or fewer) in the extension room or homeroom during one hour of the two-hour block.
- Students receive direct instruction from the state-certified teacher on their instructional level for a minimum of 50-60 minutes in reading/writing or mathematics.

Reduced Class Size: Students receive English or mathematics instruction from a state-certified teacher designated as an REP teacher. High school students participating in Remedial Education Program classes may earn core credit in English or mathematics if a) the class size is reduced to 18 without a paraprofessional and 24 with a paraprofessional, and b) the course content follows the 9-12 state adopted curriculum.

Other School-Design Models: Schools may submit to the GaDOE a school designed model that must include the following components:
- An appropriate and effective program in remediating student deficiencies.
- Remedial services through a state-certified teacher. A paraprofessional may be added to reduce the class size and serve as an assistant to the teacher.
- The use of REP funds shall provide supplemental instruction above and beyond those services provided by the state.
- Compliance with the remedial maximum class size.

Figure 29: Remedial Education Program (REP) Delivery Models with Participation Guidelines

Delivery Models for Teachers of Remedial Education Program (REP) Students	TAPS	Survey	SLO/SGP (if SLO developed for course)
Augmented	Y	Y	Y
Parallel Block Scheduling	Y	Y	Y
Other School Designed Models	TBD	TBD	TBD
Reduced Class	Y	Y	Y

Key: Y indicates participation in TKES Component; N indicates non-participation in TKES Component

Special Education Program Delivery Models

General Education: Students with disabilities are served in the general education class with no personnel support.

Consultation: Students with disabilities receive at least one segment per month of direct service from the special education teacher.

Resource: Individual needs are supported in a resource room as defined by the student's IEP. The child receiving this type of support will receive some time in the resource room and some time in the regular classroom with modifications and/ or accommodations.

Supportive Instruction: Students with disabilities receive services from personnel other than a certified teacher in the general education classroom (i.e., a paraprofessional, interpreter, or job coach).

Collaboration: A special education teacher works with identified students with disabilities and the general education teacher within the general education classroom (less than full segment daily).

Collaborative Co-Teaching: The special education teacher provides service in the general education classroom by sharing teaching responsibility with the general education teacher (full segment every day).

Alternative Placement: The special education teacher provides instruction to students with disabilities in a separate classroom, special schools, home environment, hospitals, or institutions.

Self-Contained: A self-contained learning environment provides academic support in a controlled setting. Located within a regular education school, the self-contained setting is a full day or mostly full day program. The self-contained classroom is usually comprised of children in the same categorical grouping who require highly individualized, closely supervised specialized instruction.

Departmentalized Model: When a student is served through the departmentalized model, the student must receive at least one segment per month from a teacher certified in a student's primary area of disability. The student receives special education or related services from a certified teacher, but not one who is certified in the student's area of disability. For example, a student who is deaf/hard of hearing may receive specialized instruction in mathematics, but from a teacher highly qualified in mathematics and not certified in deaf/hard of hearing.

Hospital/homebound Services: Hospital/homebound instruction may be used for students who have a medically diagnosed condition that will significantly interfere with their education and that requires them to be restricted to home or a hospital for a period of time. Specific documentation requirements are in place. The length of time for which these services may be provided varies with the individual student and his/her circumstances.

Home-based Services: This may be used as a short term placement option on occasions when the parent and district agree and FAPE is provided. During the time the student is being served

in the home-based setting, access to the general education curriculum, as well as IEP services, should be provided.

Multiple Setting Services: Based upon a student's needs and the extent to which those needs affect educational performance, the IEP Team may recommend that related services be provided. Multiple setting services which are developmental and corrective based on student needs may be required to support students with disabilities. They are intended to assist students in meeting their instructional education plan goals, to be served in the Least Restrictive Environment, and to experience success in the classroom setting.

Residential Setting: The student lives on campus of a residential facility and school. Programs are highly structured and services are provided 24 hours a day, 7 days a week. Residential setting services are designed to ensure continuity of instruction for students who cannot attend public schools for reasons of health and/or safety.

Special Needs Pre-K: Individual needs of t**he three to four year old students** are supported as defined by the student's IEP. The use of work sampling and the Child Outcomes Summary Form (COSF) is to be used as the SLO measure.

Special Education Programs with ACCESS: Holistic rubrics, collaboratively developed with GaDOE Special Education Department and the TLE Department, will be the only SLO Measure used for a student that is assessed using **GAA**. For example, if a student is enrolled in Introduction to Art, the only applicable growth measure will be the holistic rubric score. Each rubric contains two or three CCGPS overarching standards encompassing communication, such as Speaking and Listening, which will be applicable to all grade *levels (K-12).*

Special Education Programs with CRCT-M: Individual needs of the special needs students are supported as defined by the student's IEP. The CRCT-M is to be used as the SLO measure.

The student with disabilities may be placed in any of the following models/programs if the IEP committee determines one is required in order to meet that student's needs.

Figure 30: Special Education Delivery Models with Participation Guidelines

Delivery Models for Teachers of Special Education Students	TAPS	Survey	SLO/SGP (if SLO developed for course)
Special Education Students and ACCESS	Y	Y	Y ACCESS
Special Education Students and CRCT-M	Y	Y	Y CRCT-M
Collaborative Co-Teaching	Y	Y	Y
Supportive Instruction	N	N	N
Resource	Y	Y	Y

Special Needs Pre--K	Y	N	Y
Self-Contained	Y	Y	Y
Hospital Home-Bound	N	N	N
Home-Based Services	N	N	N IEP Committee Decision
Collaboration	Y	Y	Y
Consultation	N	N	N
Multiple Services	N	N	N
Residential Setting Programs	TBD	TBD	TBD

Key: Y indicates participation in TKES Component; N indicates non-participation in TKES Component

The Teacher Effectiveness Measure for special education teachers serving students in both tested and non-tested subjects in the resource setting, as determined by the students' IEPs, will be calculated based on the aggregate score of all resource students served by the special education teacher.

Teaching Positions in a Specialized School/District

The following information is designed to assist evaluators in making decisions about the participation of teachers in the TKES, TAPS, Surveys, and Student Learning Objectives/Student Growth Percentile, based on their teaching position in a specialized school/district with unique components. Figures 31-34, which follow, indicate the teacher's participation in the components of the TKES in the specialized school/district.

- Charter Schools
- International Baccalaureate Schools
- Virtual Schools
- Investing in Education Excellence (IE2) Districts

Charter Schools

Charter Schools: Georgia's charter schools are public schools. They receive public funding, cannot charge tuition and must provide fair and open enrollment for all student populations. Autonomy and flexibility distinguish charter schools from traditional public schools. A charter system is a local district that operates under the terms of a charter between the State Board of Education and the local school district. The system receives flexibility from certain state rules and regulations in exchange for greater accountability. Pursuant to the Charter Schools Act, charter schools, as public schools, are subject to the Georgia statewide accountability assessments. Charter schools and systems are subject to all provisions outlined in O.C.G.A. 20-2-2065(b) and may not waive state laws or State Board of Education rules pertaining to accountability provisions.

Figure 31:   Charter Schools with Participation Guidelines

Charter Programs	TAPS	Survey	SLO/SGP (if SLO developed for course)
Charter Systems	Y	Y	Y
Charter Schools	Y	Y	Y

Key: Y indicates participation in TKES Component; N indicates non-participation in TKES Component

International Baccalaureate Schools

International Baccalaureate Program: The International Baccalaureate® (IB) program strives to develop inquiring, knowledgeable and caring young people who exhibit intercultural understanding and respect.

The IB program focuses on the following areas:
- Development of curriculum.
- Assessment of students.
- Training and professional development of teachers.
- Authorization and evaluation of schools.

In the state of Georgia, IB schools align teaching and learning to the Common Core Georgia Performance Standards (CCGPS). Teachers and staff members are evaluated using the state or system-developed evaluation instrument.

Two district-developed SLOs may be used during a two year span. One SLO will be implemented for the first year and a different SLO for the second year. The pre-assessment is administered at the beginning of the first year in the course along with a post-assessment at the end of the first year. The post-assessment administered at the end of the first year may also be used as the pre-assessment for the second year. The International Baccalaureate (IB) exam may be used as post assessment at the end of the second year.

Figure 32: International Baccalaureate Schools with Participation Guidelines

International Baccalaureate Schools	TAPS	Survey	SLO/SGP (two district-developed SLOs)
IB Teachers of Record	Y	Y	Y

Key: Y indicates participation in TKES Component; N indicates non-participation in TKES Component

Virtual Schools

Virtual Schools: A variety of online learning programs are afforded students in the state of Georgia. These programs include, but are not limited to: virtual online schools and blended learning programs in local districts which occur in a variety of venues and models. Blended learning occurs at the district and school level, where both online and face-to-face classes are offered. At the classroom level, blended learning can occur when online courses are supported

with in-class instruction or instructional support. If the teacher does not provide direct instruction and serves as a facilitator, the teacher is identified as a contributing professional; therefore an SLO/SGP for student growth will not be utilized.

Another program offered across the state is the Georgia Virtual School (GAVS). GAVS is a SACS CASI accredited program of the Georgia Department of Education's Office of Technology Services which offers middle school and high school level courses. Georgia Virtual School provides a teacher led, virtual classroom environment. Most GAVS staff members serve in an adjunct capacity. GAVS teachers are currently evaluated using the iNACOL standards rubric.

School districts should consider the iNACOL standards rubric when evaluating on-line teachers, as well as the TKES. When considering the evaluation of on-line learning teachers, all full-time employees will be evaluated using the TKES components as reflected in the chart below. Part-time on-line learning teachers will be evaluated according to the school district's guidelines for evaluation of part-time employees.

Figure 33: Virtual Schools with Participation Guidelines

Virtual Schools	TAPS	Survey	SLO/SGP (only when teacher provides direct instruction, not as a facilitator, and if SLO developed for course)
Georgia Virtual Schools	Y	Y	Y
System-level online learning	Y	Y	Y

Key: Y indicates participation in TKES Component; N indicates non-participation in TKES Component

Investing in Educational Excellence (IE2)

Investing in Educational Excellence (IE2): IE2 Partnership Contracts provide local school districts with greater governance flexibility as a means of increasing student achievement. As outlined by House Bill 1209 (2008), Local Boards of Education (LBOE) can enter into multi-year contracts with the State Board of Education (SBOE) based on strategic plans developed in partnership with Georgia Department of Education (GaDOE) and Governor's Office of Student Achievement (GOSA). Such plans must identify specific school-level student achievement goals that are in addition to current federal accountability requirements.

Progress towards meeting those goals will be monitored by GOSA on an annual basis and reported to the State Board of Education (SBOE). The role of GaDOE and GOSA with respect to the development of these contracts is to ensure that the school-level student achievement goals are sufficiently rigorous to warrant granting the flexibility requested by the local school district. Strategic plans shall:

1. Demonstrate a proportional relationship between the amount of flexibility being granted and the rigor of the proposed performance goals.

2. Be based on clear, straightforward, independently verifiable state-level data that is meaningful and understandable to all stakeholders.

3. Identify performance goals for the local district that are aligned with the state's student achievement priorities.

IE2 school systems are subject to all provisions outlined in O.C.G.A. 20-2-84.3 and may not waive state laws or State Board of Education rules pertaining to accountability provisions.

Figure 34: IE2 District with Participation Guidelines

Partnership Contracts	TAPS	Survey	SLO/SGP (if SLO developed for course)
IE2 Systems	Y	Y	Y

Key: Y indicates participation in TKES Component; N indicates non-participation in TKES Component

Teaching Positions and Specialized Courses

The delivery model descriptions of the following courses noted in figures 35-38 are listed alphabetically in chart form. Unique to the following course delivery models is co-teaching. In most of these programs, co-teachers will be accountable for all students in the Teacher of Record's classroom.

- Advanced Placement Courses
- Connection Courses with Rotating Schedules
- Enrichment Courses with Rotating Schedules
- Math/Language Support Courses

The following information is designed to assist evaluators in making decisions about the participation of teachers in the TKES, TAPS, Surveys, and Student Learning Objectives/Student Growth Percentile, based on the teaching position in a specialized course with unique components. Figures 35-38, which follow, indicate the teacher's participation in the components of the TKES in the specialized courses.

Advanced Placement (AP) Course

Advanced Placement Courses: District-developed SLOs may be used with Advanced Placement (AP) classes. The district has the option of using the Advanced Placement (AP) Exam as post-assessments if 95% of the class participates in the exam. If student participation numbers don't support utilizing the Advanced Placement (AP) exam, a post-assessment is required for the SLO.

Figure 35: Advanced Placement (AP) Courses Participation Guidelines

Delivery Models for Advanced Placement (AP) Classes	TAPS	Survey	SLO/SGP (if SLO developed for course)
Advanced Placement (AP)	Y	Y	Y

Key: Y indicates participation in TKES Component; N indicates non-participation in TKES Component

Connection Courses with Rotating Schedules

Connection Courses with Rotating Schedules: Student Learning Objectives (SLOs) are required for the courses with state course numbers in middle school. SLO growth targets should accurately reflect the instructional time assigned to the course. For example, an art teacher provides instruction to a new group of students every nine-weeks of the school year. The growth target should reflect the appropriate amount of instruction provided to the students.

Figure 36: Connection Courses with Rotating Schedules with Participation Guidelines

Delivery Models for Connections Classes (Middle School)	TAPS	Survey	SLO/SGP (if SLO developed for course)
Art	Y	Y	Y
Music	Y	Y	Y
Physical Education	Y	Y	Y
Family and Consumer Science	Y	Y	Y
Other	Y	Y	Y

Key: Y indicates participation in TKES Component; N indicates non-participation in TKES Component

Enrichment Courses with Rotating Schedules

Enrichment Courses with Rotating Schedules: Student Learning Objectives (SLOs) are required for the courses with state course numbers. Growth targets in the SLO should accurately reflect the instructional time. For example, an art teacher provides instruction to 2nd grade students twice a month. The growth target should reflect the appropriate amount of instruction provided to the students.

Figure 37: Enrichment Courses with Rotating Schedules with Participation Guidelines

Delivery Models for Math/Language Support Classes	TAPS	Survey	SLO/SGP (if SLO developed for course)
Art	Y	Y	Y
Music	Y	Y	Y

Physical Education	Y	Y	Y
Other	Y	Y	Y

Key: Y indicates participation in TKES Component; N indicates non-participation in TKES Component

Math/Language Arts Support Courses

Math/Language Support Courses: The teacher of record and support teacher share SLO and/or teacher of record and support teacher share SGP from CRCT and EOCT.   For example, Coordinate algebra also has a support course. The SLO for coordinate algebra would also apply to the support teacher.   But, if a student is in coordinate algebra and is assigned a support class for trigonometry then the trig support class needs a separate SLO because it is not shared accountability. When the SLO is utilized, the SLO may need to be modified to address focus during support instruction and appropriate remediation skills identified by the district.

Figure 38:   Math/Language Arts Support Courses with Participation Guidelines

Delivery Models for Math/Language Support Classes	TAPS	Survey	SLO/SGP (if SLO developed for course)
Class scheduled in conjunction with specific course	Y	Y	Y
Class scheduled not in conjunction with specific course but a new course	Y	Y	Y

Key: Y indicates participation in TKES Component; N indicates non-participation in TKES Component

Human Resources Guidance

Effective Teacher and Principal Induction Programs

Human resources management encompasses selecting quality teachers and staff, inducting and supporting new teachers, mentoring novice teachers, providing professional growth opportunities, and retaining quality faculty and staff in schools. Georgia's vision as set forth in the Race to the Top application is "To equip all Georgia students, through effective teachers and leaders and through creating the right conditions in Georgia's schools and classrooms, with the knowledge and skills to empower them to graduate from high school, be successful in college and/or professional careers, and be competitive with their peers throughout the United States and the world." The Effective Teacher and Principal Induction Programs, as noted in *Appendix III*, paints an inspirational vision of the type of support induction phase principals and induction phase teachers must receive. The GaDOE works closely with districts to provide technical assistance and resources to support effective induction programs. The document of information about the induction phase for teachers and principals in the Resources section is linked to the variety of activities for the teacher and principal induction program.

TKES Teacher Assessment on Performance Standards (TAPS) Processes

At the heart of the induction guidance plan is increasing the overall effectiveness of teachers and leaders. The effectiveness of teachers and leaders is a critical factor in increasing student growth and raising student achievement. It is essential for evaluators to provide feedback and professional growth opportunities for teachers. The following required TKES processes will be located in the GaDOE TLE Electronic Platform:

<div align="center">

Pre-Evaluation, Mid-Year and Summative Conferences
4 Walkthroughs
2 Formative Observations and Assessments
Summative Assessment
Surveys of Instructional Practice
Climate Surveys
Roster Verifications Dates (October 7-December 2-February 17-April 28)
Professional Development Plan (optional)
Additional Conferences (optional)

</div>

In addition to these processes, The *Professional Development Plan* and *Additional Conferences* in the GaDOE TLE Electronic Platform may be very helpful to Human Resources leaders in working with contract decisions. Following is further insight into the Professional Development Plan (PDP) and additional conferences.

Professional Development Plan (PDP): A *Professional Development Plan* is a plan created by the evaluator and approved by the principal within the GaDOE TLE Electronic Platform. It may be developed by the evaluator in collaboration with the teacher, coaches, mentors, or other

qualified individuals. The PDP provides guidelines and timelines for specific, mandatory professional learning which supports immediate improvement of teacher practice and increased teacher effectiveness. In Appendix III, the TKES and LKES Professional Learning Resources document provides a summary of professional development opportunities located in the GaDOE TLE Electronic Platform. The PDP may include any other enhancement opportunity with clear expectations about changes needed in performance to be demonstrated in the classroom and school.

The PDP is an intensive effort toward improvement of teacher practice and effectiveness. A PDP may also be used when a teacher does not meet the professional duties, responsibilities and ethical expectations required by the teacher. The following guidelines will be used in determining the use of a PDP in three components of the TKES.

If there are major issues with any performance standard, the evaluator, with the approval of the principal, may choose to place a teacher on a *Professional Development Plan* at any time during the school year. Principals and other evaluators may also provide suggestions and guidance to teachers at any time during the school year without the development of a PDP.

A *Professional Development Plan* will be required if the Teacher Effectiveness Measure (TEM) is in the *Needs Development* or *Ineffective* ratings. Teachers beginning the school year on a PDP will be monitored and supported by the building-level administrator/evaluator. The PDP with subsequent expectations and actions will align to the appropriate performance standards. All components of the PDP must be entered into the *Professional Development Plan* on the GaDOE Electronic Platform. If a teacher is placed on a PDP, additional conferences should be scheduled when necessary as follow-up to the PDP and recorded in the GaDOE TLE Electronic Platform in the *Additional Conferences* container.

Additional Conferences: The document template entitled *Additional Conferences* is located in the GaDOE TLE Electronic Platform. It should be used to identify and document oral and written counsel that occurs between an evaluator and evaluatee. The document will provide written information regarding a conference between an evaluator and evaluatee. If this document is not used by the evaluators in the school district, the oral and written documentation should be recorded on a school or district-developed document and uploaded to the electronic platform if it is to be considered part of documentation to support appropriate or inappropriate performance by the teacher.

TKES Human Resources Evaluation Cycle Timeline: The TKES and LKES Human Resources Implementation Timeline in Part IV Implementation Procedures may be used by the school district to create an evaluation cycle calendar appropriate for the school district's teachers and administrators and district leaders. Dates may be added as appropriate for the school district.

Teacher Effectiveness Measure (TEM): During the pilot/full implementation year 2012-2013 for Teacher Keys Effectiveness System, only the TAPS component for the TKES was used for the purpose of annual evaluation ratings. The Student Growth and Academic Achievement Components of the TKES (SGP and SLOs) were not used for the purpose of annual evaluation ratings during the 2012-2013 school year and will not be factored into the TEM. During the

2013-14 implementation year, all TKES components will be utilized to calculate the Teacher Effectiveness Measure (TEM).

TKES Logistical Review

Districts can be reassured that while a completely validated instrument is valuable for research and public perception, the new evaluation system can be effectively used for the purpose of annual evaluation ratings in the 2013-2014 school year. Cohort I and II districts entering a full implementation year will use only the TKES evaluation system. Cohort III districts piloting TKES with a percentage of teachers in the district shall use their existing evaluation system parallel to the TKES evaluation system. Utilizing the TKES Implementation Handbook, the TKES and LKES Human Resources Evaluation Cycle Timeline, and the GaDOE TLE Electronic Platform, district leaders should develop plans to assist with Human Resources decisions and other teacher evaluation matters as deemed appropriate for the TKES required processes.

TKES Implementation Timeline Calendars

The following timelines in Figures 39, 40, and 41 are provided to assist Cohorts I, II, III and the district's Human Resources in the implementation of Teacher Keys Effectiveness System (TKES). District leaders and evaluators may use the information as guidance in creating the district and school calendars for the implementation of TKES. All of the materials are located in the GaDOE TLE Electronic Platform.

Figure 39: Teacher Keys Effectiveness System Implementation Timeline (Cohort I and II)

Teacher Keys Effectiveness System Implementation Timeline Cohort I (Race to the Top Districts, SID and Priority Schools) Cohort II (Volunteer Districts in 2012-13) (Materials are located in the GaDOE TLE Electronic Platform)		
Month	**Task**	**Materials**
June and July **Teacher Assessment on Performance Standards (TAPS)**	• Evaluators Complete TKES Training for Credentialing • Plan TKES Orientation for Teachers	TKES Implementation Handbook and Training Materials
Surveys of Instructional Practice		
Student Learning Objectives	• Districts review student performance data and determine student growth measures • Districts develop SLO pre and post-assessments for determining student growth • Districts may utilize the SLO Public Domain Assessment measures as is or customize the PDAs, create their own assessments utilizing collaboratively developed content items, utilize district-developed course aligned measures, or procured assessments • Districts must enter the SLO growth target on the TLE Electronic Platform and attach the GaDOE Assessment Table of Specifications and Criteria Table for locally developed assessments and submit to the GaDOE by August 2, 2013	Guide for District Leadership Guide for Principals The Basics for Classroom Teachers
GaDOE TLE Electronic Platform Training for Teachers	• Plan GaDOE TLE Electronic Platform Training for Teachers	Quick Reference Guides

August		
Teacher Assessment on Performance Standards (TAPS)	• Evaluators plan ongoing Familiarization Sessions for Teachers • Evaluators Complete TKES Training for Credentialing • Deliver TKES Orientation for Teachers • Evaluators implement timeline to complete TKES processes of 4 Walkthroughs, 2 Formative Observations, 2 *Formative Assessments* and a *Summative Assessment* along with a *Pre-Evaluation Conference, Mid-Year Conference* and a *Summative Conference* • Teachers complete TKES *Self-Assessmen*t for the *Pre-Evaluation Conference* with Principals • Evaluators schedule *Pre-Assessment Conference* with Teachers • Evaluators Record ratings and strongly recommended commentary on the *Formative Assessment* in the TLE Electronic Platform when observations completed	TKES Implementation Handbook and Training Materials
Surveys of Instructional Practice	• Review Surveys of Instructional Practice Protocol located in Resources Tab of GaDOE TLE Electronic Platform	Surveys of Instructional Practice Protocol
Student Learning Objectives	• Districts submit SLOs with growth measures to the GaDOE for review by August 2, 2013 • If GaDOE approval process results in revision requests, the revisions are due to GaDOE by August 30, 2013 • Districts submit SLO Assessment Table of Specification and SLO Assessment Criteria Table for locally developed assessments to the GaDOE for review by August 2, 2013 • Teachers administer the SLO pre-assessment during the district-determined pre-assessment window (administer to new students within ten days of enrollment in the class) • Teachers in non-traditional course schedules (i.e. block, nine-week) administer SLO pre and post-assessments according to the beginning/ending of the course • Teachers submit pre-assessment data to the school district based on the school district's plan for collecting the SLO pre-assessment data to report to the GaDOE • Teachers analyze pre-assessment data to determine instructional next steps • Teachers complete the Teacher SLO Implementation Plan located in the GaDOE TLE Electronic Platform	Guide for District Leadership Guide for Principals The Basics for Classroom Teachers School District Data System
GaDOE TLE Electronic Platform Training for Teachers	• District Leaders and Evaluators Provide Support Meetings, as needed, for the GaDOE TLE Electronic Platform Processes	Quick Reference Guides

September **Teacher Assessment on Performance Standards (TAPS)**	• Evaluators plan ongoing Familiarization Sessions for Teachers • Monitor Progress of TKES Processes in Schools with Single Row Site Plan Status Report (September thru May) • Evaluators implement timeline to complete TKES processes of 4 Walkthroughs, 2 Formative Observations,2 *Formative Assessments* and a *Summative Assessment* along with a *Pre-Evaluation Conference, Mid-Year Conference* and a *Summative Conference* • Evaluators record ratings and recommended commentary on the *Formative Assessment* in the GaDOE TLE Electronic Platform when observations completed	TKES Implementation Handbook and Training Materials
Surveys of Instructional Practice	• Review Surveys of Instructional Practice Protocol located in Resources Tab of GaDOE TLE Electronic Platform • Determine location and schedule for Surveys of Instructional Practice	Surveys of Instructional Practice Protocol
Student Learning Objectives	• All SLO growth targets finalized by September 13, 2013 • Teachers and evaluators monitor student performance and adjust SLO instructional strategies accordingly based on student performance data • Review pre-assessment data and revise growth targets if needed by September 27, 2013	Guide for District Leadership Guide for Principals The Basics for Classroom Teachers
GaDOE TLE Electronic Platform Training for Teachers	• District Leaders and Evaluators Provide Support Meetings, as needed, for the GaDOE TLE Electronic Platform Processes	Quick Reference Guides
October **Teacher Assessment on Performance Standards (TAPS)**	• Evaluators plan ongoing Familiarization Sessions for Teachers • Monitor Progress of TKES Processes in Schools with Single Row Site Plan Status Report (September thru May) • Evaluators implement timeline to complete TKES processes of 4 Walkthroughs, 2 Formative Observations, 2 *Formative Assessments* and a *Summative Assessment* along with a *Pre-Evaluation Conference, Mid-Year Conference* and a *Summative Conference* • Evaluators record ratings and recommended commentary on the *Formative Assessment* in the GaDOE TLE Electronic Platform when observations completed	TKES Implementation Handbook and Training Materials
Surveys of Instructional Practice	• Completion of Surveys of Instructional Practice for Nine-	Surveys of Instructional

	Week and First Semester Courses • Follow Survey Protocol located in the GaDOE TLE Electronic Platform • Assign Student Access Codes provided by GaDOE • Arrange for Students to take Survey in Computer Lab with Certified Teacher supervising the Students • Provide Accommodations for Students (as needed) • Print Copy of Surveys of Instructional Practice Results for Teachers using Reports tab on the GaDOE TLE Electronic Platform	Practice Protocol
Student Learning Objectives	• Teachers and evaluators monitor student performance and adjust SLO instructional strategies accordingly based on student performance data • Student Learning Objectives Item Bank Content Training	Guide for District Leadership Guide for Principals The Basics for Classroom Teachers
GaDOE TLE Electronic Platform Training for Teachers	• District Leaders and Evaluators Provide Support Meetings, as needed, for the GaDOE TLE Electronic Platform Processes	Quick Reference Guides
November **Teacher Assessment on Performance Standards (TAPS)**	• Evaluators plan ongoing Familiarization Sessions for Teachers • Monitor Progress of TKES Processes in Schools with Single Row Site Plan Status Report (September thru May) • Evaluators implement timeline to complete TKES processes of 4 Walkthroughs, 2 Formative Observations, 2 *Formative Assessments* and a *Summative Assessment* along with a *Pre-Evaluation Conference, Mid-Year Conference* and a *Summative Conference* • Evaluators record ratings and recommended commentary on the *Formative Assessment* located in the GaDOE TLE Electronic Platform when observations completed • Evaluators use Survey Results as Documentation for Standards 3, 4, 7 and 8, if available, in the *Formative Assessment*	TKES Implementation Handbook and Training Materials
Surveys of Instructional Practice	• Completion of Surveys of Instructional Practice for Nine-Week and First Semester Courses • Follow Survey Protocol located in the GaDOE TLE Electronic Platform • Assign Student Access Codes provided by GaDOE • Arrange for Students to take Survey in Computer Lab	Surveys of Instructional Practice Protocol

	• with Certified Teacher supervising the Students • Provide Accommodations for Students (as needed) • Print Copy of Surveys of Instructional Practice Results using Reports tab on the GaDOE TLE Electronic Platform for *Formative Assessment*	
Student Learning Objectives	• Teachers and evaluators monitor student performance and adjust SLO instructional strategies accordingly based on student performance data • Student Learning Objectives Item Bank Content Training	Guide for District Leadership Guide for Principals The Basics for Classroom Teachers
GaDOE TLE Electronic Platform Training for Teachers	• District Leaders and Evaluators Provide Support Meetings, as needed, for the GaDOE TLE Electronic Platform Processes	Quick Reference Guides
December **Teacher Assessment on Performance Standards (TAPS)**	• Evaluators plan ongoing Familiarization Sessions for Teachers • Monitor Progress of TKES Processes in Schools with Single Row Site Plan Status Report (September thru May) • Evaluators implement timeline to complete TKES processes of 4 Walkthroughs, 2 Formative Observations and 2 *Formative Assessments* and a *Summative Assessment* along with a *Pre-Evaluation Conference, Mid-Year Conference* and a *Summative Conference* • Evaluators record ratings and recommended commentary on the *Formative Assessment* in the GaDOE TLE Electronic Platform when observations completed • Evaluators use Survey Results as Documentation for Standards 3, 4, 7 and 8, if available, in the *Formative Assessment* • Evaluators conduct *Mid-Year Conference* with Individual or Group/s of Teachers to focus on TAPS Standards, student's academic progress and the SLO progress using the Teacher SLO Implementation Plan	TKES Implementation Handbook and Training Materials
Surveys of Instructional Practice	• Completion of Surveys of Instructional Practice for Nine-Week and First Semester Courses • Follow Survey Protocol located in the GaDOE TLE Electronic Platform • Assign Student Access Codes provided by GaDOE • Arrange for Students to take Survey in Computer Lab with Certified Teacher supervising the Students	Surveys of Instructional Practice Protocol

	• Provide Accommodations for Students (as needed) • Print Copy of Surveys of Instructional Practice Results using Reports tab on the GaDOE TLE Electronic Platform for the Teacher and the *Mid-Year Conference*	
Student Learning Objectives	• Evaluators conduct *Mid-Year Conference* with focus on TAPS Standards and SLO progress using the Teacher SLO Implementation Plan • Teachers and evaluators monitor student performance and adjust SLO instructional strategies accordingly based student performance data • Student Learning Objectives Item Bank Content Training	Guide for District Leadership Guide for Principals The Basics for Classroom Teachers
GaDOE TLE Electronic Platform Training for Teachers	• District Leaders and Evaluators Provide Support Meetings, as needed, for the GaDOE TLE Electronic Platform Processes	Quick Reference Guides
January **Teacher Assessment on Performance Standards (TAPS)**	• Evaluators plan ongoing Familiarization Sessions for Teachers • Monitor Progress of TKES Processes in Schools with Single Row Site Plan Status Report (September thru May) • Evaluators implement timeline to complete TKES processes of 4 Walkthroughs, 2 Formative Observations, 2 *Formative Assessments* and a *Summative Assessment* along with a *Pre-Evaluation Conference, Mid-Year Conference* and a *Summative Conference* • Evaluators record ratings and recommended commentary on the *Formative Assessment* in the GaDOE TLE Electronic Platform when observations completed • Evaluators conduct *Mid-Year Conference* with Individual or Group/s of Teachers with focus on TAPS Standards and SLO progress using the Teacher SLO Implementation Plan	TKES Implementation Handbook and Training Material
Surveys of Instructional Practice	• Print Copy of Surveys of Instructional Practice Results (if available) using Reports tab on the GaDOE TLE Electronic Platform for the Teacher and the *Mid-Year Conference*	Surveys of Instructional Practice Protocol
Student Learning Objectives	• Teachers administer second semester SLO pre-assessments • Evaluators conduct *Mid-Year Conference* with focus on TAPS Standards and SLO progress using the Teacher SLO Implementation Plan • Teachers and evaluators monitor student performance and adjust SLO instructional strategies accordingly based	Guide for District Leadership Guide for Principals The Basics for Classroom

	student performance data • Student Learning Objectives Item Bank Content Training	Teachers
GaDOE TLE Electronic Platform Training for Teachers	• District Leaders and Evaluators Provide Support Meetings, as needed, for the GaDOE TLE Electronic Platform Processes	Quick Reference Guides
February **Teacher Assessment on Performance Standards (TAPS)**	Non-Renewal Information to Human Resources per District Decision • Evaluators plan ongoing Familiarization Sessions for Teachers • Monitor Progress of TKES Processes in Schools with Single Row Site Plan Status Report (September thru May) • Evaluators implement timeline to complete TKES processes of 4 Walkthroughs, 2 Formative Observations, 2 *Formative Assessments* and a *Summative Assessment* along with a *Pre-Evaluation Conference, Mid-Year Conference* and a *Summative Conference* • Evaluators record ratings and recommended commentary on the *Formative Assessment* in the GaDOE TLE Electronic Platform when observations completed	TKES Implementation Handbook and Training Materials
Surveys of Instructional Practice	• Completion of Surveys of Instructional Practice for Nine-Week Courses • Follow Survey Protocol located in the GaDOE TLE Electronic Platform • Assign Student Access Codes provided by GaDOE • Arrange for Students to take Survey in Computer Lab with Certified Teacher supervising the Students • Provide Accommodations for Students (as needed) • Print Copy of Surveys of Instructional Practice Results using Reports tab on the GaDOE TLE Electronic Platform for *Formative Assessment*	Surveys of Instructional Practice Protocol
Student Learning Objectives	• Teachers and evaluators monitor student performance and adjust SLO instructional strategies accordingly based on student performance data • Student Learning Objectives Item Bank Content Training	Guide for District Leadership Guide for Principals The Basics for Classroom Teachers
GaDOE TLE Electronic Platform Training for Teachers	• District Leaders and Evaluators Provide Support Meetings, as needed, for the GaDOE TLE Electronic Platform Processes	Quick Reference Guides

March	Non-Renewal Information to Human Resources per District Guidelines	
Teacher Assessment on Performance Standards (TAPS)	• Evaluators plan ongoing Familiarization Sessions for Teachers • Monitor Progress of TKES Processes in Schools with Single Row Site Plan Status Report (September thru May) • Evaluators implement timeline to complete TKES processes of 4 Walkthroughs, 2 Formative Observations, 2 *Formative Assessments* and a *Summative Assessment* along with a *Pre-Evaluation Conference, Mid-Year Conference* and a *Summative Conference* • Evaluators Record ratings and recommended commentary on the *Formative Assessment* in the GaDOE TLE Electronic Platform when observations completed • Evaluators must use Surveys of Instructional Practice Results as Documentation for Standards 3, 4, 7 and 8 in the *Summative Assessment* • Conduct individual *Summative Conference* with Teacher using the *Summative Assessment*	TKES Implementation Handbook and Training Materials
Surveys of Instructional Practice	• Completion of Surveys of Instructional Practice for Nine-Week, Second Semester, and Year Courses • Follow Survey Protocol located in the GaDOE TLE Electronic Platform • Assign Student Access Codes provided by GaDOE • Arrange for Students to take Survey in Computer Lab with Certified Teacher supervising the Students • Provide Accommodations for Students (as needed) • Print Copy of Survey Results for Teacher's Summative Conference in March/April • Use Survey Results as Documentation for Standards 3, 4, 7 and 8 in the Summative Assessment Conference in March/April • Comprehensive Surveys of Instructional Practice's Report available for Teacher by date noted in the Step on the GaDOE TLE Electronic Platform	Surveys of Instructional Practice Protocol

March, continued		
LKES Climate Survey	• Teachers and classified staff take Climate Survey on the GaDOE TLE Electronic Platform • Administrators follow Climate Survey Protocol located on the GaDOE TLE Electronic Platform • Window of time given to Teachers and Classified staff for the Completion of the Survey • Use Survey Results as Documentation for your Current Evaluation System for Administrators (Evaluator not trained in LKES) • Print Copy of Climate Survey Results using Reports tab on the GaDOE TLE Electronic Platform for Principal and Assistant Principal Summative Conferences • Comprehensive Climate Survey Report available for Administrators on date noted in step on the GaDOE TLE Electronic Platform	Surveys of Instructional Practice Protocol
Student Learning Objectives	• Teachers and evaluators monitor student performance and adjust SLO instructional strategies accordingly based on student performance data • Student Learning Objectives Item Bank Content Training	Guide for District Leadership Guide for Principals The Basics for Classroom Teachers
GaDOE TLE Electronic Platform Training for Teachers	• District Leaders and Evaluators Provide Support Meetings, as needed, for the GaDOE TLE Electronic Platform Processes	Quick Reference Guides

April		
Teacher Assessment on Performance Standards (TAPS)	- Evaluators plan ongoing Familiarization Sessions for Teachers - Monitor Progress of TKES Processes in Schools with Single Row Site Plan Status Report (September thru May) - Evaluators complete TKES processes of 4 Walkthroughs, 2 Formative Observations, 2 *Formative Assessments* and a *Summative Assessment* along with a *Pre-Evaluation Conference, Mid-Year Conference* and a *Summative Assessment Conference* - Evaluators record ratings and recommended commentary on the *Summative Assessment* in the GaDOE TLE Electronic Platform when observations completed - Evaluators use Surveys of Instructional Practice Results as Documentation for Standards 3, 4, 7 and 8 in the *Summative Assessment* - Evaluators conduct individual *Summative Conference* with teacher using the *Summative Assessment*	TKES Implementation Handbook and Training Materials
Surveys of Instructional Practice	- Print Copy of Survey Results for Teacher's Summative Conference in March/April - Comprehensive Student Surveys of Instructional Practice's Report available for Teacher as noted in the step on the GaDOE TLE Electronic Platform	Surveys of Instructional Practice Protocol
Student Learning Objectives	- Teachers administer SLO post-assessment during district-determined post-assessment window - Teachers in non-traditional course schedules (i.e. block, nine-week) administer SLO post-assessments accordingly - Teachers enter post-assessment scores into the districts data collection system for reporting to the GaDOE	Guide for District Leadership Guide for Principals The Basics for Classroom Teachers
GaDOE TLE Electronic Platform Training for Teachers	District Leaders and Evaluators Provide Support Meetings, as needed, for the GaDOE TLE Electronic Platform Processes	Quick Reference Guides

May, 2014 **Teacher Assessment on Performance Standards (TAPS)**	• Monitor Progress of TKES Processes in Schools with Single Row Site Plan Status Report (September thru May) • Evaluators complete TKES processes of 4 Walkthroughs and 2 Formative Observations, 2 *Formative Assessments* and a *Summative Assessment* along with a *Pre-Evaluation Conference, Mid-Year Conference* and a *Summative Conference* • Evaluators record ratings and recommended commentary on the *Summative Assessment* in the GaDOE TLE Electronic Platform when observations completed • Evaluators must use Surveys of Instructional Practice Results as Documentation for Standards 3, 4, 7 and 8 in the *Summative Conference* • Evaluators conduct individual *Summative Conference* with Teacher using the *Summative Assessment* • Evaluators must complete all GaDOE TLE Electronic Platform Containers and Steps for the GaDOE	TKES Implementation Handbook and Training Materials
Surveys of Instructional Practice	• Comprehensive Student Surveys of Instructional Practice's Report available for Teacher as noted in the step on the GaDOE TLE Electronic Platform	Surveys of Instructional Practice Protocol
Student Learning Objectives	• Teachers submit post-assessment data to the school district based on the school district's plan for collecting the SLO post-assessment data to report to the GaDOE • SLO attainment results are calculated in the GaDOE TLE Electronic Platform and factored into the Teacher Effective Measure (TEM)	Guide for District Leadership Guide for Principals The Basics for Classroom Teachers
GaDOE TLE Electronic Platform Training for Teachers	• District Leaders and Evaluators Provide Support Meetings, as needed, for the GaDOE TLE Electronic Platform Processes	Quick Reference Guides

Figure 40: Teacher Keys Effectiveness System (TKES) Implementation Timeline (Cohort III)

<table>
<tr><td colspan="3">Teacher Keys Effectiveness System
Implementation Timeline
Cohort III (Volunteer Districts in 2013-14)

(Materials located in the GaDOE TLE Electronic Platform)</td></tr>
<tr><th>Month</th><th>Task</th><th>Materials</th></tr>
<tr>
<td>June and July

Teacher Assessment on Performance Standards (TAPS)</td>
<td>

Evaluators Complete TKES Training for Credentialing
Plan TKES Orientation for Teachers Participating in TAPS

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<td></td>
</tr>
<tr>
<td>Surveys of Instructional Practice</td>
<td></td>
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<tr>
<td>Student Learning Objectives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GaDOE TLE Electronic Platform Training for Teachers</td>
<td>

Plan GaDOE TLE Electronic Platform Training for Teachers.

</td>
<td></td>
</tr>
<tr>
<td>August

Teacher Assessment on Performance Standards (TAPS)</td>
<td>

Evaluators plan ongoing Familiarization Sessions for Teachers
Evaluators Complete TKES Training for Credentialing
Deliver TKES Orientation for Teachers
Evaluators implement timeline to complete TKES processes of 4 Walkthroughs, 2 Formative Observations, 2 Formative Assessments and a Summative Assessment along with a Pre-Evaluation Conference, Mid-Year Conference and a Summative Conference
Teachers complete TKES Self-Assessment for the Pre-Evaluation Conference with Principals
Evaluators schedule Pre-Assessment Conference with Teachers
Evaluators Record ratings and recommended commentary on the Formative Assessment in the TLE Electronic Platform when observations completed

</td>
<td>TKES Implementation Handbook and Training Materials</td>
</tr>
<tr>
<td>Surveys of Instructional Practice</td>
<td>

Review Surveys of Instructional Practice Protocol located in Resources Tab of GaDOE TLE Electronic Platform

</td>
<td>Surveys of Instructional Practice Protocol</td>
</tr>
<tr>
<td>Student Learning Objectives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GaDOE TLE Electronic Platform Training for</td>
<td>

District Leaders and Evaluators Provide Support Meetings, as needed, for the GaDOE TLE Electronic

</td>
<td>Quick Reference Guides</td>
</tr>
</table>

Teachers	Platform Processes	
September **Teacher Assessment on Performance Standards (TAPS)**	• Evaluators plan ongoing Familiarization Sessions for Teachers • Monitor Progress of TKES Processes in Schools with Single Row Site Plan Status Report (September thru May) • Evaluators implement timeline to complete TKES processes of 4 Walkthroughs, 2 Formative Observations,2 *Formative Assessments* and a *Summative Assessment* along with a *Pre-Evaluation Conference, Mid-Year Conference* and a *Summative Conference* • Evaluators record ratings and recommended commentary on the *Formative Assessment* in the GaDOE TLE Electronic Platform when observations completed	TKES Implementation Handbook and Training Materials
Surveys of Instructional Practice	• Review Surveys of Instructional Practice Protocol located in Resources Tab of GaDOE TLE Electronic Platform • Determine location and schedule for Surveys of Instructional Practice	Surveys of Instructional Practice Protocol
Student Learning Objectives	• Notification of Dates for Student Learning Objectives (SLO) Training and Registration Announced	
GaDOE TLE Electronic Platform Training for Teachers	• District Leaders and Evaluators Provide Support Meetings, as needed, for the GaDOE TLE Electronic Platform Processes	Quick Reference Guides
October **Teacher Assessment on Performance Standards (TAPS)**	• Evaluators plan ongoing Familiarization Sessions for Teachers • Monitor Progress of TKES Processes in Schools with Single Row Site Plan Status Report (September thru May) • Evaluators implement timeline to complete TKES processes of 4 Walkthroughs, 2 Formative Observations, 2 *Formative Assessments* and a *Summative Assessment* along with a *Pre-Evaluation Conference, Mid-Year Conference* and a *Summative Conference* • Evaluators record ratings and recommended commentary on the *Formative Assessment* in the GaDOE TLE Electronic Platform when observations completed	TKES Implementation Handbook and Training Materials

October, continued **Surveys of Instructional Practice**	• Completion of Surveys of Instructional Practice for Nine-Week and First Semester Courses • Follow Survey Protocol located in the GaDOE TLE Electronic Platform • Provide Student Access Codes (sent to you by GaDOE) • Arrange for Students to take Survey in Computer Lab with Certified Teacher supervising the Students • Provide Accommodations for Students (as needed) • Print Copy of Surveys of Instructional Practice Results for Teachers using Reports tab on the GaDOE TLE Electronic Platform	Surveys of Instructional Practice Protocol
Student Learning Objectives	• Attend Webinar for Introduction to Student Learning Objectives for 2013-14	Guide for District Leadership Guide for Principals The Basics for Classroom Teachers
GaDOE TLE Electronic Platform Training for Teachers	• District Leaders and Evaluators Provide Support Meetings, as needed, for the GaDOE TLE Electronic Platform Processes	Quick Reference Guides
November **Teacher Assessment on Performance Standards (TAPS)**	• Evaluators plan ongoing Familiarization Sessions for Teachers • Monitor Progress of TKES Processes in Schools with Single Row Site Plan Status Report (September thru May) • Evaluators implement timeline to complete TKES processes of 4 Walkthroughs, 2 Formative Observations, 2 *Formative Assessments* and a *Summative Assessment* along with a *Pre-Evaluation Conference, Mid-Year Conference* and a *Summative Conference* • Evaluators record ratings and recommended commentary on the *Formative Assessment* located in the GaDOE TLE Electronic Platform when observations completed • Evaluators use Survey Results as Documentation for Standards 3, 4, 7 and 8, if available, in the *Formative Assessment*	TKES Implementation Handbook and Training Materials

Surveys of Instructional Practice	• Completion of Surveys of Instructional Practice for Nine-Week and First Semester Courses • Follow Survey Protocol located in the GaDOE TLE Electronic Platform • Assign Student Access Codes provided by GaDOE • Arrange for Students to take Survey in Computer Lab with Certified Teacher supervising the Students • Provide Accommodations for Students (as needed) • Print Copy of Surveys of Instructional Practice Results using Reports tab on the GaDOE TLE Electronic Platform for *Formative Assessment*	Surveys of Instructional Practice Protocol
Student Learning Objectives	• Student Learning Objectives (SLO) Training Begins	Guide for District Leadership Guide for Principals The Basics for Classroom Teachers
GaDOE TLE Electronic Platform Training for Teachers	• District Leaders and Evaluators Provide Support Meetings, as needed, for the GaDOE TLE Electronic Platform Processes	Quick Reference Guides
December **Teacher Assessment on Performance Standards (TAPS)**	• Evaluators plan ongoing Familiarization Sessions for Teachers • Monitor Progress of TKES Processes in Schools with Single Row Site Plan Status Report (September thru May) • Evaluators implement timeline to complete TKES processes of 4 Walkthroughs, 2 Formative Observations and 2 *Formative Assessments* and a *Summative Assessment* along with a *Pre-Evaluation Conference, Mid-Year Conference* and a *Summative Conference* • Evaluators record ratings and recommended commentary on the *Formative Assessment* in the GaDOE TLE Electronic Platform when observations completed • Evaluators use Survey Results as Documentation for Standards 3, 4, 7 and 8, if available, in the *Formative Assessment* • Evaluators conduct *Mid-Year Conference* with Individual or Group/s of Teachers to focus on TAPS Standards, student's academic progress and the SLO progress using the Teacher SLO Implementation Plan	TKES Implementation Handbook and Training Materials

December, continued **Surveys of Instructional Practice**	• Completion of Surveys of Instructional Practice for Nine-Week and First Semester Courses • Follow Survey Protocol located in the GaDOE TLE Electronic Platform • Assign Student Access Codes provided by GaDOE) • Arrange for Students to take Survey in Computer Lab with Certified Teacher supervising the Students • Provide Accommodations for Students (as needed) • Print Copy of Surveys of Instructional Practice Results using Reports tab on the GaDOE TLE Electronic Platform for the Teacher and the *Mid-Year Conference*	Surveys of Instructional Practice Protocol
Student Learning Objectives	• Student Learning Objectives (SLO) Training Continues	Guide for District Leadership Guide for Principals The Basics for Classroom Teachers
GaDOE TLE Electronic Platform Training for Teachers	• District Leaders and Evaluators Provide Support Meetings, as needed, for the GaDOE TLE Electronic Platform Processes	Quick Reference Guides
January **Teacher Assessment on Performance Standards (TAPS)**	• Evaluators plan ongoing Familiarization Sessions for Teachers • Monitor Progress of TKES Processes in Schools with Single Row Site Plan Status Report (September thru May) • Evaluators implement timeline to complete TKES processes of 4 Walkthroughs, 2 Formative Observations, 2 *Formative Assessments* and a *Summative Assessment* along with a *Pre-Evaluation Conference, Mid-Year Conference* and a *Summative Conference* • Evaluators record ratings and recommended commentary on the *Formative Assessment* in the GaDOE TLE Electronic Platform when observations completed • Evaluators conduct *Mid-Year Conference* with Individual or Group/s of Teachers with focus on TAPS Standards and SLO progress using the Teacher SLO Implementation Plan	TKES Implementation Handbook and Training Materials
Surveys of Instructional Practice		

Student Learning Objectives	• Student Learning Objectives (SLO) Training Continues • Implementation of District's Student Learning Objectives (SLO) Development Plan	Guide for District Leadership Guide for Principals The Basics for Classroom Teachers
GaDOE TLE Electronic Platform Training for Teachers	• District Leaders and Evaluators Provide Support Meetings, as needed, for the GaDOE TLE Electronic Platform Processes	Quick Reference Guides
February **Teacher Assessment on Performance Standards (TAPS)**	Non-Renewal Information to Human Resources per District Guidelines • Evaluators plan ongoing Familiarization Sessions for Teachers • Monitor Progress of TKES Processes in Schools with Single Row Site Plan Status Report (September thru May) • Evaluators implement timeline to complete TKES processes of 4 Walkthroughs, 2 Formative Observations, 2 *Formative Assessments* and a *Summative Assessment* along with a *Pre-Evaluation Conference, Mid-Year Conference* and a *Summative Conference* • Evaluators record ratings and recommended commentary on the *Formative Assessment Report* in the GaDOE TLE Electronic Platform when observations completed	TKES Implementation Handbook and Training Materials
Surveys of Instructional Practice	• Completion of Surveys of Instructional Practice for Nine-Week Courses • Follow Survey Protocol located in the GaDOE TLE Electronic Platform • Assign Student Access Codes provided by GaDOE • Arrange for Students to take Survey in Computer Lab with Certified Teacher supervising the Students • Provide Accommodations for Students (as needed) • Print Copy of Surveys of Instructional Practice Results using Reports tab on the GaDOE TLE Electronic Platform for *Formative Assessment*	Surveys of Instructional Practice Protocol

February, continued		
Student Learning Objectives	• Implementation of District's Student Learning Objectives (SLO) Development Plan	Guide for District Leadership Guide for Principals The Basics for Classroom Teachers
GaDOE TLE Electronic Platform Training for Teachers	• District Leaders and Evaluators Provide Support Meetings, as needed, for the GaDOE TLE Electronic Platform Processes	Quick Reference Guides
March **Teacher Assessment on Performance Standards (TAPS)**	Non-Renewal Information to Human Resources per District Guidelines • Evaluators plan ongoing Familiarization Sessions for Teachers • Monitor Progress of TKES Processes in Schools with Single Row Site Plan Status Report (September thru May) • Evaluators implement timeline to complete TKES processes of 4 Walkthroughs, 2 Formative Observations, 2 *Formative Assessments* and a *Summative Assessment* along with a *Pre-Evaluation Conference, Mid-Year Conference* and a *Summative Conference* • Evaluators Record ratings and recommended commentary on the *Formative Assessment* in the GaDOE TLE Electronic Platform when observations completed • Evaluators must use Surveys of Instructional Practice Results as Documentation for Standards 3, 4, 7 and 8 in the *Summative Assessment* • Conduct individual *Summative Conference* with Teacher using the *Summative Assessment*	TKES Implementation Handbook and Training Materials

March, continued		
Surveys of Instructional Practice	• Completion of Surveys of Instructional Practice for Nine-Week, Second Semester, and Year Courses • Follow Survey Protocol located in the GaDOE TLE Electronic Platform • Assign Student Access Codes provided by GaDOE • Arrange for Students to take Survey in Computer Lab with Certified Teacher supervising the Students • Provide Accommodations for Students (as needed) • Print Copy of Survey Results for Teacher's Summative Conference in March/April • Use Survey Results as Documentation for Standards 3, 4, 7 and 8 in the Summative Conference in March/April • Comprehensive Surveys of Instructional Practice's Report available for Teacher by date noted in the Step on the GaDOE TLE Electronic Platform	Surveys of Instructional Practice Protocol
LKES Climate Survey	• Teachers and classified staff take Climate Survey on the GaDOE TLE Electronic Platform • Administrators follow Climate Survey Protocol located on the GaDOE TLE Electronic Platform • Window of time given to Teachers and Classified staff for the Completion of the Survey • Use Survey Results as Documentation for your Current Evaluation System for Administrators (Evaluator not trained in LKES) • Print Copy of Climate Survey Results using Reports tab on the GaDOE TLE Electronic Platform for Principal and Assistant Principal Summative Conferences • Comprehensive Climate Survey Report available for Administrators on date noted in step on the GaDOE TLE Electronic Platform	LKES Climate Survey Protocol
Student Learning Objectives	• Implementation of District's Student Learning Objectives (SLO) Development Plan	Guide for District Leadership Guide for Principals The Basics for Classroom Teachers
GaDOE TLE Electronic Platform Training for Teachers	• District Leaders and Evaluators Provide Support Meetings, as needed, for the GaDOE TLE Electronic Platform Processes	Quick Reference Guides

April		
Teacher Assessment on Performance Standards (TAPS)	• Evaluators plan ongoing Familiarization Sessions for Teachers • Monitor Progress of TKES Processes in Schools with Single Row Site Plan Status Report (September thru May) • Evaluators complete TKES processes of 4 Walkthroughs, 2 Formative Observations, 2 *Formative Assessments* and a *Summative Assessment* along with a *Pre-Evaluation Conference, Mid-Year Conference* and a *Summative Conference* • Evaluators record ratings and recommended commentary on the *Summative Assessment* in the GaDOE TLE Electronic Platform when observations completed • Evaluators use Surveys of Instructional Practice Results as Documentation for Standards 3, 4, 7 and 8 in the *Summative Assessment* • Evaluators conduct individual *Summative Conference* with Teacher using the *Summative Assessment*	TKES Implementation Handbook and Training Materials
Surveys of Instructional Practice	• Print Copy of Survey Results for Teacher's Summative Conference in March/April • Comprehensive Student Surveys of Instructional Practice's Report available for Teacher as noted in the step on the GaDOE TLE Electronic Platform	Surveys of Instructional Practice Protocol
Student Learning Objectives	• Implementation of District's Student Learning Objectives (SLO) Development Plan	Guide for District Leadership Guide for Principals The Basics for Classroom Teachers
GaDOE TLE Electronic Platform Training for Teachers	• District Leaders and Evaluators Provide Support Meetings, as needed, for the GaDOE TLE Electronic Platform Processes	Quick Reference Guides

May, 2014 **Teacher Assessment on Performance Standards (TAPS)**	• Monitor Progress of TKES Processes in Schools with Single Row Site Plan Status Report (September thru May) • Evaluators complete TKES processes of 4 Walkthroughs and 2 Formative Observations, 2 *Formative Assessments* and a *Summative Assessment* along with a *Pre-Evaluation Conference, Mid-Year Conference* and a *Summative Conference* • Evaluators record ratings and recommended commentary on the *Summative Assessment* in the GaDOE TLE Electronic Platform when observations completed • Evaluators must use Surveys of Instructional Practice Results as Documentation for Standards 3, 4, 7 and 8 in the *Summative Conference* • Evaluators conduct individual *Summative Conference* using the *Summative Assessment* with Teacher • Evaluators must complete all GaDOE TLE Electronic Platform Containers and Steps for the GaDOE	TKES Implementation Handbook and Training Materials
Surveys of Instructional Practice	• Comprehensive Student Surveys of Instructional Practice's Report available for Teacher as noted in the step on the GaDOE TLE Electronic Platform	Surveys of Instructional Practice Protocol
Student Learning Objectives	• Implementation of District's Student Learning Objectives (SLO) Development Plan	Guide for District Leadership Guide for Principals The Basics for Classroom Teachers
GaDOE TLE Electronic Platform Training for Teachers	• District Leaders and Evaluators Provide Support Meetings, as needed, for the GaDOE TLE Electronic Platform Processes	Quick Reference Guides

Figure 41: Human Resources TKES and LKES Evaluation Cycle Timeline

Teacher Keys Effectiveness System
Human Resources TKES and LKES Evaluation Cycle Timeline

The GaDOE Electronic Platform contains the materials for the implementation of the Leader Keys Effectiveness System (LKES) and Teacher Keys Effectiveness System (TKES).

Month	Task	Materials
July **TKES**	• TKES Training for Credentialing • TKES Update Training for Evaluators • Districts determine SLO pre-assessment administration timeframe	• Dates determined in the Spring • GaDOE approved SLO Pre-Assessment
LKES	• LKES Training for Credentialing • LKES Update Training for Evaluators	• Dates determined in the Spring
August **TKES**	• TKES Update Training for Evaluators • Evaluators conduct TKES Orientation • Teachers administer SLO pre-assessment, record data in preparation • Evaluators monitor the entry of SLO Pre-Assessment Data • Teachers (TAPS) complete Self-Assessment in preparation for *Pre-Evaluation Conference* • Evaluators begins walkthroughs (frequent brief observations) if TKES Credentialed • Principal or designated evaluator develops/monitors Professional Development Plans (PDP) as needed • Monitor Monthly TKES Reports	• TKES Update Training • TKES Orientation • School District Data System • TAPS *Self-Assessment* • Evaluators provide TAPS *Formative Assessment* feedback to teachers within five business days • TKES *Professional Development Plans* • TKES Plan Status Report in GaDOE TLE Electronic Platform

LKES	• *Evaluators conduct LKES Orientation*	• LKES Update Training • LAPS Orientation
	• Leaders (LAPS) complete Self-Assessment in preparation for *Pre-Evaluation Conference*	• LAPS Self-Assessment
	• Evaluators develop/monitor Professional Development Plans (PDP) as needed	• LKES *Professional Development Plans*
	• Monitor Monthly LKES Reports	• LKES Plan Status Report in GaDOE TLE Electronic Platform
September ***TKES***	• Evaluators provide TKES Familiarization training to teachers as needed	• Evaluators provide TKES Familiarization for Teachers using GaDOE TLE Electronic Platform Resources
	• Principal and evaluators plan for administration of Surveys of Instructional Practice	• GaDOE Survey Protocol in the GaDOE TLE Electronic Platform Resources
	• Evaluators monitor the entry of SLO Pre-Assessment Data	• School District Data System
	• Evaluators conduct Pre-Evaluation Conference	• Evaluators use the Self-Assessment to discuss strengths and areas for growth along with any questions about the process.
	• Evaluators conduct announced and/or unannounced observations and walkthroughs (frequent brief observations)	• Evaluators collect documentation and provide TAPS *Formative Assessment* feedback to teachers within five business days
	• Principal or designated evaluator develops/monitors Professional Development Plans (PDP) as needed	• TKES *Professional Development Plans*
	• Monitor Monthly TKES Reports	• TKES Plan Status Report on GaDOE TLE Electronic Platform
LKES	• *Evaluators conduct LKES Orientation*	• LKES Update Training • LAPS Orientation

	• Leaders (LAPS) complete Self-Assessment in preparation for *Pre-Evaluation Conference* • Evaluators develop/monitor *Professional Development Plans* (PDP) as needed • Monitor Monthly LKES Reports	• LAPS Self-Assessment • LKES *Professional Development Plans* • LKES Plan Status Report in GaDOE TLE Electronic Platform
October **TKES**	• Evaluators provide TKES Familiarization training to teachers as needed • Evaluators conduct announced and/or unannounced observations and walkthroughs (frequent brief observations) • TKES Student Survey Window • Evaluator develops/monitors Professional Development Plans as Needed • Monitor Monthly TKES Reports	• Evaluators provide TKES Familiarization for Teachers using GaDOE TLE Electronic Platform Resources • Evaluators collect documentation and provide TAPS *Formative Assessment* feedback to teachers within five business days • Surveys of Instructional Practice Protocol in the GaDOE TLE Electronic Platform Resources • TKES *Professional Development Plan* • TKES Plan Status Report on GaDOE TLE Electronic Platform
LKES	• Evaluators develop/monitor Professional Development Plans (PDP) as needed • Monitor Monthly LKES Reports	• LKES *Professional Development Plan* • LKES Plan Status Report in GaDOE TLE Electronic Platform
November **TKES**	• Evaluators provide TKES Familiarization training to teachers as needed • Evaluators conduct announced and /or unannounced observations and walkthroughs (frequent brief observations)	• Evaluators provide TKES Familiarization for Teachers using GaDOE TLE Electronic Platform Resources • Evaluators collect documentation and provide TAPS *Formative Assessment* feedback to teachers within five business days

	• Principal or designated evaluator develops/monitors Professional Development Plans (PDP) as needed	• TKES *Professional Development Plan*
	• TKES Student Survey Window	• Surveys of Instructional Practice Protocol in the GaDOE TLE Electronic Platform Resources
	• Monitor Monthly TKES Reports	• TKES Plan Status Report on GaDOE TLE Electronic Platform
LKES	• Evaluators develop/monitor Professional Development Plans (PDP) as needed	• LKES *Professional Development Plans*
	• Monitor Monthly LKES Reports	• LKES Plan Status Report in GaDOE TLE Electronic Platform
December **TKES**	• Evaluators provide TKES Familiarization training to teachers as needed	• Evaluators provide TKES Familiarization for Teachers using GaDOE TLE Electronic Platform Resources
	• Teachers administer SLO post-assessments for semester courses	• GaDOE approved SLO post-assessments
	• Principal or designated evaluator develops/monitors Professional Development Plans (PDP) as needed	• TKES *Professional Development Plan*
	• Evaluators conduct announced and/or unannounced observations and walkthroughs (frequent brief observations)	• Evaluators collects documentation and provides TAPS *Formative Assessment* feedback to teachers within five business days
	• Evaluators conduct and record *Mid-Year Conference* (group or individual) with teachers to discuss TAPS Standards and SLO progress and to make revisions to instruction as needed	• *SLO Teacher Implementation Plan* and Pre-Assessment Data
	• TKES Survey Window Open	• Surveys of Instructional Practice Protocol in the GaDOE TLE Electronic Platform Resources
	• Monitor Monthly TKES Reports	• TKES Plan Status Report on GaDOE TLE Electronic Platform

LKES	• Evaluators conduct *Mid-Year Conferences* • Evaluator develop/monitor Professional Development Plans (PDP) as needed • Monitor Monthly LKES Reports	• *Mid-Year Conference* • LKES *Professional Development Plans* • LKES Plan Status Report in GaDOE TLE Electronic Platform
January **TKES**	• Evaluators provide TKES Familiarization training to teachers as needed • Principal or designated evaluator conducts and records *Mid-Year Conference* (group or individual) with teachers to discuss TAPS and SLO progress and to make revisions to instruction as needed • Principal or designated evaluator develops/monitors Professional Development Plans (PDP) as needed • Evaluators conduct announced and/or unannounced observations and walkthroughs (frequent brief observations) • TKES Student Survey Window • Monitor Monthly TKES Reports	• Evaluators provide TKES Familiarization for Teachers using GaDOE TLE Electronic Platform Resources • *SLO Teacher Implementation Plan* and Pre-Assessment Data • *Mid-Year Conference* • TKES *Professional Development Plan* • Evaluators collect documentation and provide TAPS *Formative Assessment* feedback to teachers within five business days • Surveys of Instructional Practice Protocol in the GaDOE TLE Electronic Platform Resources • TKES Plan Status Report on GaDOE TLE Electronic Platform
LKES	• Evaluators conduct *Mid-Year Conferences* • Evaluators develop/monitor Professional Development Plans (PDP) as needed • Monitor Monthly LKES Reports	• *Mid-Year Conference* • LKES *Professional Development Plans* • LKES Plan Status Report in GaDOE TLE Electronic Platform

February TKES		
	• Evaluators provide TKES Familiarization training to teachers as needed	• Evaluators provide TKES Familiarization for Teachers using GaDOE TLE Electronic Platform Resources
	• Evaluators conduct announced and/or unannounced observations and walkthroughs (frequent brief observations)	• Evaluators collect documentation and provide TKES *Formative Assessment* feedback to teachers within five business days
	• Evaluators monitor SLO Data Entry	• District Data Collection System
	• Principal or designated evaluator develops/monitors Professional Development Plans (PDP) as needed	• TKES *Professional Development Plan*
	• TKES Student Survey Window	• Surveys of Instructional Practice Protocol in the GaDOE TLE Electronic Platform Resources
	• Monitor Monthly TKES Reports	• TKES Plan Status Report on the GaDOE TLE Electronic Platform
March TKES	• Evaluators provide TKES Familiarization training to teachers as needed	• Evaluators provide TKES Familiarization for Teachers using the GaDOE TLE Electronic Platform Resources
	• Evaluators conduct announced and/or unannounced observations and walkthroughs (frequent brief observations)	• Evaluators collect documentation and provide TAPS *Formative Assessment* feedback to teachers within five business days
	• Evaluators conduct and record *Summative Conferences* (individual) with teachers to discuss TAPS Standards and SLO progress and to make revisions to instruction as needed	• *Summative Conference* • *Surveys of Instructional Practice*
	• Evaluators monitor SLO data	• School District Data System
	• Principal or designated evaluator develops/monitors Professional Development Plans (PDP) as needed	• TKES *Professional Development Plan*

	• TKES Student Survey Window • Monitors monthly TKES Reports	• Surveys of Instructional Practice Protocol in the GaDOE TLE Electronic Platform Resources • TKES Plan Status Report on GaDOE TLE Electronic Platform
LKES	• Evaluators conduct *Summative Conferences* to discuss *Performance Goals Setting* and LKES standards progress • Principals conduct teacher and classified Climate Surveys for school Principal and Assistant Principals (must be completed prior to the *Summative Conference*) • Evaluators develop/monitor Professional Development Plans (PDP) as needed • Monitor Monthly LKES Reports	• *Summative Conference* • *Performance Goals Setting* • *Climate Surveys* • *Climate Survey Protocol* in the GaDOE TLE Electronic Platform • LKES *Professional Development Plans* • LKES Plan Status Report in GaDOE TLE Electronic Platform
April **TKES**	• Evaluators provide TKES Familiarization training to teachers as needed • Evaluators conduct announced and/or unannounced observations and walkthroughs (frequent brief observations) • Evaluators monitor SLO Post-Assessment Data Entry • Evaluators conduct and record *Summative Conference* (individual) with teachers to discuss TAPS Standards and SLO progress and to make revisions to	• Evaluators provide TKES Familiarization for Teachers using GaDOE TLE Electronic Platform Resources • Evaluators provide TKES *Formative Assessment* observation feedback to teachers within five business days • School District Data System • *Summative Conference* • *Surveys of Instructional Practice*

	instruction as needed • Principal or designated evaluator develops/monitors Professional Development Plans (PDP) as needed • Monitors monthly TKES Reports	• TKES *Professional Development Plan* • TKES Plan Status Report on the GaDOE TLE Electronic Platform
LKES	• Evaluators conduct and record *Summative Conferences* to discuss *Performance Goals Setting* and LKES standards progress • Principals conduct teacher and classified Climate Surveys for school Principal and Assistant Principals (must be completed prior to *Summative Conference*) • Evaluators develop/monitor Professional Development Plans (PDP) as needed • Monitor Monthly LKES Reports	• *Summative Conference* • *Performance Goals Setting* • *Climate Surveys* • *Climate Survey Protocol* in the GaDOE TLE Electronic Platform • LKES *Professional Development Plans* • LKES Plan Status Report in GaDOE TLE Electronic Platform
May **TKES**	• Teachers administer SLO post-assessment (date determined by district) and enter the data in the school district's data collection program • Teachers compile assessment data and to determine SLO attainment and complete the SLO Teacher Implementation Plan • SLO attainment data due to GaDOE by May 15 • Principal or designated evaluator conducts individual *Summative Conference* with teachers to discuss	• SLO Post-Assessment Data • *SLO Teacher Implementation Plan* on the GaDOE TLE Electronic Platform • School District Data System • SLO Attainment Data Rubric • *Summative Assessment* on the GaDOE TLE Electronic Platform

	TAPS ratings and SLO progress	
	• Principal Signs-Off on all Teacher *Summative Assessments*	• GaDOE TLE Electronic Platform Step
	• TKES *Summative Assessment* data to GaDOE by May 15	• School District Data System
	• Principal or designated evaluator develops/monitors Professional Development Plans (PDP) as needed	• TKES *Professional Development Plan*
	• Student Survey Window Closes	• Surveys of Instructional Practice Protocol in GaDOE TLE Electronic Platform Resources
	• Monitor Monthly TKES Reports	• TKES Plan Status Report on GaDOE TLE Electronic Platform
LKES	• Evaluators conduct and record *Summative Conferences* to discuss *Performance Goals Setting* and LKES standard progress	• *Summative Conference*
	• Evaluators develop/monitor Professional Development Plans (PDP) as needed	• LKES *Professional Development Plans*
	• Monitor Monthly LKES Reports	• LKES Plan Status Report in GaDOE TLE Electronic Platform
June	• Submit *Summative Assessment* TAPS rating to the Professional Standards Commission	• TKES *Summative Assessment* Report in the GaDOE TLE Electronic Platform

GaDOE TLE Electronic Platform

Georgia's electronic platform for the Teacher Keys Effectiveness Systems will provide web-based access to multiple components. The platform will communicate with existing GaDOE data and information systems to pull data for personnel, student records, student course schedules, and roster verification. Other data may also be pulled from the system. The GaDOE TLE Electronic Platform will be provided by the GaDOE to school districts and schools implementing or piloting the Teacher Keys Effectiveness System.

The electronic platform will include the following:
- Templates for multiple walkthroughs, formative assessments, and the summative assessment for TKES.
- Templates for a variety of types of conferences.
- Ability to upload documentation.
- Professional Development Plan template.
- Multiple surveys of instructional practice (TKES).
- Rolling windows for administering surveys October through March.
- Multiple language options and read aloud capabilities within the student surveys.
- Student survey data aligned to TAPS Performance Standards.
- SGP data gathered through GaDOE Student Longitudinal Data System (SLDS).
- SLO templates for districts and teachers.
- Professional learning materials, modules, and other opportunities directly linked to the TKES Performance Standards.
- Data calculated and updated at various times in the school year.

Numerous calculation processes will be implemented for TKES in the GaDOE TLE Electronic Platform which will include the following:
- SGP and SLO calculations – school and district level aggregated and disaggregated student data.
- TAPS calculations and reports – teacher or leader, school, district, and state level.
- TEM (Teacher Effectiveness Measure) calculations and reports – teacher, school, district, and state levels.
- Ongoing school, district, and state level implementation reports at strategic intervals during the school year.

The electronic platform for TKES will maintain all of the effectiveness system measures-including completion of orientation and self-assessment, TAPS formative and summative assessments and documentation, professional development plans, student survey data (TKES), electronic signatures and date/time stamps for all documents and data submissions, SLO data and performance calculations, student growth percentile measures, and TEM (Teacher Effectiveness Measure) calculations. The GaDOE TLE Electronic Platform will also provide access to videos, links, and other resources that support the ongoing professional learning needed for continuous improvement of professional practice as measured by the Teacher or Leader Effectiveness

Measure. Figure 42 provides information about the sequence of the containers and steps in the TLE Electronic Platform.

Figure 42: GaDOE TLE Electronic Platform TKES Sequence

Container	Steps
Orientation & Familiarization	**Orientation** Teacher acknowledges completion of an orientation to the Teacher Keys Effectiveness System.
	Familiarization Teacher accesses addition professional learning resources for Teacher Assessment on Performance Standards.
Self-Assessment	**Self-Assessment** Teacher reflects on areas of strength and growth related to each standard and completes a Self-Assessment. Teacher shares Self-Assessment with evaluator.
	Pre-Evaluation Conference Conference may be conducted with small groups or individuals. Evaluator and teacher contribute to conference content, including the Self-Assessment, student growth data, or other TKES processes.
Teacher Assessment on Performance Standards	**Documenting Performance** Evaluator and teacher upload documentation as evidence of performance of the standards.
	Walkthroughs & Formative Assessments Evaluator uses multiple sources of data to determine teacher's formative ratings for ten performance standards.
	Teacher Sign-off on Formative Assessments Teacher acknowledges receipt of and provides comments about the formative assessments.
	Surveys of Instructional Practice Evaluator and teacher review the survey results which become available after 15 completed surveys.
Student Growth and Academic Achievement	**Teacher Student Learning Objective Data** Teacher reviews and analyzes the pre-assessment SLO data in order to complete the Teacher SLO Implementation Plan for each course taught for which as SLO is applicable.
	Teacher Student Learning Objective Implementation Plan Teacher accesses the District SLO Statement and completes a corresponding Teacher SLO Implementation Plan for each course taught for which an SLO is applicable.
	Mid-Year Conference Conference may be conducted with small groups or individuals. Evaluator and teacher contribute to conference content including documentation and performance for ten standards, review of student growth targets, Teacher SLO Implementation Plans, and other TKES processes.
Teacher Effectiveness Measure	**Summative Assessment** Evaluator uses multiple sources of data to determine teacher's summative ratings for ten performance standards.
	Summative Conference An individual conference is required. Evaluator and teacher acknowledge the summative assessment and contribute to conference content including the summative assessment, survey data, student growth data or other TKES processes.
	Principal Summative Sign-off The principal signs off that the summative assessment, including results from the Survey of Instructional Practice, has been shared and finalized with the teacher.
	Student Growth and Academic Achievement Rating Teacher reviews the summary data for Student Growth Percentile measures and Student Learning Objective data.

	Teacher Effectiveness Measure The teacher reviews the Teacher Effectiveness Measure.
Professional Development Plan & Additional Conferences	**Professional Development Plan** Evaluator uses a variety of resources to complete a development plan for the teacher. Evaluator and teacher contribute to the conference.
	Additional Conferences Evaluator and teacher contribute to conference content including documentation and performance for ten standards, review of survey data, review of student growth targets, or other TKES processes.

Closing

In Georgia, as a Race to the Top state, the development of a comprehensive evaluation system with clear approaches to measuring student growth is a priority. To accomplish this result, Georgia has established procedures to accompany the Teacher Keys Effectiveness System (TKES). A high level of communication will be an ongoing aspect of the implementation of the TKES procedures as noted in Teacher Keys Effectiveness System (TKES) Implementation Handbook.

Designing and implementing a rigorous, transparent teacher evaluation system is the cornerstone for increasing student achievement. Conducting annual evaluations in a continuous improvement format allows school leaders to give constructive feedback to teachers in order to inform their ongoing professional development and growth. When teachers and evaluators work together to analyze and identify areas of strength and areas for growth, teacher performance and effectiveness will be continually enhanced and refined through the ongoing teacher evaluation cycle. In doing so, the evaluation process supports the ultimate goal of increased student achievement across the state of Georgia.

APPENDIX I

TKES PERFORMANCE STANDARDS and RUBRICS

Performance Standard 1: Professional Knowledge
The teacher demonstrates an understanding of the curriculum, subject content, pedagogical knowledge, and the needs of students by providing relevant learning experiences.

Sample Performance Indicators
Examples may include, but are not limited to:

The teacher:

1.1 Addresses appropriate curriculum standards and integrates key content elements.

1.2 Implements students' use of higher-level thinking skills in instruction.

1.3 Demonstrates ability to link present content with past and future learning experiences, other subject areas, and real world experiences and applications.

1.4 Demonstrates accurate, deep, and current knowledge of subject matter.

1.5 Exhibits pedagogical skills relevant to the subject area(s) taught and best practices based on current research.

1.6 Bases instruction on goals that reflect high expectations for all students and a clear understanding of the curriculum.

1.7 Displays an understanding of the intellectual, social, emotional, and physical development of the age group.

Contemporary Effective Teacher Research

Contemporary research has found that an effective teacher:

♦ Facilitates planning units in advance to make intra- and interdisciplinary connections.[2]
♦ Plans for the context of the lesson to help students relate, organize, and retain knowledge as a part of their long-term memory.[3]
♦ Identifies instructional objectives and activities[4] to promote students' cognitive and developmental growth.[5]

Exemplary *In addition to meeting the requirements for Proficient…*	Proficient *Proficient is the expected level of performance.*	**Needs Development**	**Ineffective**
The teacher continually demonstrates extensive content and pedagogical knowledge, enriches the curriculum, and guides others in enriching the curriculum. *(Teachers rated as Exemplary continually seek ways to serve as role models or teacher leaders.)*	The teacher consistently demonstrates an understanding of the curriculum, subject content, pedagogical knowledge, and the needs of students by providing relevant learning experiences.	The teacher inconsistently demonstrates understanding of curriculum, subject content, pedagogical knowledge, and student needs, **or** lacks fluidity in using the knowledge in practice.	The teacher inadequately demonstrates understanding of curriculum, subject content, pedagogical knowledge and student needs, **or** does not use the knowledge in practice.

Performance Standard 2: Instructional Planning
The teacher plans using state and local school district curricula and standards, effective strategies, resources, and data to address the differentiated needs of all students.

Sample Performance Indicators
Examples may include, but are not limited to:

The teacher:

2.1 Analyzes and uses student learning data to inform planning.

2.2 Develops plans that are clear, logical, sequential, and integrated across the curriculum (*e.g.,* long-term goals, lesson plans, and syllabi).

2.3 Plans instruction effectively for content mastery, pacing, and transitions.

2.4 Plans for instruction to meet the needs of all students.

2.5 Aligns and connects lesson objectives to state and local school district curricula and standards, and student learning needs.

2.6 Develops appropriate course, unit, and daily plans, and is able to adapt plans when needed.

Contemporary Effective Teacher Research

Contemporary research has found that an effective teacher:
- Constructs a blueprint of how to address the curriculum during the instructional time.[6]
- Uses knowledge of available resources to determine what resources s/he needs to acquire or develop.[7]

Exemplary *In addition to meeting the requirements for Proficient…*	Proficient *Proficient is the expected level of performance.*	Needs Development	Ineffective
The teacher continually seeks and uses multiple data and real world resources to plan differentiated instruction to meet the individual student needs and interests in order to promote student accountability and engagement. *(Teachers rated as Exemplary continually seek ways to serve as role models or teacher leaders.)*	The teacher consistently plans using state and local school district curricula and standards, effective strategies, resources, and data to address the differentiated needs of all students**.**	The teacher inconsistently uses state and local school district curricula and standards, **or** inconsistently uses effective strategies, resources, **or** data in planning to meet the needs of all students.	The teacher does not plan, or plans without adequately using state and local school district curricula and standards, **or** without using effective strategies, resources, **or** data to meet the needs of all students.

Performance Standard 3: Instructional Strategies
The teacher promotes student learning by using research-based instructional strategies relevant to the content to engage students in active learning and to facilitate the students' acquisition of key knowledge and skills.

Sample Performance Indicators
Examples may include, but are not limited to:

The teacher:

3.1 Engages students in active learning and maintains interest.

3.2 Builds upon students' existing knowledge and skills.

3.3 Reinforces learning goals consistently throughout the lesson.

3.4 Uses a variety of research-based instructional strategies and resources.

3.5 Effectively uses appropriate instructional technology to enhance student learning.

3.6 Communicates and presents material clearly, and checks for understanding.

3.7 Develops higher-order thinking through questioning and problem-solving activities.

3.8 Engages students in authentic learning by providing real-life examples and interdisciplinary connections.

Contemporary Effective Teacher Research
Contemporary research has found that an effective teacher:
- Stays involved with the lesson at all stages.[8]
- Uses a variety of instructional strategies.[9]
- Uses research-based strategies to make instruction student-centered.[10]
- Involves students in cooperative learning to enhance higher-order thinking skills.[11]
- Uses students' prior knowledge to facilitate student learning.[12]
- Possesses strong communication skills,[13] offering clear explanations and directions.[14]

Exemplary *In addition to meeting the requirements for Proficient…*	Proficient *Proficient is the expected level of performance.*	Needs Development	Ineffective
The teacher continually facilitates students' engagement in metacognitive learning, higher-order thinking skills, and application of learning in current and relevant ways. *(Teachers rated as Exemplary continually seek ways to serve as role models or teacher leaders.)*	The teacher consistently promotes student learning by using research-based instructional strategies relevant to the content to engage students in active learning, and to facilitate the students' acquisition of key skills.	The teacher inconsistently uses-research-based instructional strategies. The strategies used are sometimes not appropriate for the content area **or** for engaging students in active learning **or** for the acquisition of key skills.	The teacher does not use research-based instructional strategies, nor are the instructional strategies relevant to the content area. The strategies do not engage students in active learning **or** acquisition of key skills.

Performance Standard 4: Differentiated Instruction
The teacher challenges and supports each student's learning by providing appropriate content and developing skills which address individual learning differences.

Sample Performance Indicators
Examples may include but are not limited to:

The teacher:

4.1 Differentiates the instructional content, process, product, and learning environment to meet individual developmental needs.

4.2 Provides remediation, enrichment, and acceleration to further student understanding of material.

4.3 Uses flexible grouping strategies to encourage appropriate peer interaction and to accommodate learning needs/goals.

4.4 Uses diagnostic, formative, and summative assessment data to inform instructional modifications for individual students.

4.5 Develops critical and creative thinking by providing activities at the appropriate level of challenge for students.

4.6 Demonstrates high learning expectations for all students commensurate with their developmental levels.

Contemporary Effective Teacher Research

Contemporary research has found that an effective teacher:

♦ Differentiates for students' needs using remediation, skills-based instruction, and individualized instruction.[15]

♦ Uses multiple levels of questioning aligned with students' cognitive abilities with appropriate techniques.[16]

Exemplary *In addition to meeting the requirements for Proficient…*	Proficient *Proficient is the expected level of performance.*	Needs Development	Ineffective
The teacher continually facilitates each student's opportunities to learn by engaging him/her in critical and creative thinking and challenging activities tailored to address individual learning needs and interests. *(Teachers rated as Exemplary continually seek ways to serve as role models or teacher leaders.)*	The teacher consistently challenges and supports each student's learning by providing appropriate content and developing skills which address individual learning differences.	The teacher inconsistently challenges students by providing appropriate content **or** by developing skills which address individual learning differences.	The teacher does not challenge students by providing appropriate content **or** by developing skills which address individual learning differences.

.**Performance Standard 5: Assessment Strategies**
The teacher systematically chooses a variety of diagnostic, formative, and summative assessment strategies and instruments that are valid and appropriate for the content and student population

Sample Performance Indicators
Examples may include, but are not limited to:

The teacher:

5.1 Aligns student assessment with the established curriculum and benchmarks.

5.2 Involves students in setting learning goals and monitoring their own progress.

5.3 Varies and modifies assessments to determine individual student needs and progress.

5.4 Identifies and uses formal and informal assessments for diagnostic, formative, and summative purposes.

5.5 Uses grading practices that report final mastery in relationship to content goals and objectives.

5.6. Uses assessment techniques that are appropriate for the developmental level of students.

5.7 Collaborates with others to develop common assessments, when appropriate.

Contemporary Effective Teacher Research
Contemporary research has found that an effective teacher:
♦ Offers regular, timely, and specific feedback[17] and reinforcement.[18]
♦ Gives homework and offers feedback on the homework.[19]
♦ Uses open-ended performance assignments.[20]

Exemplary *In addition to meeting the requirements for Proficient…*	Proficient *Proficient is the expected level of performance.*	Needs Development	Ineffective
The teacher continually demonstrates expertise and leads others to determine and develop a variety of strategies and instruments that are valid and appropriate for the content and student population and guides students to monitor and reflect on their own academic progress. *(Teachers rated as Exemplary continually seek ways to serve as role models or teacher leaders.)*	The teacher systematically and consistently chooses a variety of diagnostic, formative, and summative assessment strategies and instruments that are valid and appropriate for the content and student population.	The teacher inconsistently chooses a variety of diagnostic, formative, and summative assessment strategies **or** the instruments are sometimes not appropriate for the content or student population.	The teacher chooses an inadequate variety of diagnostic, formative, and summative assessment strategies **or** the instruments are not appropriate for the content or student population.

Performance Standard 6: Assessment Uses
The teacher systematically gathers, analyzes, and uses relevant data to measure student progress, to inform instructional content and delivery methods, and to provide timely and constructive feedback to both students and parents.

Sample Performance Indicators
Examples may include, but are not limited to:

The teacher:

6.1 Uses diagnostic assessment data to develop learning goals for students, to differentiate instruction, and to document learning.

6.2 Plans a variety of formal and informal assessments aligned with instructional results to measure student mastery of learning objectives.

6.3 Uses assessment tools for both formative and summative purposes to inform, guide, and adjust instruction.

6.4 Systematically analyzes and uses data to measure student progress, to design appropriate interventions, and to inform long- and short-term instructional decisions.

6.5 Shares accurate results of student progress with students, parents, and key school personnel.

6.6 Provides constructive and frequent feedback to students on their progress toward their learning goals.

6.7 Teaches students how to self-assess and to use metacognitive strategies in support of lifelong learning.

Contemporary Effective Teacher Research

Contemporary research has found that an effective teacher:

♦ Analyzes student assessments to determine the degree to which the intended learning outcomes align with the test items and student understanding of objectives.[21]

♦ Interprets information from teacher-made tests and standardized assessments to guide instruction and gauge student progress by examining questions missed to determine if the student has trouble with the content or the test structure.[22]

Exemplary *In addition to meeting the requirements for Proficient…*	Proficient *Proficient is the expected level of performance.*	Needs Development	Ineffective
The teacher continually demonstrates expertise in using data to measure student progress and leads others in the effective use of data to inform instructional decisions. (*Teachers rated as Exemplary continually seek ways to serve as role models or teacher leaders.*)	The teacher systematically and consistently gathers, analyzes, and uses relevant data to measure student progress, to inform instructional content and delivery methods, and to provide timely and constructive feedback to both students and parents.	The teacher inconsistently gathers, analyzes, or uses relevant data to measure student progress, inconsistently uses data to inform instructional content and delivery methods, **or** inconsistently provides timely or constructive feedback.	The teacher does not gather, analyze, or use relevant data to measure student progress, to inform instructional content and delivery methods, **or** to provide feedback in a constructive or timely manner.

Performance Standard 7: Positive Learning Environment
The teacher provides a well-managed, safe, and orderly environment that is conducive to learning and encourages respect for all.

Sample Performance Indicators

Examples may include, but are not limited to:

The teacher:

7.1 Responds to disruptions in a timely, appropriate manner.

7.2 Establishes clear expectations for classroom rules, routines, and procedures and enforces them consistently and appropriately.

7.3 Models caring, fairness, respect, and enthusiasm for learning.

7.4 Promotes a climate of trust and teamwork within the classroom.

7.5 Promotes respect for and understanding of students' diversity, including – but not limited to – race, color, religion, sex, national origin, or disability.

7.6 Actively listens and pays attention to students' needs and responses.

7.7 Creates a warm, attractive, inviting, and supportive classroom environment.

7.8 Arranges the classroom materials and resources to facilitate group and individual activities.

Contemporary Effective Teacher Research

Contemporary research has found that an effective teacher:
- Cares about students as individuals and makes them feel valued.[23]
- Acknowledges his or her perspective and is open to hearing their students' worldviews.[24]
- Is culturally competent.[25]
- Seeks to know about the cultures and communities from which students come.[26]

Exemplary *In addition to meeting the requirements for Proficient…*	Proficient *Proficient is the expected level of performance.*	Needs Development	Ineffective
The teacher continually engages students in a collaborative and self-directed learning environment where students are encouraged to take risks and ownership of their own learning behavior. (*Teachers rated as Exemplary continually seek ways to serve as role models or teacher leaders.*)	The teacher consistently provides a well-managed, safe, and orderly environment that is conducive to learning and encourages respect for all.	The teacher-inconsistently provides a well-managed, safe, **and** orderly environment that is conducive to learning and encourages respect for all.	The teacher inadequately addresses student behavior, displays a negative attitude toward students, ignores safety standards, **or** does not otherwise provide an orderly environment that is conducive to learning or encourages respect for all.

Performance Standard 8: Academically Challenging Environment
The teacher creates a student-centered, academic environment in which teaching and learning occur at high levels and students are self-directed learners.

Sample Performance Indicators
Examples may include, but are not limited to:

The teacher:

8.1 Maximizes instructional time.

8.2 Conveys the message that mistakes should be embraced as a valuable part of learning.

8.3 Encourages productivity by providing students with appropriately challenging and relevant material and assignments.

8.4 Provides transitions that minimize loss of instructional time.

8.5 Communicates high, but reasonable, expectations for student learning.

8.6 Provides academic rigor, encourages critical and creative thinking, and pushes students to achieve goals.

8.7 Encourages students to explore new ideas and take academic risks.

Contemporary Effective Teacher Research
Contemporary research has found that an effective teacher:

♦ Adapts teaching to address student learning styles.[27]

♦ Implements good classroom management with an ultimate purpose of establishing and maintaining an environment conducive to instruction and learning.[28]

♦ Conveys high expectations to students.[29]

Exemplary *In addition to meeting the requirements for Proficient…*	Proficient *Proficient is the expected level of performance.*	Needs Development	Ineffective
The teacher continually creates an academic learning environment where students are encouraged to set challenging learning goals and tackle challenging materials. (*Teachers rated as Exemplary continually seek ways to serve as role models or teacher leaders.*)	The teacher consistently creates a student-centered, academic environment in which teaching and learning occur at high levels and students are self-directed learners.	The teacher inconsistently provides a student-centered, academic environment in which teaching and learning occur at high levels **or** where students are self-directed learners.	The teacher does not provide a student-centered, academic environment in which teaching and learning occur at high levels, **or** where students are self-directed learners.

Performance Standard 9: Professionalism
The teacher exhibits a commitment to professional ethics and the school's mission, participates in professional growth opportunities to support student learning, and contributes to the profession.

Sample Performance Indicators
Examples may include, but are not limited to:

The teacher:

9.1 Carries out duties in accordance with federal and state laws, Code of Ethics, and established state and local school board policies, regulations, and practices.

9.2 Maintains professional demeanor and behavior (*e.g.,* appearance, punctuality and attendance).

9.3 Respects and maintains confidentiality.

9.4 Evaluates and identifies areas of personal strengths and weaknesses related to professional skills and their impact on student learning and sets goals for improvement.

9.5 Participates in ongoing professional growth activities based on identified areas for improvement (*e.g.,* mentoring, peer coaching, course work, conferences) and incorporates learning into classroom activities.

9.6 Demonstrates flexibility in adapting to school change.

9.7 Engages in activities outside the classroom intended for school and student enhancement.

Contemporary Effective Teacher Research

Contemporary research has found that an effective teacher:

- Recognizes levels of involvement, ranging from networking to collaboration.[30]
- Encourages linking professional growth goals to professional development opportunities.[31]
- Encourages cognizance of the legal issues associated with educational records, and respects and maintains confidentiality. [32]

Exemplary *In addition to meeting the requirements for Proficient…*	**Proficient** *Proficient is the expected level of performance.*	**Needs Development**	**Ineffective**
The teacher continually engages in a high level of professional growth and application of skills and contributes to the development of others and the well-being of the school and community. *(Teachers rated as Exemplary continually seek ways to serve as role models or teacher leaders.)*	The teacher consistently exhibits a commitment to professional ethics and the school's mission, participates in professional growth opportunities to support student learning, and contributes to the profession.	The teacher inconsistently supports the school's mission **or** seldom participates in professional growth opportunities.	The teacher shows a disregard toward professional ethics **or** the school's mission **or** rarely takes advantage of professional growth opportunities.

Across all levels, teachers are expected to abide by the Code of Ethics
(http://www.gapsc.com/Rules/Current/Ethics/505-6-.01.pdf).

Performance Standard 10: Communication
The teacher communicates effectively with students, parents or guardians, district and school personnel, and other stakeholders in ways that enhance student learning.

Sample Performance Indicators
Examples may include, but are not limited to:

The teacher:

10.1 Uses verbal and non-verbal communication techniques to foster positive interactions and promote learning in the classroom and school environment.

10.2 Engages in ongoing communication and shares instructional goals, expectations, and student progress with families in a timely and constructive manner.

10.3 Collaborates and networks with colleagues and community to reach educational decisions that enhance and promote student learning.

10.4 Uses precise language, correct vocabulary and grammar, and appropriate forms of oral and written communication.

10.5 Explains directions, concepts, and lesson content to students in a logical, sequential, and age-appropriate manner.

10.6 Adheres to school and district policies regarding communication of student information.

10.7 Creates a climate of accessibility for parents and students by demonstrating a collaborative and approachable style.

10.8 Listens and responds with cultural awareness, empathy, and understanding to the voice and opinions of stakeholders (parents, community, students, and colleagues).

10.9 Uses modes of communication that are appropriate for a given situation.

Contemporary Effective Teacher Research

Contemporary research has found that an effective teacher:
- Recognizes the levels of involvement, ranging from networking to collaboration.[33]
- Uses multiple forms of communication between school and home.[34]
- Acknowledges his or her perspective and is open to hearing their students' worldviews.[35]
- Is culturally competent.[36]
- Seeks to know about the cultures and communities from which students come.[37]

Exemplary *In addition to meeting the requirements for Proficient…*	Proficient *Proficient is the expected level of performance.*	Needs Development	Ineffective
The teacher continually uses communication techniques in a variety of situations to proactively inform, network, and collaborate with stakeholders to enhance student learning. *(Teachers rated as Exemplary continually seek ways to serve as role models or teacher leaders.)*	The teacher communicates effectively and consistently with students, parents or guardians, district and school personnel, and other stakeholders in ways that enhance student learning.	The teacher inconsistently communicates with students, parents or guardians, district and school personnel or other stakeholders **or** communicates in ways that only partially enhance student learning.	The teacher inadequately communicates with students, parents or guardians, district and school personnel, or other stakeholders by poorly acknowledging concerns, responding to inquiries, or encouraging involvement.

APPENDIX II

TKES
Evaluation Cycle
Documents
and
Templates

GaDOE TLE Electronic Platform Quick Reference Guide

Self-Assessment
Pre-Evaluation Conference

Walkthrough
Formative Assessment

District SLO Statement
Teacher SLO Implementation Plan

Mid-Year Conference

Summative Assessment
Summative Conference

Professional Development Plan
Additional Conferences

GaDOE TLE Electronic Platform Reports

Overview of the Teacher Keys Effectiveness System Evaluation Cycle Documents

The following forms and tools are provided in the Appendix II and in the GaDOE TLE Electronic Platform.

TEACHER ASSESSMENT ON PERFORMANCE STANDARD	
GaDOE TLE Electronic Platform Quick Reference Guide	The document provides the users of the GaDOE Electronic Platform with directions and screen shots of the containers and steps for the TKES processes.
Self-Assessment Form	The required template is to be used by the teacher to reflect on areas of strength and growth related to each standard and completes a Self-Assessment. Teacher shares Self-Assessment with the evaluator.
Pre-Evaluation Conference	The required template is to be used for conference conducted with small groups or individuals. The evaluator and teacher contribute to conference content, including a review of the Self-Assessment, student growth data, or other TKES processes.
Walkthrough and Formative Assessment	The required template is to be used by evaluators to record evidence for each standard from observations and documentation provided by teachers. From these two sources, evaluators will complete ratings on each standard for the two required formative assessments on the *Formative Assessment* from September thru April. Evaluators will also complete ratings for designated standards during the four required walkthroughs on the *Formative Assessment.*
Student Learning Objective (SLO) Teacher Implementation Plan	The required plan is an editable template and MUST be completed after pre-assessment data is compiled. This form will be accessed through the District SLO statement and should serve as a framework for compiling the needed information.
Mid-Year Conference	The required template is to be used for conferences conducted with small groups or individuals. Evaluator and teacher contribute to conference content including documentation and performance for ten standards, review of student growth data or other TKES processes.
Summative Assessment	The required template is to be used by evaluators to provide teachers with summative ratings on each of the performance standards and the overall TAPS score. Evaluators will be required to complete the *Summative Assessment Report* Form by May 15, 2014.
Summative Conference	The required template is to be used for a required individual conference. Evaluator and teacher acknowledge the summative assessment and contribute to conference content including review of the summative assessment ratings, survey data, student growth data, or other TKES processes.

Additional Conferences	The optional form can be used to record the oral counsel that occurs between an evaluator and teacher. The evaluator and teacher contribute to the content of the conference.
Professional Development Plan	The template provides guidelines and timelines for specific, mandatory professional learning which supports immediate improvement of teacher practice and increased teacher effectiveness.
GaDOE TLE Electronic Platform Reports	Evaluators may access the TKES reports for use in monitoring the progress of the implementation plan.

Appendix III

TKES

Resources

TAPS Standards and Indicators Reference Sheet

TAPS Standards and Performance Appraisal Rubrics Reference Sheet

Examples of Documentation Evidence

Student Learning Objectives Operations Manual

Student Learning Objective "The Basics for Classroom Teachers"

Student Learning Objective "A Guide for Principals"

Student Learning Objective "A Guide for District Leadership"

Student Learning Objectives (SLO)
List of Courses with Assessment Support

Student Learning Objectives (SLO)
Public Domain Assessments

Effective Teacher and Principal Induction Programs

TKES and LKES Professional
Learning Resources

Overview of the Teacher Keys Effectiveness System Resources

The following TKES resources are provided in the Appendix III and in the GaDOE TLE Electronic Platform.

TEACHER ASSESSMENT ON PERFORMANCE STANDARDS	
TAPS Performance Standards and Indicators Reference Sheet	The document is a summary of the performance standards and indicators for use by teachers and evaluators throughout the evaluation cycle of observations and assessments.
TAPS Performance Standards Appraisal Rubrics Reference Sheet	The document is a summary of the performance standards and indicators for use by teachers and evaluators throughout the evaluation cycle of observations and assessments.
Examples of Documentation Evidence	Evaluators may request documentation from teachers when a standard is not observed during an announced or unannounced observation. The examples in the document will provide ideas that may be helpful when further documentation is needed.
Student Learning Objective "The Basics for Classroom Teachers"	The document provides vital information for the teacher in working with the implementation of Student Learning Objectives (SLO) in the classroom.
Student Learning Objective "A Guide for Principals"	The document provides vital information for the principals in working with the implementation of Student Learning Objectives (SLO) in the school.
Student Learning Objective "A Guide for District Leadership"	The document provides vital information for the district leadership in working with the implementation of Student Learning Objectives (SLO) in the school district.
Student Learning Objectives (SLO) List of Courses with Assessment Support	The document provides a list of courses with assessment support in the Item Bank resources that are available to school districts through GaDOE.
Student Learning Objectives (SLO) Public Domain Assessments	The document provides a list of 52 Public Domain Assessments available to school districts through the GaDOE.

Effective Teacher and Principal Induction Programs	The document provides resources for quality induction programs to support induction phase teacher and principal learning, retention, and student growth/achievement.
TKES and LKES Professional Learning Resources	The document provides information about a variety of professional learning resources located in the GaDOE TLE Electronic Platform. The resources will provide additional guidance in understanding the critical information that assists in mastering the implementation of TKES.

Teacher Assessment on Performance Standards (TAPS) Reference Performance Standards and SAMPLE Performance Indicators
(Performance indicators are not inclusive and should not be used as a checklist.)

1. Professional Knowledge: *The teacher demonstrates an understanding of the curriculum, subject content, pedagogical knowledge, and the needs of students by providing relevant learning experiences.*

1.1 Addresses appropriate curriculum standards and integrates key content elements.
1.2 Facilitates students' use of higher-level thinking skills in instruction.
1.3 Demonstrates ability to link present content with past and future learning experiences, other subject areas, and real-world experiences and applications.
1.4 Demonstrates accurate, deep, and current knowledge of subject matter.
1.5 Exhibits pedagogical skills relevant to the subject area(s) taught and best practice based on current research.
1.6 Bases instruction on goals that reflect high expectations for all students and a clear understanding of the curriculum.
1.7 Displays an understanding of the intellectual, social, emotional, and physical development of the age group.

2. Instructional Planning: *The teacher plans using, state and local school district curricula and standards, effective strategies, resources, and data to address the differentiated needs of all students.*

2.1 Analyzes and uses student learning data to inform planning.
2.2 Develops plans that are clear, logical, sequential, and integrated across the curriculum (e.g., long-term goals, lesson plans, and syllabi).
2.3 Plans instruction effectively for content mastery, pacing, and transitions.
2.4 Plans for differentiated instruction.
2.5 Aligns and connects lesson objectives to state and local school district curricula and standards, and student learning needs.
2.6 Develops appropriate course, unit, and daily plans, and is able to adapt plans when needed.

3. Instructional Strategies: *The teacher promotes student learning by using research-based instructional strategies relevant to the content to engage students in active learning and to facilitate the students' acquisition of key knowledge and skills.*

3.1 Engages students in active learning and maintains interest.
3.2 Builds upon students' existing knowledge and skills.
3.3 Reinforces learning goals consistently throughout the lesson.
3.4 Uses a variety of research-based instructional strategies and resources.
3.5 Effectively uses appropriate instructional technology to enhance student learning.
3.6 Communicates and presents material clearly, and checks for understanding.
3.7 Develops higher-order thinking through questioning and problem-solving activities.
3.8 Engages students in authentic learning by providing real-life examples and interdisciplinary connections.

4. Differentiated Instruction: *The teacher challenges and supports each student's learning by providing appropriate content and developing skills which address individual learning differences.*

4.1 Differentiates the instructional content, process, product, and learning environment to meet individual developmental needs.
4.2 Provides remediation, enrichment, and acceleration to further student understanding of material.
4.3 Uses flexible grouping strategies to encourage appropriate peer interaction and to accommodate learning needs/goals.
4.4 Uses diagnostic, formative, and summative assessment data to inform instructional modifications for individual students.
4.5 Develops critical and creative thinking by providing activities at the appropriate level of challenge for students.
4.6 Demonstrates high learning expectations for all students commensurate with their developmental levels.

5. Assessment Strategies: *The teacher systematically chooses a variety of diagnostic, formative, and summative assessment strategies and instruments that are valid and appropriate for the content and student population.*

5.1 Aligns student assessment with the established curriculum and benchmarks.
5.2 Involves students in setting learning goals and monitoring their own progress.
5.3 Varies and modifies assessments to determine individual student needs and progress.
5.4 Uses formal and informal assessments for diagnostic, formative, and summative purposes.
5.5 Uses grading practices that report final mastery in relationship to content goals and objectives.
5.6 Uses assessment techniques that are appropriate for the developmental level of students.
5.7 Collaborates with others to develop common assessments, when appropriate.

6. **Assessment Uses:** *The teacher systematically gathers, analyzes, and uses relevant data to measure student progress, to inform instructional content and delivery methods, and to provide timely and constructive feedback to both students and parents.*

6.1 Uses diagnostic assessment data to develop learning goals for students, to differentiate instruction, and to document learning.

6.2 Plans a variety of formal and informal assessments aligned with instructional results to measure student mastery of learning objectives.

6.3 Uses assessment tools for both formative and summative purposes to inform, guide, and adjust instruction.

6.4 Systematically analyzes and uses data to measure student progress, to design appropriate interventions, and to inform long- and short-term instructional decisions.

6.5 Shares accurate results of student progress with students, parents, and key school personnel.

6.6 Provides constructive and frequent feedback to students on their progress toward their learning goals.

6.7 Teaches students how to self-assess and to use metacognitive strategies in support of lifelong learning.

7. **Positive Learning Environment:** *The teacher provides a well-managed, safe, and orderly environment that is conducive to learning and encourages respect for all.*

7.1 Responds to disruptions in a timely, appropriate manner.

7.2 Establishes clear expectations for classroom rules, routines, and procedures and enforces them consistently and appropriately.

7.3 Models caring, fairness, respect, and enthusiasm for learning.

7.4 Promotes a climate of trust and teamwork within the classroom.

7.5 Promotes respect for and understanding of students' diversity, including – but not limited to – race, color, religion, sex, national origin, or disability.

7.6 Actively listens and pays attention to students' needs and responses.

7.7 Creates a warm, attractive, inviting, and supportive classroom environment.

7.8 Arranges the classroom materials and resources to facilitate group and individual activities.

8. **Academically Challenging Environment:** *The teacher creates a student-centered, academic environment in which teaching and learning occur at high levels and students are self-directed learners.*

8.1 Maximizes instructional time.

8.2 Conveys the message that mistakes should be embraced as a valuable part of learning.

8.3 Encourages productivity by providing students with appropriately challenging and relevant material and assignments.

8.4 Provides transitions that minimize loss of instructional time.

8.5 Communicates high, but reasonable, expectations for student learning.

8.6 Provides academic rigor, encourages critical and creative thinking, and pushes students to achieve goals.

8.7 Encourages students to explore new ideas and take academic risks.

9. **Professionalism:** *The teacher exhibits a commitment to professional ethics and the school's mission, participates in professional growth opportunities to support student learning, and contributes to the profession.*

9.1 Carries out duties in accordance with federal and state laws, Code of Ethics, and established state and local school board policies, regulations, and practices.

9.2 Maintains professional demeanor and behavior (*e.g.,* appearance, punctuality and attendance).

9.3 Respects and maintains confidentiality.

9.4 Evaluates and identifies areas of personal strengths and weaknesses related to professional skills and their impact on student learning and sets goals for improvement.

9.5 Participates in ongoing professional growth activities based on identified areas for improvement (*e.g.,* mentoring, peer coaching, course work, conferences) and incorporates learning into classroom activities.

9.6 Demonstrates flexibility in adapting to school change.

9.7 Engages in activities outside the classroom intended for school and student enhancement.

10. **Communication:** *The teacher communicates effectively with students, parents or guardians, district and school personnel, and other stakeholders in ways that enhance student learning.*

10.1 Uses verbal and non-verbal communication techniques to foster positive interactions and promote learning in the classroom and school environment.

10.2 Engages in ongoing communication and shares instructional goals, expectations, and student progress with families in a timely and constructive manner.

10.3 Collaborates and networks with colleagues and community to reach educational decisions that enhance and promote student learning.

10.4 Uses precise language, correct vocabulary and grammar, and appropriate forms of oral and written communication.

10.5 Explains directions, concepts, and lesson content to students in a logical, sequential, and age-appropriate manner.

10.6 Adheres to school and district policies regarding communication of student information.

10.7 Creates a climate of accessibility for parents and students by demonstrating a collaborative and approachable style.

10.8 Listens and responds with cultural awareness, empathy, and understanding to the voice and opinions of stakeholders (parents, community, students, and colleagues).

10.9 Uses modes of communication that are appropriate for a given situation.

Teacher Assessment on Performance Standards (TAPS) Performance Standards and Performance Appraisal Rubrics

Performance Standard 1: Professional Knowledge
The teacher demonstrates an understanding of the curriculum, subject content, pedagogical knowledge, and the needs of students by providing relevant learning experiences.

Exemplary *In addition to meeting the requirements for Proficient…*	Proficient *Proficient is the expected level of performance.*	**Needs Development**	**Ineffective**
The teacher continually demonstrates extensive content and pedagogical knowledge, enriches the curriculum, and guides others in enriching the curriculum. *(Teachers rated as Exemplary continually seek ways to serve as role models or teacher leaders.)*	The teacher consistently demonstrates an understanding of the curriculum, subject content, pedagogical knowledge, and the needs of students by providing relevant learning experiences.	The teacher inconsistently demonstrates understanding of curriculum, subject content, pedagogical knowledge, and student needs, **or** lacks fluidity in using the knowledge in practice.	The teacher inadequately demonstrates understanding of curriculum, subject content, pedagogical knowledge and student needs, **or** does not use the knowledge in practice.

Performance Standard 2: Instructional Planning
The teacher plans using state and local school district curricula and standards, effective strategies, resources, and data to address the differentiated needs of all students.

Exemplary *In addition to meeting the requirements for Proficient…*	Proficient *Proficient is the expected level of performance.*	**Needs Development**	**Ineffective**
The teacher continually seeks and uses multiple data and real world resources to plan differentiated instruction to meet the individual student needs and interests in order to promote student accountability and engagement. *(Teachers rated as Exemplary continually seek ways to serve as role models or teacher leaders.)*	The teacher consistently plans using state and local school district curricula and standards, effective strategies, resources, and data to address the differentiated needs of all students.	The teacher inconsistently uses state and local school district curricula and standards, or inconsistently uses effective strategies, resources, or data in planning to meet the needs of all students.	The teacher does not plan, or plans without adequately using state and local school district curricula and standards, or without using effective strategies, resources, or data to meet the needs of all students.

Performance Standard 3: Instructional Strategies
The teacher promotes student learning by using research-based instructional strategies relevant to the content to engage students in active learning and to facilitate the students' acquisition of key knowledge and skills.

Exemplary *In addition to meeting the requirements for Proficient…*	Proficient *Proficient is the expected level of performance.*	Needs Development	Ineffective
The teacher continually facilitates students' engagement in metacognitive learning, higher-order thinking skills, and application of learning in current and relevant ways. *(Teachers rated as Exemplary continually seek ways to serve as role models or teacher leaders.)*	The teacher consistently promotes student learning by using research-based instructional strategies relevant to the content to engage students in active learning, and to facilitate the students' acquisition of key skills.	The teacher inconsistently uses research-based instructional strategies. The strategies used are sometimes not appropriate for the content area or for engaging students in active learning or for the acquisition of key skills.	The teacher does not use research-based instructional strategies, nor are the instructional strategies relevant to the content area. The strategies do not engage students in active learning or acquisition of key skills.

Performance Standard 4: Differentiated Instruction
The teacher challenges and supports each student's learning by providing appropriate content and developing skills which address individual learning differences.

Exemplary *In addition to meeting the requirements for Proficient…*	Proficient *Proficient is the expected level of performance.*	Needs Development	Ineffective
The teacher continually facilitates each student's opportunities to learn by engaging him/her in critical and creative thinking and challenging activities tailored to address individual learning needs and interests. *(Teachers rated as Exemplary continually seek ways to serve as role models or teacher leaders.)*	The teacher consistently challenges and supports each student's learning by providing appropriate content and developing skills which address individual learning differences.	The teacher inconsistently challenges students by providing appropriate content or by developing skills which address individual learning differences.	The teacher does not challenge students by providing appropriate content or by developing skills which address individual learning differences.

Performance Standard 5: Assessment Strategies
The teacher systematically chooses a variety of diagnostic, formative, and summative assessment strategies and instruments that are valid and appropriate for the content and student population.

Exemplary *In addition to meeting the requirements for Proficient…*	Proficient *Proficient is the expected level of performance.*	Needs Development	Ineffective
The teacher continually demonstrates expertise and leads others to determine and develop a variety of strategies and instruments that are valid and appropriate for the content and student population and guides students to monitor and reflect on their own academic progress. *(Teachers rated as Exemplary continually seek ways to serve as role models or teacher leaders.)*	The teacher systematically and consistently chooses a variety of diagnostic, formative, and summative assessment strategies and instruments that are valid and appropriate for the content and student population.	The teacher inconsistently chooses a variety of diagnostic, formative, and summative assessment strategies or the instruments are sometimes not appropriate for the content or student population.	The teacher chooses an inadequate variety of diagnostic, formative, and summative assessment strategies or the instruments are not appropriate for the content or student population.

Georgia Department of Education
Teacher Keys Effectiveness System

Performance Standard 6: Assessment Uses
The teacher systematically gathers, analyzes, and uses relevant data to measure student progress, to inform instructional content and delivery methods, and to provide timely and constructive feedback to both students and parents.

| Exemplary
In addition to meeting the requirements for Proficient… | Proficient
Proficient is the expected level of performance. | Needs Development | Ineffective |
| --- | --- | --- | --- |
| The teacher continually demonstrates expertise in using data to measure student progress and leads others in the effective use of data to inform instructional decisions. (*Teachers rated as Exemplary continually seek ways to serve as role models or teacher leaders.*) | The teacher systematically and consistently gathers, analyzes, and uses relevant data to measure student progress, to inform instructional content and delivery methods, and to provide timely and constructive feedback to both students and parents. | The teacher inconsistently gathers, analyzes, or uses relevant data to measure student progress, inconsistently uses data to inform instructional content and delivery methods, or inconsistently provides timely or constructive feedback. | The teacher does not gather, analyze, or use relevant data to measure student progress, to inform instructional content and delivery methods, or to provide feedback in a constructive or timely manner. |

Performance Standard 7: Positive Learning Environment
The teacher provides a well-managed, safe, and orderly environment that is conducive to learning and encourages respect for all.

| Exemplary
In addition to meeting the requirements for Proficient… | Proficient
Proficient is the expected level of performance. | Needs Development | Ineffective |
| --- | --- | --- | --- |
| The teacher continually engages students in a collaborative and self-directed learning environment where students are encouraged to take risks and ownership of their own learning behavior. (*Teachers rated as Exemplary continually seek ways to serve as role models or teacher leaders.*) | The teacher consistently provides a well-managed, safe, and orderly environment that is conducive to learning and encourages respect for all. | The teacher inconsistently provides a well-managed, safe, and orderly environment that is conducive to learning and encourages respect for all. | The teacher inadequately addresses student behavior, displays a negative attitude toward students, ignores safety standards, or does not otherwise provide an orderly environment that is conducive to learning or encourages respect for all. |

Performance Standard 8: Academically Challenging Environment
The teacher creates a student-centered, academic environment in which teaching and learning occur at high levels and students are self-directed learners.

| Exemplary
In addition to meeting the requirements for Proficient… | Proficient
Proficient is the expected level of performance. | Needs Development | Ineffective |
| --- | --- | --- | --- |
| The teacher continually creates an academic learning environment where students are encouraged to set challenging learning goals and tackle challenging materials. (*Teachers rated as Exemplary continually seek ways to serve as role models or teacher leaders.*) | The teacher consistently creates a student-centered, academic environment in which teaching and learning occur at high levels and students are self-directed learners. | The teacher inconsistently provides a student-centered, academic environment in which teaching and learning occur at high levels or where students are self-directed learners. | The teacher does not provide a student-centered, academic environment in which teaching and learning occur at high levels, or where students are self-directed learners. |

Performance Standard 9: Professionalism
The teacher exhibits a commitment to professional ethics and the school's mission, participates in professional growth opportunities to support student learning, and contributes to the profession.

| Exemplary
In addition to meeting the requirements for Proficient… | Proficient
Proficient is the expected level of performance. | Needs Development | Ineffective |
| --- | --- | --- | --- |
| The teacher continually engages in a high level of professional growth and application of skills and contributes to the development of others and the well-being of the school and community. (*Teachers rated as Exemplary continually seek ways to serve as role models or teacher leaders.*) | The teacher consistently exhibits a commitment to professional ethics and the school's mission, participates in professional growth opportunities to support student learning, and contributes to the profession. | The teacher inconsistently supports the school's mission or seldom participates in professional growth opportunities. | The teacher shows a disregard toward professional ethics or the school's mission or rarely takes advantage of professional growth opportunities. |

Performance Standard 10: Communication
The teacher communicates effectively with students, parents or guardians, district and school personnel, and other stakeholders in ways that enhance student learning.

| Exemplary
In addition to meeting the requirements for Proficient… | Proficient
Proficient is the expected level of performance. | Needs Development | Ineffective |
| --- | --- | --- | --- |
| The teacher continually uses communication techniques in a variety of situations to proactively inform, network, and collaborate with stakeholders to enhance student learning. (*Teachers rated as Exemplary continually seek ways to serve as role models or teacher leaders.*) | The teacher communicates effectively and consistently with students, parents or guardians, district and school personnel, and other stakeholders in ways that enhance student learning. | The teacher inconsistently communicates with students, parents or guardians, district and school personnel, or other stakeholders or communicates in ways that only partially enhance student learning. | The teacher inadequately communicates with students, parents or guardians, district and school personnel, or other stakeholders by poorly acknowledging concerns, responding to inquiries, or encouraging involvement. |

Examples of Documentation Evidence

Evaluators may request documentation from teachers when a standard is not observed during an announced or unannounced observation. The examples below will provide ideas that may be helpful when covering further documentation. This is not a comprehensive list of examples and should not be used as a checklist. Documentation may also need to be supplemented with conversation, discussion, and/or annotations to clarify the teacher's practice and process.

Standards	Examples of Documentation
1. Professional Knowledge	• Summary of a plan for integrating instruction • Class profile • Annotated list of instructional activities for a unit • Annotated photographs of teacher-made displays used in instruction • Annotated samples or photographs of instructional materials created by the teacher • Lesson/intervention plan (including goals and objectives, activities, resources, and assessment measures)
2. Instructional Planning	• Course Syllabus • Lesson Plan • Intervention Plan • Team/Department Meeting Minutes • Substitute Lesson Plan
3. Instructional Strategies	• Samples of handouts/presentation visuals • Technology samples on disk • Video of teacher using various instructional strategies
4. Differentiated Instruction	• Summary of consultation with appropriate staff members regarding special needs of individual students • Samples of extension or remediation activities • Video or annotated photographs of class working on differentiated activities • Video of teacher instructing various groups at different levels of challenge
5. Assessment Strategies	• Copy of teacher-made tests and other assessment measures • Copy of scoring rubric used for a student project • Summary explaining grading procedures
6. Assessment Uses	• Brief report describing record-keeping system and how it is used to monitor student academic progress • Photocopies or photographs of student work with written comments • Samples of educational reports, progress reports, or letters prepared for parents or students
7. Positive Learning Environment	• List of classroom rules with a brief explanation of the procedures used to develop and reinforce them • Diagram of the classroom with identifying comments • Schedule of daily classroom routines • Explanation of behavior management philosophy and procedures

8. Academically Challenging Environment	• Samples of materials used to challenge students • Samples of materials used to encourage creative and critical thinking • Video of lesson with students problem-solving challenging problems
9. Professionalism	• Documentation of presentations given • Certificates or other documentation from professional development activities completed (*e.g.,* workshops, conferences, official transcripts from courses, etc.) • Thank you letter for serving as a mentor, cooperating teacher, school leader, volunteer, etc. • Reflection on personal goals
10. Communication	• Samples of communication with students explaining expectations • Parent communication log • Sample of email concerning student progress • Sample of introductory letter to parents/guardians • Sample of communication with peers

Dr. John D. Barge, State School Superintendent
"Making Education Work for All Georgians"

Student Learning Objectives

As Measures for Educator Effectiveness

Student Learning Objectives Operations Manual

Student Learning Objectives "*A Guide for District Leadership*"

Student Learning Objectives "*A Guide for Principals*"

Student Learning Objectives "*The Basics for Classroom Teacher*"

List of Courses with Assessment Supports

Summary of the Tools and Resources available from GaDOE
(Yellow indicates courses represented in both the PDAs and item bank.)

2012-2013 Public Domain Assessments	2013-2014 Item Bank Development
Collaboratively developed assessments were developed for the following "Phase II" courses in the Spring of 2012. If desired, districts may choose to use any of these assessments in their entirety, or may choose items from the assessment to use for their own locally created assessments. All assessments and items should be reviewed carefully by districts to ensure they meet district expectations and needs.	A variety of items (questions, tasks, etc) were developed by teacher teams for the following courses. Districts may choose to use any of the items as they develop their own assessments to measure SLOs in their district. All items should be reviewed carefully by districts to ensure they meet district expectations and needs.
Elementary Reading and Math	**HS ELA**
Pre-K Literacy	23.0340000: Advanced Composition
Pre-K Numeracy	23.0520000: British Literature / Composition
23.0011: Reading / 23.0010000: Language Arts / Gr K	23.0620000: Tenth Grade Literature / Composition
23.0012: Reading / 23.0020000: Language Arts / Gr 1	23.0630000: World Literature / Composition
23.0013: Reading / 23.0030000: Language Arts / Gr 2	**HS Science**
23.0014: Reading / 23.0040000: Language Arts / Gr 3	40.0510000: Chemistry I
27.0110000: Mathematics / Gr K	40.0810000: Physics I
27.0120000: Mathematics / Gr 1	26.0611000: Environmental Science
27.0130000: Mathematics / Gr 2	26.0730000: Human Anatomy / Physiology
27.0140000: Mathematics / Gr 3	40.0930000: Forensic Science
HS English	26.0610000: Ecology
23.0320000: Journalism I	26.0150000: Genetics
23.0330000: Journalism II	**HS Math**
23.0340000: Advanced Composition	27.0710000: Calculus
23.0520000: British Literature / Composition	27.0830000: Mathematics III - Advanced Algebra / Statistics
23.0620000: Tenth Grade Literature / Composition	27.0850000: Advanced Mathematical Decision Making
23.0630000: World Literature / Composition	27.0870000: Mathematics of Finance
HS Science	27.0840000: Mathematics IV - Pre-Calculus - Trigonometry/Statistics
26.0130000: Biology II (Grade 9-12)	**HS Social Studies**
26.0611000: Environmental Science	45.0150000: Psychology
26.0710000: Zoology	45.0570000: American Government / Civics
26.0730000: Human Anatomy / Physiology	45.0711000: World Geography
40.0510000: Chemistry I	45.0830000: World History
40.0520000: Chemistry II	**Foreign Language**
40.0640000: Earth Systems	60.0110000: French I
40.0810000: Physics I	60.0710000: Spanish I
40.0820000: Physics II	60.0720000: Spanish II
HS Math	60.0120000: French II
27.0624: GPS Pre-Calculus	60.0740000: Spanish IV
27.0710000: Calculus	61.0410000: Latin I
27.0830000: Mathematics III - Advanced Algebra / Statistics	61.0120000: German II
27.0840000: Mathematics IV - Pre-Calculus - Trigonometry/Statistics	62.0110000: Chinese I

HS Social Studies	Physical Education
45.0150000: Psychology	**36.0010000: Physical Education / Grade K**
45.0310000: Sociology	**36.0020000: Physical Education / Grade 1**
45.0570000: American Government / Civics	**36.0030000: Physical Education / Grade 2**
45.0711000: World Geography	**36.0040000: Physical Education / Grade 3**
45.0830000: World History	**36.0050000: Physical Education / Grade 4**
HS Foreign Language	**36.0060000: Physical Education / Grade 5**
60.0110000: French I	**36.0080000: Physical Education / Grade 8**
60.0710000: Spanish I	**36.0540000: Weight Training**
	36.0210000: Introductory Team Sports
	Music / Theatre
Note about Advanced Placement: The following AP courses were included as part of Phase II, however the associated Public Domain Assessments are no longer available. Districts are encouraged to utilize as needed the many other resources available to them from released AP exams. **The AP courses that were included during Phase II:** • **AP Language and Composition** • **AP Literature and Composition** • **AP Calculus AB** • **AP Statistics** • **AP Psychology,** • **AP Gov/Pol: USA** • **AP Gov / Pol: Comparative** • **AP Macroeconomics** • **AP Microeconomics** • **AP World History** • **AP US History**	**53.0020000: Music, General / Grade 1**
	53.0050000: Music, General / Grade 4
	53.0080000: Music, General / Grade 7
	53.0330000 / 53.0340000 / 53.0350000 / 53.0361000: Beginning Band (Grade 6,7,8, 9-12)
	54.0130000 / 54.0140000 / 54.0150000 / 54.0211000: Beginning Chorus (Grade 6,7,8, 9-12)
	53.0381000: Advanced Band I (Grades 9-12)
	54.0231000: Advanced Mixed Chorus I (Grades 9-12)
	53.0571000: Intermediate Orchestra I (Grades 9-12)
	52.0210000: Theatre Arts/Fundamentals I
	52.0120000: Theatre Arts (Grade 7)
	51.0120000: Proficient Dance (Grade 7)
	Art
	50.0020000: Visual Arts/Grade 1
	50.0050000: Visual Arts/Grade 4
	50.0120000: Visual Arts/Grade 7
	50.0211000: Visual Arts/Comprehensive I
	50.0411000: Visual Arts/Ceramics/Pottery I
	50.0313000: Visual Arts/Drawing & Painting I
	50.0711000: Visual Arts/Photography I
	CTAE
	47.53100 - Basic Maintenance and Light Repair
	20.52810 - Early Childhood Care Education I
	21.42500 - Foundations of Engineering and Technology
	43.43000 - Introduction to Law, Public Safety, Corrections and Security
	08.47400 : Marketing Principles
	25.52100 – Introduction to Healthcare Science
	07.44130 - Introduction to Business and Technology
	10.51810 - Audio-Video Technology Film I
	02.47100 - Basic Agriculture Science
	32.41400 - Coordinated Career Academic Education I
	20.41610 - Foods, Nutrition and Wellness
	46.54500 - Industry Fundamentals and Occupational Safety
	20.53100 - Introduction to Culinary Arts
	11.41500 - Introduction to Digital Technology
	Middle School Business and Computer Science

Student Learning Objectives (SLO) Public Domain Assessments

COURSE NUMBER	COURSE DESCRIPTION	MAIN SUBJECT AREA
	Pre-K Literacy	
	Pre-K Numeracy	
23.0010000	Kindergarten English Language Arts	23. English Language Arts
23.0011	Kindergarten Reading	23. English Language Arts
27.0110000	Kindergarten Mathematics	27. Mathematics
23.0012	First Grade Reading	23. English Language Arts
27.0120000	First Grade Math	27. Mathematics
23.0020000	First Grade English Language Arts	23. English Language Arts
23.0013	Second Grade Reading	23. English Language Arts
27.0130000	Second Grade Math	27. Mathematics
23.0030000	Second Grade English Language Arts	23. English Language Arts
23.0014	Third Grade Reading	23. English Language Arts
27.0140000	Third Grade Math	27. Mathematics
23.0040000	Third Grade English Language Arts	23. English Language Arts
23.0320000	Journalism I	23. English Language Arts
23.0330000	Journalism II	23. English Language Arts
23.0340000	Advanced Composition	23. English Language Arts
23.0520000	British Literature/Composition	23. English Language Arts
23.0620000	Tenth Grade Literature/and Composition	23. English Language Arts
23.0630000	World Literature/Composition	23. English Language Arts
26.0130000	Biology II (Grades 9-12)	26. Life Sciences
26.0611000	Environmental Science	26. Life Sciences
26.0710000	Zoology	26. Life Sciences
26.0730000	Human Anatomy/Physiology	26. Life Sciences
27.0624	GPS Pre-Calculus	27. Mathematics
27.065	Advanced Algebra and Trigonometry	27. Mathematics
27.0710000	Calculus	27. Mathematics
27.0830000	Mathematics III-Advanced Algebra / Statistics	27. Mathematics
27.0840000	Mathematics IV-Pre-Calculus - Trigonometry/Statistics	27. Mathematics
40.0510000	Chemistry I	40. Physical Sciences
40.0520000	Chemistry II	40. Physical Sciences
07.4411005	CTAE Computer Apps I	
54.01100	Fine Arts—Beginning Chorus Grades 4-5	54. Fine Arts
40.0640000	Earth Systems	40. Physical Sciences
40.0810000	Physics I	40. Physical Sciences
40.0820000	Physics II	40. Physical Sciences
45.0150000	Psychology	45. Social Sciences
45.0160000	AP Psychology	45. Social Sciences
45.0310000	Sociology	45. Social Sciences

COURSE NUMBER	COURSE DESCRIPTION	MAIN SUBJECT AREA
45.0570000	American Government/Civics	45. Social Sciences
45.0620000	AP Macroeconomics	45. Social Sciences
45.0630000	AP Microeconomics	45. Social Sciences
45.0711000	World Geography	45. Social Sciences
45.0830000	World History	45. Social Sciences
60.0110000	French I	60. Romance Languages
60.0710000	Spanish I	60. Romance Languages
23.0430000	AP Language Composition	23. English Language Arts
23.0530000	AP English Literature & Composition	23. English Language Arts
45.0520000	AP Government/Politics: USA	45. Social Sciences
45.0530000	AP Government/Politics/ Comparative	45. Social Sciences
45.0811000	AP World History	45. Social Sciences
45.082000	AP US History	45. Social Sciences
27.072000	AP Calculus AB	27. Math
27.074000	AP Statistics	27. Math

Effective Teacher and Principal Induction Programs

Overarching Goal for Georgia Districts

To provide quality induction programs that support induction phase teacher and principal learning, retention, and student growth/achievement.

Effective teacher and principal induction programs support induction phase teacher* and induction phase principal* learning, retention, and student growth/achievement (New Teacher Center). Effective programs have three basic components: 1) comprehensive, consisting of many activities/components and many people; 2) coherent, various components, activities, and people are logically connected to each other; and 3) sustained, continues for many years (Wong, 2001). Collectively, the GaDOE induction guidance domains provide districts an effective teacher and principal induction program model.

Georgia's vision as set forth in the RT3 application is "To equip all Georgia students, through effective teachers and leaders and through creating the right conditions in Georgia's schools and classrooms, with the knowledge and skills to empower them to: graduate from high school, be successful in college and/or professional careers, and be competitive with their peers throughout the United States and the world." At the heart of the RT3 plan is increasing the overall effectiveness of teachers and leaders. Their effectiveness is a critical factor in increasing student growth and raising student achievement. The GaDOE induction guidance paints an inspirational vision of the type of support induction phase principals and induction phase teachers must receive. The GaDOE works closely with districts to provide technical assistance and resources to support effective induction programs. RT3 districts are required to align their induction programs to the GaDOE Teacher and Principal Induction Guidance and all other Georgia districts are encouraged to use this guidance.

The following resources are available at http://www.gadoe.org/School-Improvement/Teacher-and-Leader-Effectiveness/Pages/Teacher-and-Principal-Induction-Guidelines-.aspx

1. Teacher Induction Guidance

2. Principal Induction Guidance

3. Induction Process Steps to support the Development, and Implementation of Effective Induction Programs

4. Teacher Induction Guidance Self-Assessment

5. Principal Induction Guidance Self-Assessment

6. Induction Goal Setting Worksheet

7. Teacher Implementation and Evaluation Resource Guide (aligned to the New Teacher Center Induction Program Standards)

8. Principal Implementation and Evaluation Resource Guide (aligned to the New Teacher Center Induction Program Standards)

9. Reviewing the Effectiveness of Teacher Induction Program

10. Reviewing the Effectiveness of Principal Induction Programs

Induction Phase Principal
The induction phase principal is defined as a principal who has been hired or appointed into a new permanent position in any Georgia school. Principals are considered to be in the "induction phase" until they successfully complete the district induction program. The district induction program will be tiered to provide differentiated support based on the individual's needs.

Induction Phase Teacher
The induction phase teacher is defined as any teacher who has been hired into a new permanent position in any Georgia school. Teachers are considered to be "induction phase" until they successfully complete the district induction program. The district induction program will be tiered to provide differentiated support based on the individual's needs.

TKES and LKES Professional Learning Resources
GaDOE TLE Electronic Platform

The Teacher and Leader Effectiveness (TLE) Division strives to provide professional learning to support teachers and leaders in the successful implementation of the Teacher Keys and Leader Keys Effectiveness Systems (TKES and LKES). All professional learning opportunities are designed to develop knowledge, skills, and behaviors to improve teacher and principal practice and effectiveness leading to increased student achievement. The professional development provided is aligned with the components of TKES and LKES, and fosters ongoing improvements in teaching and student learning.

A variety of the professional learning resources have been developed to guide understanding of critical information that assists in mastering the implementation of TKES and LKES. These resources are available for both teachers and leaders and can be found by accessing the GaDOE TLE Electronic Platform under the Professional Learning Opportunities Tab. Resources include:

Quick Guides

Quick Guides are concise, targeted reference tool for many of the topics and concepts related to TKES. Each one page, accessible document focuses on the essential points of a TKES topic. Quick Guides help clarify and guide understanding of critical information associated with TKES.

Flow Charts

Flow Charts are graphic representations of step-by-step guidance on TKES implementation. These flow charts can be used as decision-making tools when encountering roadblocks with the Leader Keys Effectiveness System and will also serve as reminders for facilitating the TKES process with efficacy.

Mini-Modules

Mini-modules are online, self-directed, professional learning courses designed to enhance the participant's understanding of various concepts of TKES. Each mini-module can be used independently or with a small group in a professional learning community environment. Mini-modules currently feature the online course, a participant's guide, and PowerPoint to support and expand learning options. A facilitator's guide, videos, and research articles will be added to the modules in the near future.

Please log in to the GaDOE TLE Electronic Platform to access these modules under the Professional Learning Opportunities tab. Here you may enroll and complete each professional learning (PL) mini-module. You can also view additional PL courses and/or view additional PL opportunities. Each module takes approximately one hour to complete. It includes an on-line, self-paced professional learning course, as well as, a PowerPoint, and participant's guide.

Appendix IV

TKES

Support

Documents

Teacher Assessment on Performance Standards and Class Keys Crosswalk

TAPS and National Virtual School Teaching Standards Crosswalk

Ongoing Teacher and Leader Effectiveness Cycle

Georgia Department of Education
Teacher Keys Effectiveness System

<table>
<tr><td colspan="2" style="background-color:orange"><h1>Overview of the Teacher Keys Effectiveness System
Support Documents</h1></td></tr>
</table>

The following TKES resources are provided in the Appendix IV and in the GaDOE TLE Electronic Platform.

TEACHER ASSESSMENT ON PERFORMANCE STANDARD	
Crosswalks	Crosswalks are provided for the Teacher Assessment on Performance Standards and Class Keys and TAPS and National Virtual School Teaching Standards.
Ongoing Teacher and Leader Effectiveness Cycle	The chart provides a view of the cycle followed by school districts during the implementation of the Teacher Keys Effectiveness System (TKES).

Georgia Department of Education
Teacher Keys Effectiveness System

Domain	TKES Standards	CLASS Keys^{SM}
		Georgia Department of Education **Crosswalk** **Teacher Assessment on Performance Standards and CLASS Keys^{SM}**

Georgia Department of Education Crosswalk Teacher Assessment on Performance Standards and CLASS Keys^{SM}		
Domain	**TKES Standards**	**CLASS Keys^{SM}**
Planning	1. Professional Knowledge	CP 1.1: Plans with deep knowledge of content and delivery techniques. CP 1.2: Demonstrates clear understanding of the curriculum. CP 1.3: Plans interdisciplinary instruction with real-world connections.
	2. Instructional Planning	CP 2.1: Uses the required curriculum to plan instruction and assessment. CP 2.2: Uses an organizing framework to plan instruction. CP 2.3: Plans assessment to measure mastery of the curriculum.
Instructional Delivery	3. Instructional Strategies	SBI 1.1: Demonstrates research-based practices for student engagement. SBI 1.2: Engages students in higher-order thinking skills. SBI 2.2: Clearly communicates the learning expectations. SBI 1.5: Uses accessible technology to enhance learning.
	4. Differentiated Instruction	SBI 2.1: Demonstrates high expectations with students playing roles in learning. SBI 1.3: Uses appropriate differentiation. SBI 1.4: Uses flexible grouping based on assessment.
Assessment of and for Learning	5. Assessment Strategies	AL 1.1: Uses diagnostic assessment strategies to inform planning. AL 1.2: Uses formative assessment strategies to adjust instruction. AL 1.3: Uses a variety of summative strategies to evaluate mastery of curriculum.
	6. Assessment Uses	AL 2.1: Uses data to design appropriate, timely interventions. SBI 2.3: Provides effective feedback/commentary on student performances.
Learning Environment	7. Positive Learning Environment	P 1.1: Maintains a positive learning environment through rules and procedures. P 1.3: Fosters a sense of community and belonging.
	8. Academically Challenging Environment	P 1.2: Maximizes instructional time. P 1.4: Helps students take responsibility for behavior and learning.
Professionalism and Communication	9. Professionalism	P 3.1: Grows professionally through job-embedded learning. P 3.2: Enhances knowledge and skills through professional learning. P 4.1: Actively supports the school improvement plan.
	10. Communication	P 2.1: Establishes relationships with families and the community.

Crosswalk of TAPS and National Virtual School Teaching Standards

Teacher Keys Evaluation System Teacher Assessment on Performance Standards	SREB Online Teaching Evaluation for State Virtual Schools	iNACOL National Standards for Quality Online Teaching
Performance Standard 1: Professional Knowledge The teacher demonstrates an understanding of the curriculum, subject content, pedagogical knowledge, and the needs of students by providing relevant learning experiences.	**Content Knowledge and Skills for Instructional Technology** The teacher has the prerequisite technology skills to teach online. **Online Teaching and Learning Methodology, Management, Knowledge, Skills and Delivery** The teacher has experienced online learning from the perspective of a student.	**Standard A** The online teacher knows the primary concepts and structures of effective online instruction and is able to create learning experiences to enable student success.
Performance Standard 2: Instruction Planning The teacher plans using state and local school district curricula and standards, effective strategies, resources, and data to address the differentiated needs of all students.	**Online Teaching and Learning Methodology, Management, Knowledge, Skills and Delivery** The teacher plans, designs and incorporates strategies to encourage active learning, interaction, participation and collaboration in the online environment.	**Standard C** The online teacher plans, designs, and incorporates strategies to encourage active learning, application, interaction, participation, and collaboration in the online environment. **Standard K** The online teacher arranges media and content to help students and teachers transfer knowledge most

Teacher Keys Evaluation System Teacher Assessment on Performance Standards	SREB Online Teaching Evaluation for State Virtual Schools	iNACOL National Standards for Quality Online Teaching
		effectively in the online environment.
Performance Standard 3: Instructional Strategies The teacher promotes student learning by using research-based instructional strategies relevant to the content area to engage students in active learning and to promote key skills.	**Online Teaching and Learning Methodology, Management, Knowledge, Skills and Delivery** The teacher develops and delivers assessments, projects, and assignments that meet standards-based learning goals and assesses learning progress by measuring student achievement of learning goals.	**Standard B** The online teacher understands and is able to use a range of technologies, both existing and emerging, that effectively support student learning and engagement in the online environment.
Performance Standard 4: Differentiated Instruction The teacher challenges students by providing appropriate content and developing skills which address individual learning differences.	**Online Teaching and Learning Methodology, Management, Knowledge, Skills and Delivery** The teacher understands and is responsive to students with special needs in the online classroom.	**Standard F** The online teacher is cognizant of the diversity of student academic needs and incorporates accommodations into the online environment.
Performance Standard 5: Assessment Strategies The teacher systematically chooses a variety of diagnostic, formative, and summative assessment strategies and instruments that are valid and appropriate for the content and student population.	**Online Teaching and Learning Methodology, Management, Knowledge, Skills and Delivery** The teacher demonstrates competencies in creating and implementing assessments in online learning environments in ways that assure validity and reliability of instruments and procedures.	**Standard G** The online teacher demonstrates competencies in creating and implementing assessments in online learning environments in ways that ensure validity and reliability of the instruments and procedures.

Teacher Keys Evaluation System Teacher Assessment on Performance Standards	SREB Online Teaching Evaluation for State Virtual Schools	iNACOL National Standards for Quality Online Teaching
Performance Standard 6: Assessment Uses The teacher systematically gathers, analyzes, and uses relevant data to measure student progress, to inform instructional content and delivery methods, and to provide timely and constructive feedback to both students and parents.	**Online Teaching and Learning Methodology, Management, Knowledge, Skills and Delivery** The teacher demonstrates competencies in using data and findings from assessments and other data sources to modify instructional methods and content and to guide student learning. **Online Teaching and Learning Methodology, Management, Knowledge, Skills and Delivery** The teacher demonstrates frequent and effective strategies that enable both teacher and students to complete self- and pre-assessments.	**Standard H** The online teacher develops and delivers assessments, projects, and assignments that meet standards-based learning goals and assesses learning progress by measuring student achievement of the learning goals. **Standard I** The online teacher demonstrates competency in using data from assessments and other data sources to modify content and to guide student learning.
Performance Standard 7: Positive Learning Environment The teacher provides a well-managed, safe, and orderly environment that is conducive to learning and encourages respect for all.	**Online Teaching and Learning Methodology, Management, Knowledge, Skills and Delivery** The teacher models, guides and encourages legal, ethical, safe and healthy behavior related to technology use.	**Standard E** The online teacher models, guides, and encourages legal, ethical, and safe behavior related to technology use.
Performance Standard 8: Academically Challenging Environment The teacher creates a student-centered, academic environment in which teaching and learning occur at high levels and students are self-directed learners.	**Online Teaching and Learning Methodology, Management, Knowledge, Skills and Delivery** The teacher provides online leadership in a manner that promotes student success through regular feedback, prompt response and clear expectations.	**Standard D** The online teacher promotes student success through clear expectations, prompt responses, and regular feedback.

Georgia Department of Education
Teacher Keys Effectiveness System

Teacher Keys Evaluation System Teacher Assessment on Performance Standards	SREB Online Teaching Evaluation for State Virtual Schools	iNACOL National Standards for Quality Online Teaching
Performance Standard 9: Professionalism The teacher demonstrates a commitment to professional ethics and the school's mission, participates in professional growth opportunities, and contributes to the profession.	**Academic Preparation** The teacher meets the professional teaching standards established by a state-licensing agency or the teacher has academic credentials in the field in which he or she is teaching.	
Performance Standard 10: Communication The teacher communicates effectively with students, parents or guardians, district and school personnel, and other stakeholders in ways that enhance student learning.		**Standard J** The online teacher interacts in a professional, effective manner with colleagues, parents, and other members of the community to support students' success.

Ongoing Teacher and Leader Effectiveness Cycle

Other Quantitative Measures: Surveys
Conduct and Collect
October – April

Growth Score for Tested Subjects *(based on student growth percentiles – CRCT & EOCT)*
Calculate June-July

Teacher and Leader Keys Effectiveness Systems
Implementation
August - May

Growth Score for Non-Tested Subjects *(based on student learning objectives)*
Calculate May

TEM/LEM Calculate July

Summer Training
Comprehensive Evaluation System
June-August

TEM/LEM
Share with administrators/teachers
August
Modify School Improvement Plan, Develop Performance Growth Plans, Develop Due Process and Professional Development Plans

Merit Pay Awarded
September

Beginning September 2014
Race to the Top Districts Only

Talent Management Decisions
May
Determine interventions for teachers and leaders
Renewal/Retention or Dismissal

Professional Development
August-April

Appendix V

TKES Implementation Handbook Figures

Appendix V: TKES Implementation Handbook Figures

Appendix VI

TKES

Acronyms and Glossary

Appendix VI: TKES Acronyms and Glossary

ACRONYMS

GaDOE:	Georgia Department of Education
IEP:	Individual Education Plan
JAD:	Joint Application Development
LAPS:	Leader Assessment on Performance Standards
LDS:	Longitudinal Data System
LKES:	Leader Keys Effectiveness System
PDP:	Professional Development Plan
SGP:	Student Growth Percentile
SLO:	Student Learning Objective
TAPS:	Teacher Assessment on Performance Standards
TEM:	Teacher Effectiveness Measure
TLE:	Teacher and Leader Effectiveness
TKES:	Teacher Keys Effectiveness System

Glossary

Academic Peers: Students with similar prior academic achievement (i.e., those with similar history scores).

Academic risks: Student behavior to reach beyond their comfort zone to expand their learning. Risk-taking may be in a form in which students select tasks with a possibility of failure but value the feedback elicited from error-making.

Authentic learning: Authentic learning is a teaching method that allows students to explore, discuss, and meaningfully develop concepts and skills in the authentic contexts of students' real life.

Contributing professionals: Contributing professionals are credentialed with teaching or service certificates or are licensed therapists who are not directly involved in providing instruction for students.

Diagnostic assessment: Assessments, often applied in a pre-assessment time frame, that are administered prior to or during instruction to ascertain each student's strengths, weaknesses, knowledge, and skills, and to permit teachers to remediate, enrich, accelerate, or differentiate the instruction to meet each student's readiness for new learning.

Differentiated instruction: Differentiated instruction is a general term for an approach to teaching that responds to the range of student needs, abilities, and preferences in the classroom, and attempts to account for those differences in instructional planning and delivery, as well as in the content, process, product, and learning environment.

Documentation (referring to evidence & artifacts): Documentation is a general term for a collection of information or evidence that can serve as a record of a teacher's practice.

Domain: Comprehensive categories which describe the major areas of teachers' work. There are five domains in TAPS, each of which includes two teacher performance standards.

Electronic platform: Georgia's statewide longitudinal data system (SLDS) enhances the ability of Georgia educators to effectively manage, use, and analyze education data to support instruction. The vendor-based electronic platform for TKES will provide web-based access to multiple TKES component measures. This platform will communicate with Georgia's SLDS to pull data for student records, student course schedules, and roster verification. Other data may also be pulled from the system.   The electronic platform will be provide school districts and schools (SIG, Priority, etc.) with the resources necessary for implementing or piloting the TKES beginning with the 2012-2013 school year.

Formal assessment: The collection of student learning data using standardized tests or procedures under controlled conditions. These tests or other assessment tools have a history of application and have statistics which support educational conclusions, such as "the student is below or above average for her age/grade." Formal assessments can also refer to assessments for a grade, as opposed to an informal assessment where a teacher is simply surveying the students to see if they understand a concept.

Formative assessment: Assessments that are administered to regularly/continuously study and document the progress made by learners toward instructional goals and objectives. Formative assessment is integral to the instructional process. Use of formative assessment allows teachers to target lessons to the areas in which students need to improve, and focus less on areas in which they already have demonstrated mastery.

Growth Percentile: A growth prediction generated for each student which describes his rank on current achievement relative to other students with similar score histories.

Growth Projection: A student growth projection describes where on the assessment scale a student may score on the next assessment for all possible levels of growth (1st-99th percentile).

Growth Target: A student growth target describes the level of growth a student must demonstrate to reach or exceed proficiency in three years or by the last tested grade, whichever comes first.

Higher-level thinking: Generally, the skills involving application, analysis, evaluation, etc., identified in Webb's Depth of Knowledge and a Bloom's Cognitive Taxonomy are regarded as higher-level thinking.

Informal assessment: Appraisal of student learning by causal/purposeful observation or by other non-standardized procedures.

Inter-rater Reliability: The consistency with which two or more scorers apply the rating or grading criteria of an assessment thereby resulting in stable assessment results among students; it is not influenced by factors that are not the intended criteria of learning. Training, education and monitoring skills enhance inter-rater reliability.

Metacognitive strategies: Strategies for thinking about thinking. They refer to higher-order thinking that involves a high level of awareness of one's own knowledge and ability to understand, monitor, and modify thinking processes involved in learning.

*Notes library***:** Evaluators may include observation notes and commentary related to TAPS observations in the GaDOE TLE Electronic Platform. These notes can be used to tag notes to specific standards on the *Walkthroughs, Formative Assessments*, and *Summative Assessment*.

Pedagogical knowledge/skills: The information and skills about instructional methods and strategies that are gathered from research and experience of accomplished teachers intended to help optimize the connections between teaching and learning.

Peer coaching: Peer coaching is a professional development approach which joins teachers together in an interactive and collaborative learning community. As applied to education, peer coaching often is used for teachers to help one another improve their pedagogical skills and competencies, instructional and assessment practices, and other attributes of teacher effectiveness.

Performance appraisal rubric: Performance appraisal rubric is a behavioral summary scale that guides evaluators in assessing how well a standard is performed. The design and intent of a rubric is to make the rating of teachers' performance efficient and accurate, and to help the evaluator justify to the evaluatees and others the rating that is assigned.

Professional Development Plan: A Professional Development Plans (PDP) focuses on increasing the teachers' ability to improve student achievement in specified area. The PDP provides guidelines and timelines for specific, mandatory professional learning which supports immediate improvement of teacher practice and effectiveness. A Professional Development Plan may also be used when a teacher does not meet the professional duties, responsibilities and ethical expectation required by the teacher. A Professional Development Plan (PDP) is required if the teacher's TEM is in the *Needs Development* or *Ineffective* ratings.

Performance indicator: Performance indicators provide examples of observable, tangible behaviors for each teacher performance standard. They are <u>examples</u> of the type of performance that will occur if a standard is being successfully met.

Performance portrait: Performance portrait is a rhetorical expression to refer to a faithful and thorough representation of a teacher's effectiveness.

Performance standard: Performance standards are the major duties performed by a teacher and serve as the basic unit of analysis in the TAPS component of the Teacher Keys Effectiveness System. The teacher performance standards are well supported by extant research as the essential elements that constitute teacher effectiveness.

Purposeful sample: A sample that is generated through a non-random method of sampling. Purposeful sampling is often used to select information-rich cases for in-depth study.

Self-assessment: Self-assessment is a process by which teachers judge the effectiveness and adequacy of their practice, effects, knowledge, and beliefs for the purpose of performance improvement.

SGP: Student Growth Percentile is a component of the Student Growth and Academic achievement section of the TKES framework. SGP is used to calculate student growth for teachers of tested subjects.

SLO: Student Learning Objective is a component of the Student Growth and Academic Achievement

section of the TKES framework. SLOs are used to measure growth for teachers of non-tested subjects.

SLDS: Statewide Longitudinal Data System

SMART Criteria: A critical way to self-assess a learning objective's feasibility and value with regards to learning and learning outcomes. The acronym stands for *Specific, Measurable, Appropriate, Realistic,* and *Time-bound*

Step-wise progression: A format of evaluation rubric design that arranges the levels of a rubric to make a qualitative distinction among different levels of performance. The differentiated descriptions of four levels of performance, ranging from ineffective to exemplary, on each of the ten teacher standards are marked by a gradual progression as if step by step.

Stratified random sample: A method of sampling that involves the division of a population into smaller homogeneous subgroups known as strata. The strata are formed based on members' shared attributes or characteristics. A random sample is taken from each stratum that may be proportional to the stratum's size when compared to the total population. These subsets of the random sample are then pooled together. Stratified random sampling is particularly advantageous for a population of diversity.

Summative assessment: Assessment that summarizes the development of learners at a particular time, usually at the end of a unit, semester or a school year. Summative assessment can be used for judging success or attainment in such diverse areas as teacher performance or student attainment of curricular standards.

Tagging: Evaluators use tagging to attach formative observation notes to specific standards within the GaDOE TLE Electronic Platform when completing *Walkthroughs, Formative Assessments* and the *Summative Assessment.*

TAPS: Teacher Assessment on Performance Standards

Teacher of record: The teacher of record is an individual (or individuals in the case of co-teaching assignments) who has been assigned responsibility for a student's learning in a subject/course. Students can have more than one teacher of record in a specific subject/course. The teacher of record is not necessarily the teacher who assigns the course grade.

Teachers of tested subjects: Teachers of tested subjects are considered to be those who teach subjects with state standardized tests, in particular those who will have state-generated value-added or growth scores available.

TEM: Teacher Effectiveness Measure

TKES: Teacher Keys Effectiveness System

Walkthroughs/Frequent Brief Observations: Informal classroom observations of a minimum of 10 minutes used to provide additional information on teacher performance.

Dr. John D. Barge, State School Superintendent
"Making Education Work for All Georgians"

Chapter 2

Teacher Keys Effectiveness System Fact Sheets

2013-14

Georgia Department of Education
Teacher Keys Effectiveness System

Dr. John D. Barge, State School Superintendent
"Making Education Work for All Georgians"

TABLE OF CONTENTS

Fact Sheet #1: TKES

THE TEACHER KEYS EFFECTIVENESS SYSTEM

As part of the Race to the Top Initiative (RT3), Georgia will continue to introduce the Teacher Keys Effectiveness System (TKES), a common evaluation system that will allow the state to ensure consistency and comparability across districts, based on a common definition of teacher effectiveness.[1] The Teacher Keys Effectiveness System consists of multiple components which contribute to an overall Teacher Effectiveness Measure (TEM). These components include Teacher Assessment on Performance Standards (TAPS), Surveys of Instructional Practice, and Student Growth and Academic Achievement.

TEACHER ASSESSMENT ON PERFORMANCE STANDARDS (TAPS)

The TAPS component of TKES provides evaluators with a qualitative, rubrics-based evaluation method by which they can measure teacher performance related to quality performance standards. TAPS offers a balance between structure and flexibility. It is prescriptive in that it defines common purposes and expectations, thereby guiding effective instructional practice. At the same time, it provides flexibility by allowing for creativity and individual teacher initiative. The overarching goal of TKES is to support the continuous growth and development of each teacher by monitoring, analyzing, and applying pertinent data compiled within a system of meaningful feedback.

Performance Indicators

Performance indicators provide suggested examples of observable, tangible behaviors for each standard. That is, the performance indicators are examples of the types of performance that may occur if a standard is being successfully met. The list of performance indicators is <u>not exhaustive</u>, is not intended to be prescriptive, and <u>it is not intended to be a checklist.</u> Further, all teachers

are not expected to demonstrate each performance indicator. An example of performance indicators for Standard 1 (Professional Knowledge) includes:
The teacher:

    1.1 Addresses appropriate curriculum standards and integrates key content elements.

    1.2 Implements students' use of higher-level thinking skills in instruction.

    1.3 Demonstrates ability to link present content with past and future learning experiences, other subject areas, and real-world experiences and applications.

Domains, Standards, and Indicators

TAPS uses a three-tiered approach to define the expectations for teacher performance consisting of five domains, ten standards, and multiple performance indicators. The five domains and ten performance standards are:

PLANNING
1. Professional Knowledge The teacher demonstrates an understanding of the curriculum, subject content, pedagogical knowledge, and the needs of students by providing relevant learning experiences.
2. Instructional Planning The teacher plans using state and local school district curricula and standards, effective strategies, resources, and data to address the differentiated needs of all students.
INSTRUCTIONAL DELIVERY
3. Instructional Strategies The teacher promotes student learning by using research-based instructional strategies relevant to the content to engage students in active learning and to facilitate the students' acquisition of key knowledge and skills.
4. Differentiated Instruction The teacher challenges and supports students'

learning by providing appropriate content and developing skills which address individual learning differences.

ASSESSMENT OF AND FOR LEARNING

5. Assessment Strategies
The teacher systematically chooses a variety of diagnostic, formative, and summative assessment strategies and instruments that are valid and appropriate for the content and student population.

6. Assessment Uses
The teacher systematically gathers, analyzes, and uses relevant data to measure student progress, to inform instructional content and delivery methods, and to provide timely and constructive feedback to both students and parents.

LEARNING ENVIRONMENT

7. Positive Learning Environment
The teacher provides a well-managed, safe, and orderly environment that is conducive to learning and encourages respect for all.

8. Academically Challenging Environment
The teacher creates a student-centered, academic environment in which teaching and learning occur at high levels and students are self-directed learners.

PROFESSIONALISM & COMMUNICATION

9. Professionalism
The teacher exhibits a commitment to professional ethics and the school's mission, participates in professional growth opportunities to support student learning, and contributes to the profession.

10. Communication
The teacher communicates effectively with students, parents or guardians, district and school personnel, and other stakeholders in ways that enhance student learning.

Performance Appraisal Rubrics

Teachers will be rated on the performance standards using performance appraisal rubrics. The performance rubric is a behavioral summary scale that guides evaluators in assessing *how well* a standard is performed. It states the measure of performance expected of teachers and provides a qualitative description of performance at each level. In some instances, quantitative terms are included to augment the qualitative description. The resulting performance appraisal rubric provides a clearly delineated step-wise progression, moving from highest to lowest levels of performance. Each level is intended to be qualitatively superior to all lower levels. The description provided in the *Proficient* level of the performance appraisal rubric is the actual performance standard, thus *Proficient* is the expected level of performance. Teachers who earn an *Exemplary* rating must meet the requirements for the *Proficient* level and go beyond it. The performance appraisal rubric for Performance Standard 1 (Professional Knowledge) is shown below:

Exemplary* *In addition to meeting the requirements for Proficient…*	Proficient *Proficient is the expected level of performance.*	Needs Development	Ineffective
The teacher continually demonstrates extensive content and pedagogical knowledge, enriches the curriculum, and guides others in enriching the curriculum. *(Teachers rated as exemplary continually seek ways to serve as role models or teacher leaders.)*	The teacher consistently demonstrates an understanding of the curriculum, subject content, pedagogical knowledge, and the needs of students by providing relevant learning experiences	The teacher inconsistently demonstrates understanding of curriculum, subject content, pedagogical knowledge, and student needs, **or** lacks fluidity in using the knowledge in practice.	The teacher inadequately demonstrates understanding of curriculum, subject content, pedagogical knowledge and student needs, **or** does not use the knowledge in practice.

Documenting Performance

Self-Assessment: As a requirement of the TAPS, teachers will conduct a self-assessment at the beginning of the school year.

Observations: Evaluators are required to conduct two formative observations and four walkthroughs/ frequent brief observations of teachers evaluated by the TKES. All formative observations must be at least 30 minutes in duration. Walkthroughs should be a minimum of ten minutes and should focus on a limited number of teacher performance standards and/or indicators. Walkthroughs will inform

the *Formative Assessment*. Evaluators will record their observation notes on the *Formative Assessment*. A conference with the teacher after the formative observations is optional, but written feedback through the electronic platform is required.

Documentation: The teacher is responsible for submitting documentation as requested by the evaluator for consideration in the formative assessment, either prior to or after the actual classroom observation. Teachers may organize the material as they see fit and they are not required to use the *Documentation Cover Sheet* provided in the *TKES Handbook*. The emphasis should be on the quality of work, not the quantity of material presented. Evaluators will make notes pertaining to the documentation on *the Formative Assessment*.

Rating Performance

Formative Assessment: Evaluators will make decisions about performance on the 10 performance standards based on observation, documentation, and anecdotal information. Using this information, they will then provide a formative assessment rating on each of the 10 performance standards using the performance appraisal rubrics. The evaluator must ensure the teacher receives feedback in some appropriate manner. Both formative assessments and four walkthroughs (frequent brief observations which inform the formative assessments) must be completed prior to the summative assessment.

Summative Assessment: After collecting information throughout the assessment period, evaluators will provide a summative assessment of a teacher's performance. Evaluators will use the *Summative Assessment* to evaluate performance on each standard using the four-category rating scale. By receiving a rating on each individual standard, the teacher is provided with a diagnostic profile of his/her performance for the evaluation cycle. In making judgments for the summative assessment on each of the ten performance

standards, the evaluator should determine where the **totality of evidence and most consistent practice** exists, based on observations and the documentation of practice and process provided by the teacher. In addition to the ten separate ratings, the teachers will receive an overall TAPS point score. *Exemplary* ratings are worth 3 points, *Proficient* ratings are worth 2 points, and *Needs Development* ratings are worth 1 point. *Ineffective* ratings have no point value. The TAPS rating will be appropriately scaled to represent a specific percentage of the Teacher Effectiveness Measure. The TAPS Summative Assessment should be completed by May.

SURVEYS OF INSTRUCTIONAL PRACTICE

The second component of the Teacher Keys Effectiveness System consists of student surveys of instructional practice. The surveys ask students to report on items they have directly experienced. There are three different versions of the student survey (grades 3-5, 6-8, and 9-12) designed to reflect developmental differences in students' ability to provide useful feedback regarding their teacher. All surveys are to be completed anonymously to promote honest feedback. Each survey contains questions that address four teacher performance standards in the TAPS component of the evaluation system: Instructional Strategies, Differentiated Instruction, Positive Learning Environment, and Academically Challenging Environment. Students will answer questions that address teacher performance standards to which they can respond from personal experience in the classroom.

Surveys will only be administered to students assigned to the teacher of record. Teachers who teach self-contained classes (e.g., elementary teachers, special education teachers) will have all the students in their class surveyed. Departmentalized teachers (e.g., middle and high school teachers,

elementary PE and music teachers) will have designated classes of students surveyed. The local school site administrator will determine the selection of the classes.

District and site administrators will also select a time frame period during the academic year in which to administer the surveys. An open survey window will be available for schools to select a time frame that does not interfere with testing or other uses of computer labs, etc. The multiple survey options offered in the open survey window will accommodate courses taught only during first semester, only during second semester, all year, or for shorter segments within the academic year. Furthermore, surveys may be administered multiple times during the school year at the district's discretion.

Teachers of record will not be involved in administering the survey to their own students; rather, a certified specialist (e.g., media specialist, instructional technology specialist) will administer the survey in a common media center or computer lab, if at all possible. All surveys will be administered using a vendor-hosted electronic platform. The surveys will be accessed through the GaDOE TLE Electronic Platform.

STUDENT GROWTH AND ACADEMIC ACHIEVEMENT

The second component of the Teacher Keys Evaluation System is Student Growth and Academic Achievement. For teachers of tested subjects, this component consists of a student growth percentile/value-added measure. For teachers of non-tested subjects, this component consists of GaDOE-approved Student Learning Objectives (SLOs) utilizing district-identified achievement growth measures.

Student Learning Objectives

District-determined SLOs using SMART criteria are content-specific, grade level learning objectives that are measureable, focused on growth in student learning, and aligned to curriculum standards. Districts must submit each SLO for GaDOE approval before local teachers begin implementation of their SLO plans.

Within the first ten days of the instructional period, teachers administer a pre-assessment to all students they teach in a course measured with an SLO. Using the district developed student learning objectives (SLO), teachers will use their students' pre-assessment scores, along with other diagnostic information, and complete a *Teacher SLO Implementation Plan*. Teachers should review the plan with the evaluator during the *Mid-Year Conference*.

The next part of the process is recursive in that individual teachers create and implement strategies and monitor progress toward the SLOs, making adjustments to the teaching and learning strategies, as required.

Teachers will administer the post-assessment and assess the students' growth toward the SLO. By May 15, they must submit their completed Teacher SLO Implementation Plan to the evaluator. Evaluators will review the pre-assessment and post-assessment data presented by the teacher to determine the teacher's level of performance using the rubric for the SLOs ratings. Evaluators will assign an end-of-year rating using an evaluation rubric with the following levels: *Exemplary, Proficient, Needs Development*, and *Ineffective.*

Fact Sheet #2: Why Evaluate?

THE VALUE OF EVALUATION

The core of education is teaching and learning, and the teaching-learning connection works best when we have effective teachers working with every student every day.[1] Teacher effectiveness has proven time after time to be the most influential school-related factor in student achievement. If teacher quality is the pillar of the success of education, then it logically follows that a robust teacher evaluation system should be in place, since the purpose of evaluation is to "recognize, cultivate, and develop good teaching."[2]Stronge and Tucker stated:[3]

> Without capable, high-quality teachers in America's classrooms, no educational reform effort can possibly succeed. Without high quality evaluation systems, we cannot know if we have high-quality teachers. Thus, a well-designed and properly implemented teacher evaluation system is essential in the delivery of effective educational programs and in school improvement.

Among the many roles assumed by the principals, one of their most important responsibilities is to evaluate teacher performance. This is important for several reasons: (1) the improvement of the instructional program, (2) the improvement of student performance, and (3) the improvement of professional development activities and opportunities for teachers.[4] Evaluation is a tool, not the outcome — it serves as a systematic tool that enables data-driven personnel and school improvement decisions.

The Purposes of Teacher Evaluation
There are many ways to conceptualize the purposes of teacher evaluation. For example, Wheeler and Scriven identified 14 different purposes, including hiring, assigning, performance evaluation, pre-tenured retention/termination, granting tenure or a continuing contract, post-tenure retention/termination, promotion/career ladder, salary decisions, reduction in force, retirement exemption, licensing/recognition, self-assessment, and mentoring assignment.[5]

The Personnel Evaluation Standards of the Joint Committee on Standards for Educational Evaluation identified ten distinct purposes for teacher evaluation:[6]

- Evaluate entry-level educators before certifying or licensing them to teach.
- Identify promising job candidates.
- Assess candidates' qualifications to carry out particular assignments.
- Guide hiring decisions.
- Assess performance of educators for continuing contract and promotion decisions.
- Determine recognition and awards for meritorious contributions.
- Assist faculty and administrators in identifying strengths and needs for improvement.
- Plan meaningful staff development activities.
- Develop remediation goals and activities.
- When necessary, support fair, valid, and legal decisions for termination.

The literature succinctly summarizes two major purposes of teacher evaluation-professional growth and accountability.[7]

The Benefits of Teacher Evaluation
The benefits of an effective teacher evaluation system are numerous and well documented. The process of teacher evaluation can be valuable in several ways including involving teachers in professional development efforts by identifying areas in need of improvement, improving instruction school-wide, and assessing the effectiveness of classroom teachers. Stronge summarized the advantages of a quality teacher evaluation system:[8]

- Joint involvement of administrators and teachers in the evaluation process.
- Inclusion of entire professional staff.
- Rationally linked school goals and individual responsibilities.
- Clearly established objectives for the teacher.
- A basis for an objective evaluation.
- Efficiently channeled, system-wide resources.
- Manageable and meaningful training for evaluators, who are also instructional leaders.
- Appropriate systematic opportunities for improvement for all professional employees.
- More school accountability through meaningful inclusion of all professional employees.
- A legally defensible evaluation system in terms of its treatment of teachers and others.

Fact Sheet #3 - Performance Standard 1: Professional Knowledge

PROFESSIONAL KNOWLEDGE

The teacher demonstrates an understanding of the curriculum, subject content, pedagogical knowledge, and the needs of students by providing relevant learning experiences.

Classroom teaching is a complex activity that demands teachers possess substantial thinking skills and a solid knowledge base. Knowledge of subject matter is a prerequisite for effective classroom instruction. A teacher's understanding of subject facts, concepts, principles, methodology, and important generalizations determines his/her pedagogical thinking and decision-making. Furthermore, according to research, the professional knowledge that is essential to be an effective teacher extends well beyond knowledge of subject matter to encompass the factors identified in the following table.[1]

Key elements of Professional Knowledge

Knowledge Area	Focus
• Subject-matter knowledge	Content to teach
• Pedagogical knowledge	How to teach
• Curricular knowledge	What to teach
• Learner knowledge	Whom to teach
• Cultural/community knowledge	Sensitivity to settings where one teaches

Content knowledge, the disciplinary understanding of the subject taught, exerts a significant influence on teachers' classroom behavior. Various studies suggest that teachers with stronger content knowledge are more likely to use practices that can help students construct and internalize knowledge, such as:

• Asking higher-level questions.
• Encouraging students to explore alternative explanations.
• Involving students in more inquiry-based learning.
• Allowing more student-directed activities.
• Engaging students in the lessons.[2]

Many researchers have explored the impact of teachers' content knowledge on student achievement. They have measured teachers' content knowledge through tallying coursework taken by the teachers and administering questionnaires or classroom observations. The literature has been consistent in the findings about the positive association between teacher content knowledge and students' learning at all grade levels, particularly in mathematics.[3]

Research has found that when a teacher's subject-matter knowledge is insecure (for instance, when a teacher is teaching unfamiliar areas of curriculum) his/her ability to give appropriate and effective explanations in the classroom is limited, rendering them ineffective.[4] Teachers who lack subject-matter knowledge usually lack confidence in the classroom, which in turn, has significant impact on their planning and teaching. For instance, they are more likely to adopt closed and constrained pedagogy – developing the pedagogy to a more discursive style, keeping a tighter rein on what is taught, avoiding asking open-ended questions and conducting discussion sessions, and being more authoritative in what they plan and do in the classroom.

Effective teaching requires teachers to have not only sufficient knowledge in their own fields, but also an interdisciplinary understanding that ranges across multiple branches of human knowledge. The real world does not completely organize itself according to the disciplines or the traditional school subjects. Many phenomena cannot be adequately understood solely from one disciplinary perspective.[5] Making connections across subject areas is an effective way to engage students in

challenging, integrated, and exploratory learning around personal and social concerns that appeal to them. In addition, the integration of disciplines can prompt students to learn to think critically and develop a common core of knowledge necessary for success.[6] Effective teachers use a wide variety of sources and make meaningful connections to sustain students' inquiry across disciplines.

Effective teaching resides not simply in the knowledge a teacher has accrued, but also in how this knowledge is translated into student learning in classrooms.[7]For instance, teachers who are highly proficient in mathematics or writing will help others learn mathematics or writing only if they are able to use their own knowledge to enact learning activities that are appropriate to students. Therefore, a teacher's subject matter knowledge and pedagogical knowledge are complementary and interdependent. These two knowledge categories can be synthesized by what Shulman called "pedagogical content knowledge," which he defined as "the blending of content and pedagogy into an understanding of how particular topics, problems, or issues are organized, represented, and adapted to the diverse interests and abilities of learners, and presented for instruction."[8]

The professional knowledge of effective teachers reaches beyond merely the knowledge of subject matter (content knowledge) and instructional strategies (pedagogical knowledge); indeed, professional knowledge also encompasses an understanding of students and environmental contexts.[9] Effective teachers often use the knowledge of their students (for instance, knowledge of students' learning ability, prior achievement, cultural background, and personal interests) to decide what to teach and how to teach. Based on this expansive

knowledge, teachers can anticipate the conceptions, misconceptions, and possible difficulties their students are likely to encounter while learning particular content. Research has found that an effective teacher:

- Possesses a great deal of knowledge about the content and curriculum areas taught, and knows how the material fits into the educational landscape.[10]
- Is certified in his or her field, resulting in higher levels of student achievement on standardized tests.[11]
- Determines and teaches the essential knowledge and skills through effective instruction.[12]
- Cares about students as individuals and makes them feel valued.[13]
- Adapts teaching to address student learning styles.[14]
- Acknowledges his or her perspective and is open to hearing their students' worldviews.[15]
- Is culturally competent.[16]
- Seeks to know about the cultures and communities from which students come.[17]

Sample Performance Indicators for the Professional Knowledge of Teachers

1.1 Addresses appropriate curriculum standards and integrates key content elements.
1.2 Implements students' use of higher-level thinking skills in instruction.
1.3 Demonstrates ability to link present content with past and future learning experiences, other subject areas, and real-world experiences and applications.
1.4 Demonstrates accurate, deep, and current knowledge of subject matter.
1.5 Exhibits pedagogical skills relevant to the subject area(s) taught and best practices based on current research.

1.6 Bases instruction on goals that reflect high expectations for all students and a clear understanding of the curriculum.

1.7 Displays an understanding of the intellectual, social, emotional, and physical development of the age group.

_____

Sample Student Evidence that Teacher met the Criteria for Proficiency

- Observe (through surveys and conversations) that teachers help them understand rather than judge them for misconceptions.
- Grasp the meaning as well as the facts of the content they are learning.
- Recognize and discuss issues related to the content area.
- Acknowledge the teacher's efforts to make the curriculum challenging, relevant, and rewarding for all learners.
- Perform tasks that are varied and appropriate for all learning levels.
- Engage in learning activities that lead to most students achieving standards and some exceeding them.
- Engage in projects, essays, and research that relate to content areas to real life experiences.
- Explain how major concepts in content areas relate.

_____

Sample Conference Prompts

- When did you have to teach a complex concept the year? How did you ensure that all students understood and grasped the concept that you were teaching?
- How did you develop your unit plans and decide what to include or exclude from the unit of study?
- How have you worked to expand your understanding of the issues in your content area this year?
- What collaborative planning experiences have you participated in this year?

- How have you worked with your colleagues this year to ensure vertical alignment?
- How have you worked with your colleagues this year to ensure that there has been consistency and fairness across the course in different classrooms?
- What are your expectations and the appropriate learning outcomes for the grade level/subject matter you teach? How did the results at the end of the year compare with the expectations you held and the results you anticipated at the beginning of the year?
- What are some ways that you added relevance to the curriculum and helped students make real-world connections?

Georgia Department of Education
Teacher Keys Effectiveness System

Teacher Self-Assessment Checklist					
Performance Standard 1: Professional Knowledge					
Quality		Exemplary	Proficient	Needs Development	Ineffective
Subject-matter Knowledge	Have accurate, cohesive, and in-depth subject-matter knowledge.				
	Possess a coherent body of knowledge about the facts, concepts, principles, methodology, and important generalization of the subject areas taught.				
	Make interdisciplinary connections across subject areas to engage students in challenging, integrated, and exploratory learning.				
Curricular Knowledge	Know the school district curriculum guides and benchmarks.				
	Understand the scope and sequence of learning goals and objectives.				
	Develop appropriate curriculum guides and set up outlines for unit plans.				
	Be able to perceive the gap between planned curriculum and received curriculum.				
Pedagogical Knowledge	Choose the most effective pedagogical strategies that can best communicate subject content.				
	Design and organize learning activities that are appropriate for learners of different interests and abilities to explore the topics, problems, or issues.				
	Exhibit instructional practices that are supported by current research.				
Learner Knowledge	Have an understanding of special education and gifted education.				
	Relate subject-matter to the personal and social concerns that appeal to the learners.				
	Know students as individuals regarding their learning abilities, prior achievement, cultural background, and personal interests.				
	Anticipate the conceptions, misconceptions, and possible difficulties the students are likely to have when learning particular content area.				

Fact Sheet #4 - Performance Standard 2: Instructional Planning

INSTRUCTIONAL PLANNING

The teacher plans using state and local school district curricula and standards, effective strategies, resources, and data to address the differentiated needs of all students.

In general terms, planning means the "act or process of making or carrying out plans."[1] Instructional planning is a process of the teacher using appropriate curricula, instructional strategies, resources and data during the planning process to address the diverse needs of students. A teacher's teaching begins before he or she steps into the classroom. Prior to each lesson, unit, semester, or school year, teachers plan the content of instruction, select teaching materials, design learning activities and grouping methods, decide on the pacing and allocation of instructional time, and identify learning opportunities for students. Teachers use state or district curriculum standards, school district curriculum goals and objectives, and learning outcomes developed by professional organizations to plot the scope and sequence of subject topics. Teachers also apply their knowledge of research-based practices to plan strategies and techniques for delivering instruction. The most informative source for all of the instructional planning is the student.

Effective teachers also evaluate the quality of available resources when designing a unit or lesson. They use criteria such as appropriateness for grade level, alignment to national, state, or local standards, accuracy of information, the time allowed for the lesson or unit, and the learning benefits that come from using the resource.[2] Effective teachers maximize the instructional benefits of resources while minimizing time allocated to less relevant or unnecessary material.

Research indicates the following key questions that teachers need to consider for effective instructional planning:

1) What should be taught?
2) How should it be taught?
3) How should instruction and student learning be assessed?

What should be taught? Effective student learning requires a progressive and coherent set of learning standards. Effective teachers excel in delineating the intended outcomes of each lesson and describing the behaviors or actions that students should be able to perform after participating in the learning activities. Effective teachers conceive a lesson along two dimensions simultaneously:

1) The teacher's own actions, thoughts, and habits.
2) The students' thinking and understanding of the content.

Thus, effective teachers not only plan what to teach, but more importantly, they plan for whom they are going to teach. They exert effort to reach beyond their comfort zone of disciplinary thinking and actions to incorporate their students' learning preferences.

How Should It Be Taught? Once the learning objectives are developed, evidence suggests that expert teachers are more competent in translating their instructional plans into actions than non-expert teachers.[3] Additionally, effective teachers follow the predefined plan while remaining open to changes and continuously adjusting their instruction based on student needs. Further, expert teachers anticipate the difficulties students might encounter while learning the content of the lesson. They consider students' thinking in order to assess the success of the lesson plan and then modify their instruction promptly.[4] Having a lesson

plan cannot ensure that the actual lesson will be implemented as prescribed. The classroom is full of ebbs and flows. Consequently, teachers need to be opportunistic and tap into their pedagogical and content resources in a fluid and flexible manner in order to proceed smoothly.[5]

How Should Instruction and Student Learning Be Assessed? When the learning objectives are set up, in addition to aligning activities to them, teachers also need to link the assessment plan to the learning objectives. Alignment of curriculum, learning activities, and assessment is integral to any quality instructional design. This type of alignment is referred to as "Opportunity to Learn." Before the actual instruction starts, teachers need to decide upon valid and reliable assessment techniques that elicit student learning data and judge the success of the instructional plan. Additionally, teachers should communicate to their students what they are expected to achieve and inform them how they will be assessed after participating in the learning activities.

Teachers must consider a variety of factors when planning instruction, including how to pace the actual delivery in the classroom. The feasibility of a particular lesson largely depends on student ability and variation, content goals and mandated objectives, time and material resources, and so forth. Many of these factors present teachers with constraints that are beyond their immediate control. For example, there is a prescribed, fixed amount of time each day in which formal instruction may occur. Typically, hours of the day are chunked into units that are dedicated to the study of a certain subject or discipline as determined by a legislative body, school board, or a school administrator. Within those chunks of time, however, teachers traditionally have enjoyed a great deal of flexibility and autonomy. That is, what they

did with class time was largely up to them. Over the past decade that flexibility has begun to wane – a by-product of high-stakes testing. Teachers report a narrowing of the curriculum that focuses on tested items and breadth of content while sacrificing depth.[6]

Many school districts require teachers to follow strict pacing guides, which prescribe how much time to spend on certain lessons or concepts. Pacing guides are intended to be instruments that teachers use to measure the amount of instructional time devoted to certain topics in light of the total content that must be taught. Properly used, pacing guides are tools to steer daily instructional decisions within the context of the entire curriculum. Used improperly, however, pacing guides unduly restrict the proper ebb and flow of the classroom and restrict the instructional pace regardless of student ability. On this topic, one researcher stated:

> Pacing guides are not an inherently bad idea. Their effects depend on their design and how district and school leaders use them. The best pacing guides emphasize curriculum guidance instead of prescriptive pacing. These guides focus on central ideas and provide links to exemplary curriculum material, lessons, and instructional strategies.[7]

Thus, pacing is an important component of instructional planning. It allows teachers to see the curriculum in its entirety and avoid the trap of overemphasizing one area of content at the expense of others. Because instructional time with students is fixed, teachers must value class time.

In the process of classroom instruction, a teacher needs to make decisions regarding how to pace learning activities and how to allocate instructional time on a regular basis. Anderson, Evertson, and Brophy concluded

that "at some point during the lesson, the teacher must make a fundamental decision about whether the group as a whole can or cannot meet the objectives of a lesson."[8] When should a teacher decide to move on to the next goals? Should the teacher wait until every single student in the class masters the new content or skill? Should the teacher steer the class to new directions as long as half of the class attained the learning goal?

Ideally, students are sensitive to the difficulty of the content and objectives to be learned and will allocate their study time accordingly – they will devote more time to more difficult learning. However, Perrin, Banks and Dargue found that students' control of pace is not perfect and they do not always increase study sufficiently for more difficult learning objectives.[9] An optimum learning approach is to create adaptive learning strategies that diagnose student learning needs on specific learning areas, develop learning activities that conform to the evolving skill level of the student, and adjust time/pace on a content area according to student performance. This purposeful way of scheduling and rescheduling the learning progress, with flexible incorporation of additional practice and review, can significantly increase the study time allocated to challenging content areas and increase student learning outcomes.

One important misconception that many teachers hold about learning is to perceive it as a mechanical process of information being transferred from textbooks to students who acquire it through listening, reading, and memorization.[10] However, in reality, the way learners interact with new information is influenced by their experiences and prior knowledge and beliefs, and they often fail to remember, understand, and apply new information that has no connection to them and no context for acquiring meaning.[11]

Materials and equipment serve as a supportive rather than a central role in the curriculum and instruction.[12] That is, the school district's core curricula and the teachers' instructional strategies should not be dictated by textbooks. On one hand, materials aligned with curriculum and instruction is indispensable for each student's academic success. Effective teaching is much more than the acting out of scripts written by the publishers of textbooks and tests.[13] Students are frequently conditioned in their approach to learning by experience in teacher-centered, textbook-driven classrooms. Hill stated:

> Traditional textbooks are fact- rather than process-oriented. They stress "what" instead of "how" and "why"…when teachers allow textbooks to dominate instruction they are unlikely to meet today's educational demands for critical thinking, problem-solving, skill-building, and inquiry about the real world.[14]

In addition, some topics are too specific to be included in textbooks and some are too new to be included in textbooks. To enrich students' learning, teachers need to be well-informed and resourceful investigators and expect their students to cultivate the same qualities.[15] Furthermore, to prepare students for the world outside the school, teachers need to "develop ways for them to learn from information as they will encounter in the real-life situations, information that is not predigested, carefully selected, or logically organized."[16]

Planning is preparation for action. Without prior thought and planning, ongoing review, and adjustment as the plan unfolds in practice, and reflection on what worked, what didn't, and how to improve, teachers seldom improve practice. Indeed, planning is an essential tool for effective teaching.

Teaching is a complex activity that involves careful preparation and planning, both for short-term learning purposes and for long-term learning purposes. Misulis commented that "regardless of the teaching model and methods used, effective instruction begins with careful, thorough, and organized planning on the part of the teacher."[17]

Comparatively, novice teachers have more difficulty responding to individual student needs in their planning. They tend to develop a "one-size fits all" approach to planning, whereas more experienced teachers build in differentiation and contingencies at different points during the lesson.[18] To further assist with meeting individual needs, effective teachers typically plan a blend of whole-group, small-group, and individualized instruction.

As an illustration, Haynie examined the planning practices of ten effective and ten less effective teachers whose effectiveness was identified by their students' achievement gains. He found that most top teachers collaborated with one or more teachers while planning lessons; however, the less effective teachers reported they always planned lessons alone. The top teachers also were not restricted by pacing guides, and reached beyond prepared resources to plan their own activities, while the less effective teachers used resources already prepared. In addition, the top teachers used student assessment data in the planning of instruction. Based on data drawn from frequent assessments, they made data-driven decisions about what goals and objectives to address.[19]

Allington and Johnston also found that the instruction of effective teachers was multi-sourced.[20] Exemplary teachers were inclined to stretch the reading and writing beyond the textbooks. Although effective teachers did often dip into prescribed textbooks, they hardly ever followed traditional plans for these materials. For instance, while planning for a lesson in social science, the effective teachers usually used historical fiction, biography, information on the Internet and in magazines, and other nontraditional content sources. Borko and Livingston investigated the pedagogical expertise in instructional planning by comparing novice teachers and experienced teachers.[21] They found that novices showed more time-consuming, less efficient planning. While implementing the planned lessons, their attempts to be responsive to students were likely to lead them away from scripted lesson plans. The novice teachers were less successful in translating their instructional plans into actions than expert teachers. The expert teachers were better able to predict where in a course the students were likely to have problems and predict misconceptions the students would have and areas of learning these misconceptions were likely to affect.

Various research studies have found that effective teachers tend to have the following behaviors while making planning decisions:

- Construct a blueprint of how to address the curriculum during the instructional time.[22]
- Collaborate with one or more teachers while planning, rather than plan lessons alone.[23]
- Facilitate planning units in advance to make intra- and interdisciplinary connections.[24]
- Use student assessment data to plan what goals and objectives to address.[25]
- Plan for the context of the lesson to help students relate, organize, and make knowledge become a part of students' long-term memory.[26]
- Sequence material to promote students' cognitive and developmental growth.[27]

- Use knowledge of available resources to determine what resources they need to acquire or develop.[28]
- Plan instruction in a multi-sourced manner.[29]
- Take into account the abilities of their students and the students' strengths and weaknesses as well as their interest level.[30]

Sample Performance Indicators for the Professional Knowledge of Teachers

2.1 Analyzes and uses student learning data to inform planning.
2.2 Develops plans that are clear, logical, sequential, and integrated across the curriculum (e.g., long-term goals, lesson plans, and syllabi).
2.3 Plans instruction effectively for content mastery, pacing, and transitions.
2.4 Plans for instruction to meet the needs of all students.
2.5 Aligns and connects lesson objectives to state and local school district curricula and standards, and student learning needs.
2.6 Develops appropriate course, unit, and daily plans, and is able to adapt plans when needed.

Sample Student Evidence that Teacher met the Criteria for Proficiency

- See a logical sequence and purpose for most instruction and activities.
- Describe a variety of activities the teacher uses to engage students in meeting specific standards.
- Learn from assessment tasks that clearly measure progress and mastery of standards.
- Engage in learning activities that lead to achieving and exceeding standards.
- Understand teacher's reasons behind activities, organization of learning, and assessments.

- Understand the connections between CCGPS/GPS and classroom assessments.
- Experience assessments using format, language, and content aligned with district, state, and national mandated tests.
- Demonstrate the use of higher-order thinking skills on assessments.

Sample Conference Prompts
What process or rationale do you use in selecting standards for lessons or units?

- How do you engage students in planning, learning, and assessing their learning?
- How do you plan for assessment of student progress and mastery of standards?
- In what ways have you worked with colleagues toward deeper assessments and use of assessment data to plan?
- How do you build high-quality, demanding assessments?
- How do you plan for the different needs of your students?

Teacher Self-Assessment Checklist					
Performance Standard 2: Instructional Planning					
Quality		Exemplary	Proficient	Needs Development	Ineffective
Learning Objectives	Set clear, specific, and unambiguous learning objectives to communicate intended learning outcomes.				
	Identify learning objectives that focus on high cognitive levels of student learning (e.g., analysis, synthesis, evaluation, and creation).				
	Use learning objective to design instructional strategies and organize learning activities.				
	Encourage students to objectively evaluate their progress against the benchmark.				
Differentiated Planning	Use student assessment and diagnostic data in instructional planning.				
	Plan a learner-centered environment that allows for student choice, flexibility, and independence.				
	Use a variety of grouping arrangements and ensure high mobility within the classroom.				
	Plan advanced learning (e.g., enrichment, curriculum compacting) for gifted learners.				
	Plan remediated learning for struggling students.				
Alignment with Curriculum	Construct a blueprint of how to address the curriculum during the instructional time at the beginning of the school year or semester.				
	Plan appropriate long-range learning and developmental goals for students.				
	Align daily lesson plans with district curriculum guides.				
	Sequencing learning materials and activities logically and develop appropriate timelines for the completion of instructional units of study.				
	Identify and develop assessment strategies to determine the extent that intended learning has occurred.				
Resources and Materials	Integrate other content areas when appropriate.				
	Use materials from a wide variety of resources for lesson planning.				
	Determine available technology resources and integrate technology into instruction when it is value-added.				
	Evaluate the quality of available resources when designing a unit or lesson.				
Team Planning	Collaborate with other teachers to make intra- and inter-disciplinary connections.				

Fact Sheet #5 - Performance Standard 3: Instructional Strategies

INSTRUCTIONAL STRATEGIES

The teacher promotes student learning by using research-based instructional strategies relevant to the content to engage students in active learning and to facilitate the students' acquisition of key knowledge and skills.

Instruction is a process in which teachers apply a repertoire of instructional strategies to communicate and interact with students around academic content, and to support student engagement. An array of studies reveals that teachers who have similar professional qualifications (e.g., degree, certification, years of experience) instruct differently in their classroom and vary significantly in their ability to help students grow academically.[1] However, the primary difference between effective and ineffective teachers does not lie in the amount of knowledge they have about disciplinary content,[2] the type of certificate they hold,[3] the highest degree they earned,[4] or the years they have been in the teaching profession.[5] Rather, the difference lies more fundamentally in the manner in which they deliver their knowledge and skills while interacting with the students in their classrooms.[6] Numerous studies reveal that schools and teachers with the same resources yield strikingly different results in terms of student learning. Thus, it seems clear that these differences depend on how the resources are used by those who work in instruction.[7]

Based on a synthesis of over 500,000 studies of student achievement, Hattie suggested that teachers account for 30% of student achievement variance, with the rest attributable to school, family, and student variables.[8] It is estimated that only about 3% of the contribution teachers make to student learning is associated with teacher experience, educational level, certification status, and other readily observable characteristics. The remaining 97% of teachers' effects on student achievement is associated with intangible aspects of teacher quality that defy easy measurement, such as classroom practices.[9] Thus, teachers' practices inside classrooms have not only statistical significance, but also practical significance in terms of student learning. Numerous studies and literature reviews have begun to focus upon identifying the classroom practices of effective teachers.[10] Figure 3 summarizes the findings of two literature reviews conducted by Hattie on a range of variables relating to student achievement.[11] The elements highlighted below are descriptors of classroom-level instructional practices and their corresponding effect sizes.

An essential aspect of effective instruction that helps build and sustain student engagement is relevance of the instruction. Making instruction relevant to real-world problems is among the most powerful instructional practices a teacher can use to increase student learning.[12] This kind of instruction allows students to explore, inquire, and meaningfully construct knowledge of real problems that are relevant to their lives. Moreover, students are motivated and engaged when their learning is authentic, especially when the real-world tasks performed have personalized results. Research indicates that students have higher achievement when the focus of instruction is on meaningful conceptualization, especially when it emphasizes their own knowledge of the world.[13]

Selected research-supported key elements of effective instructional delivery include:

Note: This list is not intended to be a comprehensive set of research-based

instructional strategies, but rather an indicative set of those strategies for which there exists solid evidence of success.

Key Elements of Effective Instructional Delivery

Key Elements	Descriptions
Differentiation	The teacher uses multiple instructional materials, activities, strategies, and assessment techniques to meet students' needs and maximize the learning of all students.[14]
Variety	The teacher implements a variety of classroom techniques and strategies that enhance student motivation and decrease discipline problems.[15]
Cognitive challenge	The teacher provides in-depth explanations of academic content and covers higher-order concepts and skills thoroughly.[16]
Student engagement	The teacher is supportive and persistent in keeping students on task and encouraging them to actively integrate new information with prior learning.[17]
Recognizing patterns of student learning and adjusting	The teacher recognizes the schema or pattern in student learning, makes inferences about the situation (such as identifying the difficulties the students are having), and promptly adjusts the materials, learning activities, and assessment techniques to maximize student learning.[18]

Questioning	The teacher uses multiple levels (particularly higher cognitive levels) of questioning to stimulate student thinking and monitor student learning.[19]
Relevance	The learning process and the outcomes of learning have authentic relevance with students' lives.[20]

Students arrive at school with a variety of backgrounds, interests, and abilities. This means that a one-size-fits-all approach to instruction is ineffective, probably counterproductive, and perhaps even unethical. If the goal of instruction is to provide an opportunity for all students to learn, then the instructional practices that teachers choose to employ in the classroom matter and matter greatly.[21] In an analysis of educational productivity in the United States and other countries, teachers' classroom instruction was identified as one of the most significant variables having a great effect on student affective, behavioral, and cognitive outcomes.[22] For instance, the instructional practice of reinforcement has a magnitude of 1.17 standard deviations on educational outcomes. The effect of cues, engagement, and corrective feedback is approximately one standard deviation each. Personalized and adaptive instruction, tutoring, and diagnostic-prescriptive methods also have strong effects on student learning, with effect sizes[*] of .57 (i.e., 22 percentile gain), .45 (i.e., 17 percentile gain), .40 (i.e., 16 percentile gain),

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[*] *Effect size* is a measure of the magnitude of a treatment effect. Effect size helps us determine if the treatment effect is practically significant. The effect size can be interpreted as the average percentile standing of the students who received the treatment relative to the average untreated students. For instance, the strategy of mastery learning has an effect size of 0.58 on student achievement. An effect size of .58 would translate into a percentile gain of approximately 20 points.

and .33 (i.e., 13 percentile gain), respectively.[23]

Questioning can be another highly effective instructional tool when used properly.[24] In particular, the types of questions asked, wait time, and types of responses play a role in the propitious use of questioning.[25]There are substantial differences in the adept use of questioning between effective teachers and ineffective teachers. On the negative side, in a study of mathematics classrooms, Craig and Cairo found that teachers asked more than 99% of the questions. They also found that teachers tended to provide little wait time, asked recall and use questions, and designated a particular student to answer a question.[26] On the positive side, one case study found that teachers deemed effective asked approximately seven times higher cognitive-level questions than those considered ineffective.[27]

Effective teachers ask questions that are sensitive to students' differential levels of learning abilities, and that the questions are more closely aligned with learning outcomes and learning activities. Effective teachers try to accommodate their teaching to students of different levels. They take students' individual needs into account while differentiating the learning objectives, learning activities, and assessments, so that ALL students can engage with meaningful learning. Effective teachers have also been found to be more self-reflective and critical about their own classroom instruction. They are more adept in planning, evaluating, and modifying their instructional process, and more skillful in deploying strategies flexibly to attain their instructional goals.[28]

The complexities of teaching involve the focus on not only the breadth of content and skills that students should possess, but also the depth of the content and skills.[29]

Effective teachers focus on meaningful connections rather than isolated facts and ideas.[30] A study of student performance on the NAEP found that when teachers emphasized facts over reasoning, students performed more poorly than those of teachers who emphasized reasoning.[31] Effective teachers emphasize meaning. They encourage students to respond to questions and activities that require them to discover and assimilate their own understanding, rather than to simply memorize material.[32] These teachers also present and engage students in content at various levels of complexity, using a broad range of objectives and activities and employing activities and questions that address higher and lower levels of cognitive complexity.

Techniques that have been found to substantially increase student achievement include direct instruction, simulated instruction, and integrated instruction.[33] Integrating technology has also been associated with better academic achievement.[34] In addition, instruction that includes hands-on activities and cooperative groups has been associated with increased academic performance.[35] Furthermore, questioning as an instructional strategy has also been found to be effective among students.[36] A study of student reading growth revealed that the more teachers focused on higher level questions, the better students performed in reading.[37] Teachers also provided wait time for students to reflect on their answers.[38] Throughout instruction, effective teachers model and provide scaffolding to support student achievement.[39] While extant empirical studies focus on specific techniques and their impact on student achievement, the common thread among the studies is the focus on using a variety of instructional strategies.

Selected instructional practices exhibited by effective teachers are noted in the following list. The effective teacher:

- Stays involved with the lesson at all stages so that adjustments can be made based on feedback from the students.[40]
- Uses a variety of instructional strategies, as no one strategy is universally superior with all students.[41]
- Uses research-based strategies to enhance the time students spend with teachers by making instruction student-centered.[42]
- Involves students in appropriate and challenging learning activities, such as cooperative learning, to enhance higher order thinking skills.[43]
- Knows that instructional strategies that use students' prior knowledge in an inquiry-based, hands-on format facilitate student learning.[44]
- Uses remediation, skills-based instruction, and differentiated instruction to meet individual student's learning needs.[45]
- Uses multiple levels of questioning aligned with students' cognitive abilities.[46]

There is no single classroom practice that is necessarily effective with all subject matter and all grade levels.[47] Effective teachers recognize that no single instructional strategy can be used in all situations. Rather, they develop and call on a broad repertoire of approaches that have proven successful for them with students of varying abilities, backgrounds, and interests.[48] Effective instruction involves a dynamic interplay among content to be learned, pedagogical methods applied, characteristics of individual learners, and the context in which the learning is to occur.[49] Ultimately, subject matter knowledge, pedagogical skills, and an inspiration for instructional innovation and development can liberate individual teachers to explore the diversification and richness of daily practice.

Impact of Teacher Instructional Strategies on Student Achievement[50]

Variables	Effect Size	Source of Influence
Providing formative evaluation	.90	Teacher
Acceleration	.88	School
Teacher clarity	.75	Teacher
Feedback	.73	Teacher
Teacher-student relationships	.72	Teacher
Meta-cognitive strategies	.69	Teacher
Students' prior achievement	.67	Student
Not labeling students	.61	Teacher
Problem-solving instruction	.61	Teacher
Direct instruction	.59	Teacher
Mastery learning	.58	Teacher
Concept mapping	.57	Teacher
Socioeconomic status	.57	Home
Class environment	.56	Teacher
Challenge level of learning goals	.56	Teacher
Peer tutoring	.55	Teacher
Parental involvement	.51	Home
Expectations	.43	Teacher
Matching students' learning styles	.41	Teacher
Cooperative learning	.41	Teacher
Advance organizers	.41	Teacher
Higher cognitive questioning	.46	Teacher
Peer effects	.38	Student
Time on task	.38	Teacher
Computer-assisted instruction	.37	Teacher
Frequent testing/ Effects of testing	.34	Teacher
Homework	.29	Teacher
School aims and policies	.24	School
Affective attributes of students	.24	Student
Finances	.23	School
Individualization	.23	Teacher
Teaching test-taking and coaching	.22	Teacher
Physical attributes of students	.21	Student

Personality	.19	Student
Family structure	.17	Home
Ability grouping	.18	School
Reducing class size from 25 to 13	.13	School
Teacher subject matter knowledge	.09	Teacher
Student control over learning	.04	Teacher
Retention	-.16	School
Television	-.18	Home

Sample Performance Indicators for the Professional Knowledge of Teachers

3.1 Engages students in active learning and maintains interest.
3.2 Builds upon students' existing knowledge and skills.
3.3 Reinforces learning goals consistently throughout the lesson.
3.4 Uses a variety of research-based instructional strategies and resources.
3.5 Effectively uses appropriate instructional technology to enhance student learning.
3.6 Communicates and presents material clearly, and checks for understanding.
3.7 Develops higher-order thinking through questioning and problem-solving activities.
3.8 Engages students in authentic learning by providing real-life examples and interdisciplinary connections.

Sample Student Evidence that Teacher met the Criteria for Proficiency

- Make transitions from prior knowledge to new concepts with teacher support.
- Grasp meaning, not just facts.
- Create a range of products that provide evidence of learning in a unit.
- Use multiple strategies in learning new concepts.
- Take reasonable risks in responding, questioning, and/or producing products that reflect higher order thinking.

- Use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions.
- Demonstrate an ease of use with a wide variety of technology and software resources to complete assignments and show understanding of learning.
- Examine his/her own work and can explain how it relates to GPS/CCGPS.
- Describe learning expectations for which they are responsible, either in their own language or the language of the standard.
- Compare his/her work against standard-specific benchmarks and show evidence of the standards in their work.

Sample Conference Prompts

- What is an example of a research-based strategy you have used to successfully engage students?
- How do you learn about proven research-based strategies?
- How do you share what works with other colleagues?
- In what ways have you sought to keep instruction focused at a higher level of thinking?
- In what ways do you use technology and resources to promote higher-order thinking?
- How do you challenge special education students to use higher-order thinking skills?
- How have you worked with colleagues to locate and use technology tools and resources?
- What is an example of a lesson you developed that incorporated technology?
- How have you used benchmarks and exemplars this year as related to student mastery of standards?
- How have you worked with colleagues to develop exemplars and benchmarks?
- How have you created, modified, or used rubrics to communicate expectations?

Georgia Department of Education
Teacher Keys Effectiveness System

Teacher Self-Assessment Checklist					
Performance Standard 3: Instructional Strategies					
Quality		Exemplary	Proficient	Needs Development	Ineffective
Instructional strategies	Employ a variety of techniques and instructional strategies to enhance student motivation and decrease discipline problems.				
	Use both direct instruction and indirect instruction flexibly to serve appropriate learning purposes.				
	Stress meaningful conceptualization, emphasizing the students' own knowledge of the world.				
	Match instruction on students' achievement levels and needs.				
	Think through likely misconceptions that may occur during instruction and monitor students for these misconceptions.				
	Connect the learning process and outcomes to the authentic contexts in students' real life.				
	Adjust the delivery and pacing of the lesson in response to student cues.				
Content and Expectation	Choose appropriate pedagogical strategies that can best present the content.				
	Give clear examples and offer guided practice.				
	Make the learning student-centered.				
	Stress student responsibility and accountability in mastery of content and skills.				
	Teach students to reflect on learning progress.				
Cognitive Challenge	Is concerned with having students learn and demonstrate higher-order thinking skills rather than memorization of facts.				
	Provide in-depth explanations of academic content and cover higher-order concepts and skills thoroughly.				
	Stress meaningful concept mapping to connect new knowledge with prior learning.				
Questioning	Ask questions that reflect type of content and goals of the lesson.				
	Ask questions of varying depths of knowledge.				
	Use wait time during questioning.				
	Recognize the pattern in student learning and promptly adjust instruction to maximize student learning.				

Fact Sheet #6 - Performance Standard 4: Differentiated Instruction

DIFFERENTIATED INSTRUCTION

The teacher challenges and supports each student's learning by providing appropriate content and developing skills which address individual learning differences.

Effective teachers differentiate instruction and individualize for the range of student needs, abilities, and preferences in the classroom. Instead of using uniform strategies for all students, effective teachers design instruction that motivates each student and they communicate content in such a way that students are able to comprehend based on their individual prior learning and ability. Because students learn in a variety of ways and at a variety of rates, teachers should deliver their lessons with appropriate variety. As Weiss explained, differentiation to maximize the learning of individual students is the cornerstone of effective teaching. He pointed out that "we do our kids a disservice by choosing one pedagogy and using it all the time."[1] Carolan and Guinn stated that: "Diversity is a gold mine. It offers all members of a diverse group multiple ideas, perspectives, and solutions to problems. Teachers can nurture this diversity early on by maximizing the potential of each student in their classroom."[2] Effective teachers tend to recognize individual and group differences among their students and accommodate those differences in their instruction.[3] They adapt instruction to meet student needs, which requires careful assessment and planning for all students in the classroom, as well as the ability to select from a range of strategies to find the optimal match to the context.[4] Differentiation requires teachers to reflect on students as individuals. They also need to be clear about what students should know, understand, and able to do as the result of a segment of learning, and they also need to have a repertoire of instructional approaches to manage and facilitate flexible student-centered instruction.[5]

Studies on student achievement and on perceptions of teacher effectiveness have emphasized the importance of appropriate differentiation in instruction, including the following findings:

- Students are most engaged and achieve most successfully when instruction is appropriately suited to their achievement levels and needs.[6]
- Instructional differentiation requires careful monitoring and assessment of student progress, as well as proper management of activities and behavior in the classroom. Placing students into groups based on ability without tailoring instruction to the different groups is insufficient to support academic success.[7]
- Effective teachers know and understand their students as individuals in terms of their abilities, achievement, learning styles, and needs and give greater emphasis to individualization in their teaching.[8]

A meta-analysis of the extant research suggests that instruction based on learning styles is positively related to student attitudes and achievement.[9] Dunn et al. conducted a meta-analysis of 36 experimental studies to examine the effects of teaching students through their learning-style preferences.[10] They found that instructional interventions designed to meet the learning needs of the students showed a statistically significant difference in achievement over students not being accommodated, with an effect size of .353. That means students whose learning styles are accommodated would achieve 75% of a standard deviation higher than their counterparts whose learning styles are not accommodated. Dunn et al. also extended this finding to at-risk students, reporting that mean achievement increased nearly one standard deviation (i.e., approximately 84th

percentile versus 50th percentile) when teachers accommodated for learning styles.[11] Implementing a variety of classroom techniques and strategies also enhances student motivation and decreases discipline problems.[12] Furthermore, differentiated instruction enables teachers to adjust their curriculum, materials, learning activities, and assessment techniques to ensure that all students in a mixed-ability classroom can have different avenues to process new knowledge and develop skills, while having equal access to high-quality learning.[13]

Studies have found that a learning unit that has been enhanced or modified based on student learning abilities can improve students' learning outcomes compared with a regular textbook unit.[14] Furthermore, students from all socio-economic backgrounds and of different prior achievement levels make significant gains during the implementation of a differentiated unit. They also present higher motivation for learning. These studies indicate that teachers can differentiate the regular teaching materials, through the use of flexible grouping practices based on pre-assessment of student learning, and the increase of the breadth (i.e., interest, choices, and learning style variation) and depth (lessons for different ability levels), to create more meaningful learning for students. Beck also noted that accommodating student differences can be beneficial in many ways.[15] First, it motivates teachers to broaden their instructional versatility and creativity. Second, students are more likely to respond favorably to the subject content that is presented in a way that is compatible to their learning preferences. Third, students' positive attitudes can lead to higher commitment to learning and decrease behavioral problems. Research and best practice indicate that teachers can differentiate at least three classroom elements

as shown in Figure 4, according to students' readiness and preference

How to Differentiate[16]

Content	What do we want our students to know? How do we present the curriculum so that all children can learn the content?	Differentiation can take the form of varying the modalities in which students gain access to important learning, for example by (a) listening, reading, and doing; (b) presenting content in incremental steps, like rungs on a ladder, resulting in a continuum of skill-building tasks; and (c) offering learners a choice in the complexity of content with which they will begin a learning task that matches their current level of understanding and from which every learner can experience academic success.
Process	What do we want our students to be able to do? How can we integrate basic and higher-level thinking skills into the curriculum?	Differentiation takes the form of grouping flexibly, for example, by (a) varying from whole class, to collaborative groups, to small groups, to individuals, and (b) providing incentives to learn based on a student's individual interests and current level of understanding.
Product	What do we want our students to create? How can we teach them to become more self-directed learners?	Differentiation can also the take the form of varying assessment methods, such as (a) providing students a menu of choices that may include oral responses, interviews, demonstrations and reenactments, portfolios, and formal tests; (b) keeping each learner challenged at his or her level of understanding with content at or slightly above his or her current level of functioning; and (c) allowing students to have some choice in the means in which they can express what they know □ for example, writing a story, drawing a picture, or telling about a real-life experience that involves what is being taught.

As general education classrooms are increasingly inclusive, differentiation is becoming more essential to enable all students to achieve their optimal levels of learning. Despite the importance of differentiation, teachers are still not implementing it on a regular basis. Many

teachers are resistant to differentiation because:

- They do not receive administrative support.
- They fear that straying from the mandated curriculum may result in lower standardized test scores.
- They have classroom management or student behavioral problems.
- They are resistant to long-term changes in teaching style.
- They do not have time to plan for differentiation.
- They fear that students' parents may not agree with the practice.[17]

Carolan and Guinn pointed out that many educators mistakenly think that differentiation means teaching everything in at least three different ways. A differentiated classroom does look different from a one-size-fits-all classroom, but often the differences between students are less dramatic. For instance, differentiation can be in form of developing a metaphor matched to a student' cognitive ability and personal interests, or pushing the thinking of an advanced student during a whole-class discussion.[18] Through observations and interviews with five outstanding teachers, they found that their strategies that addressed student individual needs had four common characteristics:

- Offering personalized scaffolding, often inventing supports on the spot as a student faltered. In order to deliver tailored explanations, these teachers had a rich mental database of examples, metaphors, and enrichment ideas to draw on.
- Using flexible means or multiple paths to reach defined ends.
- Mining subject-area expertise. These teachers not only knew the landscape of their subject matter, they also showed

multiple ways to navigate it and translate it into their instruction in a manner that led to student learning.
- Creating a caring classroom in which student differences in ability, culture, language, or interests were seen as assets, rather than hurdles.

Sample Performance Indicators for the Professional Knowledge of Teachers

4.1 Differentiates the instructional content, process, product, and learning environment to meet individual developmental needs.
4.2 Provides remediation, enrichment, and acceleration to further student understanding of material.
4.3 Uses flexible grouping strategies to encourage appropriate peer interaction and to accommodate learning needs/goals.
4.4 Uses diagnostic, formative, and summative assessment data to inform instructional modifications for individual students.
4.5 Develops critical and creative thinking by providing activities at the appropriate level of challenge for students.
4.6 Demonstrates high learning expectations for all students commensurate with their developmental levels.

Sample Student Evidence that Teacher met the Criteria for Proficiency

- Meet the same standards through the same content/process but may demonstrate learning through differentiated products.
- Discover and examine their strengths, talents, interests, and resources with teacher guidance.
- Complete individualized activities designed to achieve success in specific content and/or skills.

- Participate successfully in group learning activities designed to help peers of varied academic strengths and weaknesses work together.
- Practice leadership and support roles in groups with teacher's help.
- Provide feedback to the teacher about how they learn best, when they are confused, and what help they need.
- Learn and enact explicit roles and responsibilities (e.g., group member, listener, partner, worker, etc.)
- Learn in ways that are comfortable and productive for them.
- Explain different group options typically used by the teacher.
- Grasp the meaning, not just the facts, of the content they learn.
- Explain and demonstrate how they can meet or have met the standards.
- Explain personal learning goals and how they have met them.
- Use agenda (or other forms of communication) to record individual learning goals.

Sample Conference Prompts
- How have you determined which differentiation strategies are appropriate for your students?
- How have you adapted instruction?
- How have you worked with teachers to develop differentiation strategies for special needs and gifted students?
- How do you use technology and resources to differentiate instruction?
- What is your process for determining how to group students for particular lessons?
- How do you use data to support your grouping practices?
- How do you determine whether or not a group is working well? How do you make adjustments to improve effectiveness?

- How do students set their own learning goals in the classroom?
- How do you support student goal-setting and self-assessment during your lesson?

Teacher Self-Assessment Checklist					
Performance Standard 4: Differentiated Instruction					

Quality		Exemplary	Proficient	Needs Development	Ineffective
Differentiating Content	Increase the breadth of learning materials to enhance student learning motivation.				
	Offer students choice regarding the complexity (depth) of content they want to start with so that they can experience academic success.				
	Offer multiple modes of learning for students to be exposed to the target content through their learning-style preferences (such as reading, listening, or doing).				
	Re-teach an idea or skill in small groups of struggling learners.				
	Extend and enrich the thinking or skills of advanced learners.				
Differentiating Process	Vary instructional strategies and activities for students.				
	Vary types of assignment to assess student learning.				
	Routinely combine instructional techniques that involve individual, small-group, and whole-class instruction.				
	Monitor and pace instruction based on the individual needs of students.				
	Draw on a mental database of examples, metaphors, and enrichment ideas to provide personalized scaffold.				
	Offer optimal amount of support/intervention and structure learning tasks to ensure the learning demand is appropriately challenging.				
Differentiating Product	Provide students with choices regarding the method to express required learning, such as presentation, portfolios, or formal tests.				
	Use rubrics that match and extend students' varied ability levels.				
	Encourage students to produce their own product assignment.				
	Allow students to work alone or in small groups on projects.				
Learning Environment	Create an environment in which student differences in ability, cultural background, academic needs and interest are respected and treated as assets.				
	Know and understand students as individuals in terms of ability, achievement, learning styles, and needs.				

Fact Sheet #7 - Performance Standard 5: Assessment Strategies

ASSESSMENT STRATEGIES

The teacher systematically chooses a variety of diagnostic, formative, and summative assessment strategies and instruments that are valid and appropriate for the content and student population.

A teacher's skill in assessment must be more than merely testing students or measuring achievement. Teacher assessment skill "must center not on *how [they] assess* student achievement but on *how [they] use assessment* in pursuit of student success."[1]Researchers usually draw a distinction between *assessment of learning* and *assessment for learning.* Gronlund described assessment *of* learning as "a broad category that includes all of the various methods for determining the extent to which students are achieving the intended learning outcomes of instruction."[2]Assessment of student learning can emerge in various formats, such as teacher observation, oral questioning, journal entries, portfolio entries, exit cards, skill inventories, homework assignments, project products, student opinions, interest surveys, criterion-referenced tests, or norm-based tests. [3] In comparison, assessment *for* learning involves the teacher gathering, analyzing, and using data, including state and district assessment data, to measure learner progress, guide instruction, and provide timely feedback. Educators distinguish three different types of assessment based on the purpose and principles that drive assessment:

- Diagnostic assessment – the purpose of diagnostic assessment is to ascertain, prior to instruction, each student's strengths, weaknesses, knowledge, and skills and to permit the teachers to remediate, accelerate, or differentiate the instruction to meet each student's readiness for new learning.
- Formative assessment – formative assessment is an assessment that is integral to the instructional process to help teachers adjust and modify their teaching practices so as to reflect the progress and needs of the students.
- Summative assessment – summative assessment can occur at the end of a chapter, unit, semester or a school year to determine the student attainment of the standards of certain subject areas.

The practice of assessing student learning is essential for effective instruction and learning. High quality assessment provides teachers with the information regarding the extent to which students have attained the intended learning outcomes, and it informs teachers' instructional decision making (what to teach and how to teach) as well. The goals of assessment are to provide teachers with evidence of student learning and to facilitate teachers in making informed decisions on revising instruction and advancing student learning.

Assessment can facilitate instruction and learning in many ways, including:

- Providing diagnostic information regarding students' mental readiness for learning new content.
- Providing formative and summative information needed to monitor student progress and adjust instruction.
- Keeping students motivated.
- Holding students accountable for their own learning.
- Providing opportunities to re-expose students to content.
- Helping students to retain and transfer what they have learned.[4]

Research has indicated that teachers who introduce assessment into their classroom practice can affect substantial achievement

gains. In their 1998 research review, Black and Wiliam examined a multitude of empirical studies to determine whether improvement in classroom assessments can lead to improvement in learning.[5] They found that formative assessment has substantial positive effects on student achievement, with effect size ranging from 0.3 to 0.7 standard deviations. Particularly, they found that formative assessment is more effective for low achievers than other students, thus, reducing an achievement gap while raising achievement overall at the same time.[6]Wenglinsky found that teachers' use of frequent assessment and constructive feedback had a positive effect on student mathematics and science achievement at all grade levels.[7]Stronge et al. also noted that effective teachers and ineffective teachers differed in their student assessment practices.[8] In particular, effective teachers were found to provide more differentiated assignments for students than those deemed ineffective.

Research has found that an effective teacher:

- Gives regular feedback and reinforcement.[9]
- Offers timely and specific feedback.[10]
- Gives homework and offers feedback on the homework.[11]
- Uses open-ended performance assignments.[12]
- Analyzes student assessments to determine the degree to which the intended learning outcomes align with the test items and student understanding of objectives. [13]
- Interprets information from teacher-made tests and standardized assessments to guide instruction and gauge student progress by examining questions missed to determine if the student has trouble with the content or the test structure.[14]

Assessments are more likely to have a positive influence on student learning when they exhibit the following characteristics:

- Aligned with the framework of learning targets and instruction.
- Of sufficient validity and reliability to produce an accurate representation of student learning.
- Accompanied with frequent informative feedback, rather than infrequent judgmental feedback.
- Involve students deeply in classroom review and monitoring.
- Processes and results are timely and effectively communicated.
- Documented through proper record keeping of learning results.[15]

As noted earlier, there are multiple methods for assessing student learning. Guskey found that teachers and administrators believed student portfolios were the most important type of assessment tool used to measure student learning, while division, state, and national assessments ranked the lowest.[16] Interestingly, homework ranked in the middle of Guskey's analysis of assessment types. Regardless of the type of assessment used, the more important issue is the practical value of the assessment in use. Tomlinson suggested that teachers must find a proper fit between students and the method being used to assess their learning.[17] Assessment is a form of communication. Teachers must allow students to communicate their learning in a manner best suited to their needs.

Given the prevalence of standardized assessments at the state, regional, and national levels, in the United States and in numerous countries around the globe, a brief summary on this particular type of assessment seems in order. Extant literature has documented both positive and negative

impacts of standardized assessments on teachers' instruction and assessment at the classroom level. The positive evidence indicates that standardized tests motivate teachers to:

- Align their instruction to standards.
- Maximize instructional time.
- Work harder to cover more material in a given amount of instructional time.
- Adopt a better curriculum or more effective pedagogical methods.[18]

However, other research reveals that high-stakes assessments force teachers to:

- Narrow the curriculum.
- Focus on memorization, drills, and worksheets.
- Allocate less time to higher-order skills.
- Restrict their teaching to formulated approaches of instruction.[19]

Standardized assessment is not primarily concerned with what is going on in the daily classroom. Consequently, teachers should maintain a balance between state/national-level assessments and classroom-level assessments to optimize student learning.

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Sample Performance Indicators for the Professional Knowledge of Teachers

5.1 Aligns student assessment with the established curriculum and benchmarks.
5.2 Involves students in setting learning goals and monitoring their own progress.
5.3 Varies and modifies assessments to determine individual student needs and progress.
5.4 Identifies and uses formal and informal assessments for diagnostic, formative, and summative purposes.
5.5 Uses grading practices that report final mastery in relationship to content goals and objectives.

5.6. Uses assessment techniques that are appropriate for the developmental level of students.
5.7 Collaborates with others to develop common assessments, when appropriate.

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Sample Student Evidence that Teacher met the Criteria for Proficiency

- Give examples of how the teacher assesses prior knowledge at the beginning of most instructional units/courses, etc.
- Give several examples of how the teacher gave different tasks to different individuals or groups.
- Learn from their misconceptions as the teacher uses formative assessment to adjust teaching to meet student needs.
- Participate in and learn from a variety of appropriate formative assessments.
- Explain teacher feedback on summative assessments as well as re-teaching that promotes specific knowledge of the GPS/CCGPS content.
- Describe their strengths and weaknesses *based on assessments.*

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Sample Conference Prompts

- How are you using assessment data to plan your lesson or unit plans?
- How are you differentiating based on diagnostic data?
- What is your process for analyzing and interpreting diagnostic data you collect on your students?
- How are you using formative assessments to adjust instruction? How do you differentiate based on formative assessments?
- What is your process for analyzing and interpreting formative assessments data?
- What is an example of how you used data to adjust instruction?
- How are the summative assessments connected to the GPS/CCGPS or other standards?
- How does the data from the summative assessment inform your future instruction?

Teacher Self-Assessment Checklist					
Performance Standard 5: Assessment Strategies					
Quality		Exemplary	Proficient	Needs Development	Ineffective
Use Different Formats of Teacher-Made Assessment	Use conventional multiple-choice, matching, alternate choice, true/false, and fill-in-the-blank questions appropriately.				
	Use short answer, constructed response, and essay to encourage students to explain their understanding of important ideas and principles.				
	Design performance tasks to ask students to show what they can do with the knowledge and skills learned.				
	Observe students informally in the classroom to assess their ongoing learning.				
	Encourage students' self-assessment of their own thinking, reasoning, processes, and products.				
	Clearly explain homework.				
	Design diagnostic assessment to identify students' strengths, weaknesses, and mental readiness for learning new content or skill.				
	Use formative assessment to monitor student learning progress and modify instruction.				
	Use summative assessment to determine the student attainment of the standards of subject areas.				
	Be a critical consumer of available assessment resources.				
Validity of Assessment	Relate assessment to the content under study and to student capacity.				
	Match assessment to intended learning objectives.				
	Align assessment with written and taught curriculum.				
	Use assessment that can truly reveal whether students understand the learning.				
	Use ongoing assessment to monitor student progress.				
	Use multiple assessments to determine whether a student has mastered a skill.				
	Design assessments to assess both higher- and lower-level content and skills.				
	Exercise accommodations in assessment for students with special needs.				
	Use robust rubrics or scoring guides for student assignments, products, and projects.				

Fact Sheet #8 - Performance Standard 6: Assessment Uses

ASSESSMENT USES

The teacher systematically gathers, analyzes, and uses relevant data to measure student progress, to inform instructional content and delivery methods, and to provide timely and constructive feedback to both students and parents.

Effective teachers not only assess student learning, but also they use the results of student assessment systematically and intelligently. That is a commonly adopted strategy by effective teachers and an integral attribute of their instruction. Using assessment means assessment of student learning is not just the end, but also the means to reach an end by continuously monitoring success and step-by-step moving to desired learning outcomes. Assessment is a waste of time and effort if its results are shelved and collect dust. The essence of assessment is how it can lead to improvements in teaching and learning.[1] Assessment use can be defined as the practice that helps teachers use student performance data to continuously evaluate the effectiveness of their teaching and make more informed instructional decisions.[2] The purposes of assessment use include:[3]

- Gathering important information about student understanding to make prompt instructional modification - evidence of students' knowledge and understanding.
- Providing timely and informative feedback to students - the nature of feedback given to students.
- Enabling students to set and attain meaningful goals - shifts in the way that students learn.

A review of research by Natriello[4] and Crooks[5] and more recently by Black and Wiliam[6] has demonstrated that substantial student learning gains are possible when teachers introduce assessment results into their classroom practice. Assessment data can be used for tasks such as setting annual, intermediate, and ongoing goals. Assessment results also can be used to visually depict goals and visions, motivate students, and celebrate achievements and progress.[7] Effective teachers provide instruction and support that leads to quality learning opportunities on a day-to-day basis. Additionally, an experimental study reached the following conclusions for teachers who monitored their students' progress on a regular basis:

- They effected greater student achievement than those who used conventional monitoring methods.
- They had more improvement in their instructional structure.
- Their pedagogical decisions reflected greater realism and responsiveness to student progress.
- Their students were more knowledgeable of their own learning and more conscious of learning goals and progress.[8]

The practice of assessing and documenting student growth is essential for effective instruction and learning. It determines the effectiveness of a period of teaching (*e.g.,* a lesson, a unit, a semester, or a school year) in terms of student learning and provides a basis for continuing instruction. Collecting evidence of students' learning progress provides teachers with day-to-day data on students' mental preparedness for certain learning targets and facilitates teachers in making data-based decisions for instruction modification. The data can come from small-group discussion with the teacher and a few students, whole-class discussion, journal entries, portfolio entries, exit cards, skill inventories, pretests, homework assignments, student opinion, or interest surveys.[9] In

addition, reviewing student work (*e.g.,* student writing samples and project-based work) is also an important way of assessing student performance on curricular goals and identifying desired changes in instructional practices.

Student progress monitoring is a technique that can provide teachers with data on students' performance to evaluate the effectiveness of their instruction and make adjustments in their pedagogical behavior. Progress monitoring also can help teachers set meaningful student achievement goals to tap into greater student learning potential. Teachers who use progress monitoring also are better informed of the strengths and weaknesses in student learning and can better decide on what instructional modifications are necessary. Empirical research has found that when progress monitoring is combined with goal-raising, student learning profiles, and appropriate instructional modifications, it can help teachers build stronger instructional programs that are more varied and more responsive to students' learning needs, and effect better academic performance for students.[10] Stecker, Fuchs, and Fuchs noted that teachers effected significant growth in student learning with progress monitoring only when they modified instruction based on progress monitoring data; however, frequent progress monitoring alone did not boost student achievement.[11]

Effective teachers are often described as flexible and opportunistic. They use various techniques (such as questioning, classroom observation) to diagnose student learning and then adjust instruction promptly to close the gap between where the students are now and where the students should be. Effective teachers are aware that when students begin to indicate unengaged behaviors, that can be the result of poorly planned activities,

inadequate scaffolding and modeling, or insufficient attention to developing norms and participation routines in the classroom.[12] To address student off-task behaviors, they not only use behavior control, but also, more importantly, modify their instruction to make it more engaging. Effective teachers ask appropriate questions at appropriate times to solicit information regarding how well students have mastered the basic facts, skills, or ideas in a lesson. The technique of questioning not only provides students an opportunity to think critically and become more informed about their learning, it also provides important input for teachers to make instructional modifications.

An instructional technique that is complimentary to questioning is feedback. Questions and answers, from teachers to students and back again, represent much of the academic interaction that takes place in schools. This process supports student engagement in learning and enhances teachers' ability to monitor the learning process.[13] Feedback to students that focuses on developing skills, understanding, and mastery, and treat mistakes as opportunities to learn is particularly effective.[14] Effective feedback targets students' specific misconceptions or errors that occur in a content area or a skill set and that provide informative guidance on what they need to do to maximize their performance. Effective teachers avoid simple yes or no answers; rather, they provide informative explanations of what students are doing correctly, what they are not doing correctly, and how to fix it.[15] Students as well as teachers have strong beliefs about the importance of feedback. Students report that informative feedback makes them aware of their mistakes, highlights ways to make corrections, and informs them of teacher expectations. Teachers report that providing feedback can

be arduous and painstaking, but also they feel that it is an important part of instruction.[16]

Based on a large-scale research review, Hattie found that compared to their ineffective colleagues, effective teachers were adept at monitoring student problems and assessing their level of understanding and progress, and they provided much more relevant, useful feedback.[17] The research also shows that effective teachers are more adept at developing and testing hypotheses about learning difficulties or instructional strategies. Wenglinsky found that teachers' use of frequent assessment and constructive feedback had a positive effect on student mathematics and science achievement at all grade levels.[18] Some other characteristics of teachers' effective use of student assessment data include:

- Aligning intended learning outcomes, instruction, and assessment to effectively keep track of students' progress.[19]
- Using high-quality homework and classroom quizzes to review student performance on key knowledge and skills, and providing meaningful and timely feedback.[20]
- Targeting areas of strength and weakness to provide appropriate remediation.[21]

When teachers monitor students' ongoing learning and use student assessment data to inform their own teaching, they:

- Effect greater student achievement.
- Have more improvement in their instruction and make their pedagogical decisions more responsive to student learning.
- Exhibit greater concerns about learning and higher academic emphasis in their classroom practices.
- Are better at supervising the adequacy of student learning, identifying students in need of additional or different forms of

instruction, and modifying practices to maximize student learning.[22]

Fuchs and Fuchs found that teacher use of ongoing student assessment data can be beneficial to student learning in many ways, such as:

- To identify students in need of additional or different forms of instruction.
- To enhance instructional decision-making by assessing the adequacy of student progress.
- To determine when instructional modifications are necessary.
- To prompt teachers to build stronger instructional programs that are more varied and responsive to student needs.[23]

Sample Performance Indicators for the Professional Knowledge of Teachers

6.1 Uses diagnostic assessment data to develop learning goals for students, to differentiate instruction, and to document learning.

6.2 Plans a variety of formal and informal assessments aligned with instructional results to measure student mastery of learning objectives.

6.3 Uses assessment tools for both formative and summative purposes to inform, guide, and adjust instruction.

6.4 Systematically analyzes and uses data to measure student progress, to design appropriate interventions, and to inform long- and short-term instructional decisions.

6.5 Shares accurate results of student progress with students, parents, and key school personnel.

6.6 Provides constructive and frequent feedback to students on their progress toward their learning goals.

6.7 Teaches students how to self-assess and to use metacognitive strategies in support of lifelong learning.

Sample Student Evidence that the Teacher met the Criteria for Proficiency

- Recognize that the teacher tries to meet the needs of all students.
- Be engaged in learning and on task.
- Explain how they need to perform on most tasks to-meet standard
- Be aware that the teacher works individually with struggling students and high achieving ones on what they need to learn and where they need to focus their efforts.
- Have multiple opportunities to achieve mastery and improve grades.
- Articulate assessment procedures.

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Sample Conference Prompts

- How do you use assessment data to plan instruction based on student and sub-group need?
- How do you contribute to the RTI process?
- How do you monitor students and use various types of data to assess student needs? What types of data do you use?
- Give an example of a student for whom you identified a need and provided an intervention?

Teacher Self-Assessment Checklist					
Performance Standard 6: Assessment Uses					
Quality		Exemplary	Proficient	Needs Development	Ineffective
Identify and Enhance Student learning	Use assessment data to check for understanding and adequacy of learning.				
	Return student work in a timely manner.				
	Assess, comment on, and discuss homework in class.				
	Give clear, timely, and informative oral or written feedback.				
	Document student progress and achievement over time.				
	Share progress reports with students and parents in a timely manner.				
	Remediate the learning of students who did not achieve mastery.				
	Provide differentiated instruction based on assessment analysis.				
	Interpret data of teacher-made assessment and standardized assessment accurately and make inferences about student progress and challenges.				
	Provide students with opportunities to reflect on their performance themselves and ask questions.				
	Provide opportunities for students to reengage with the content and skills of the curriculum, rather than focusing solely on the grades.				
	Use assessment data to set future achievement goals.				
Improve Instruction	Use assessment data to self-assess instructional effectiveness and identify areas of strengths and weaknesses.				
	Make instructional decisions based on student achievement data analysis.				
	Make pedagogical decisions more responsive to student learning needs.				
	Design appropriate interventions for students in need of additional or different forms of instruction.				
	Use information gained from ongoing assessment for remediation and instructional planning.				

Fact Sheet #9 - Performance Standard 7: Positive Learning Environment

POSITIVE LEARNING ENVIRONMENT

The teacher provides a well-managed, safe, and orderly environment that is conducive to learning and encourages respect for all.

Students need an engaging, stimulating, and enriching learning environment to grow and thrive. In order to achieve this type of rich environment, effective teachers establish and communicate guidelines for expected behavior, monitor student behavior, keep students on task, and infuse humor, care, and respect into the classroom interactions, so as to develop a climate that is conducive to student learning. As a result, research has indicated that a positive learning environment can shape student outcomes in cognitive, motivational, emotional, and behavioral domains.[1]

Among others, the attributes of caring, supportive, safe, challenging, and academically robust help define what it means to have a positive learning environment that is conducive to student success.[2] However it is defined, virtually all teachers and administrators, and even students, themselves, recognize how valuable a positive classroom climate is to learning. The most prevalent criteria used to define learning environments are probably the physical arrangement of the classroom, discipline and routines, organization of learning activities, and the engagement of students with tasks, among others. The key features highlighted next can elucidate what research indicates about an effective learning environment.[3]

Key Features of an Effective Learning Environment

Defining Characteristics	Focus
Physical arrangement of the classroom	The teacher develops functional floor plans with teacher and student work areas and furniture/materials placement for optimal benefit.[4]
Discipline and routines	The teacher establishes classroom rules and procedures early on in the school year.[5]
Organization of learning activities	Classroom activities have an academic focus. The teacher orchestrates smooth transitions and maintains momentum throughout teaching and learning.[6]
Engagement of students	The teacher uses effective questioning, smooth transitions, and challenging but interesting activities to increase student engagement in learning and student accountability.[7]
Maximizing instructional time	The teacher protects instruction from disruption and makes the most out of every instructional moment.[8]
Communication of high expectations	The teacher assumes responsibility for student learning, sets high (but reasonable) expectations for all students, and supports students in achieving them.[9]
Care and respect	The teacher establishes rapport and trustworthiness with students by being fair, caring, respectful, and enthusiastic.[10]

Research has found that an effective teacher:

- Is adept at organizing and maintaining an effective classroom environment.[11]
- Has a sense of "with-it-ness," which can be translated as being aware of when routines need to be altered or an intervention may be needed to prevent behavior problems.[12]
- Fosters relationships where respect and learning are central so students feel safe in taking risks that are associated with learning and believes in the students.[13]
- Is culturally competent and attuned to students' interests both in and out of school.[14]
- Establishes good discipline, effective routines, smooth transitions, and ownership of the environment as components of establishing a supportive and collaborative climate.[15]

A review of research connecting learning environment and student achievement emphasizes a number of key dimensions, including classroom management and structure, positive classroom climate, and classroom talk.

Classroom management and structure:
Teachers who emphasize structure in the classroom are more effective than those who do not.[16] In general, structure means "an aggregate of elements of an entity in their relationships to each other."[17] For our purposes in education, specifically, structure involves physically orienting the classroom for instruction, preparing and organizing materials, and framing lessons in a coherent and logical manner. Effective teachers implement good classroom management to establish order, engage students, and elicit student cooperation, with an ultimate purpose to establish and maintain an environment conducive to instruction and learning.[18] Two

key features of effective classroom management are:

1. Good management is preventive rather than reactive.
2. Teachers create well-managed classrooms by identifying and teaching desirable behaviors to students.

Effective teachers were found to maintain their management system by "monitoring and providing prompt feedback, pacing class activities to keep them moving, and by consistently applying classroom procedures and consequence."[19] The extant research is fairly clear that good classroom management has a positive influence on students' motivational development.

Positive classroom climate: Effective teachers build a classroom climate where error (i.e., risk taking) is welcomed, where student questioning is high, where engagement is the norm, and where students can gain reputations as effective learners.[20] Teachers who make the effort to engage in positive interactions with students make a difference in the academic and social development of their students.[21]

Classroom talk: The interaction between teacher and students, and among students, is another significant indicator of learning environment. Authority is more distributed than centralized through the communication that happens in a positive classroom environment. Additionally, the talk between teacher and student is personalized and personal. Exemplary teachers have been found to use authentic conversation to learn about students and encourage students to engage their peers' ideas.[22]

A safe school always starts with individual safe classrooms. Cornell and Mayer stated that "academic success for students begins

with a trusting and mutually respectful relationship between student and teacher, extends to classroom order, and culminates in a safe and supportive school climate that is profoundly and inextricably linked to learning outcomes."[23] The classroom environment refers to the conditions, circumstances and influences surrounding and affecting the development and performance of learners. The classroom climate is the shared perceptions of learners about the classroom environment. The classroom climate can range from a warm, welcoming and nurturing atmosphere to one characterized by coldness and indifference.[24]

Attributes of Positive Learning Environment

Positive Attributes	Descriptions
Classroom management and structure	• identifying and communicating desirable behavior • consistently applying rules and procedures • monitoring student behavior • taking preventive rather than reactive management actions • pacing class activities and transitioning between tasks smoothly • maximizing instructional time • keeping students on task • making learning meaningful[25]
Positive classroom climate	• cooperation among teachers and students • common interest and values • pursuit of common goals • a clear academic focus • well-organized and well-planned lessons • explicit leaning objectives • appropriate level of task difficulty for students • appropriate instructional pace[26]
Classroom talk	• respectful, supportive, and productive • modeled by teachers • practiced to students

Anderson suggested that classes have a distinctive personality or "climate" which influences the learning efficiency of their members. The properties that make up a classroom environment include interpersonal relationships among students, relationships between students and their teachers, relationships between students and both the subject being studied and the method of learning, and the students' perception of the structure of the class.[27]

As early as 1973, Moos, the first researcher who popularized the concept of classroom climate, developed a measurement scale that measures the climate within a classroom on three broad categories:[28]

- *Relationships* – the degree to which individuals in the environment help and support each other and express themselves openly and freely.
- *Personal development* – the degree to which personal self-enhancement can occur.
- *Maintenance and change in the system* – the degree to which the environment is orderly, clear in its expectations, maintains control, and is able to change.

Similarly, the scale developed by Sinclair and Fraser measures classroom environment from five aspects:[29]

- *Cooperation* – the extent to which students cooperate with each other during class and activities.
- *Teacher Support* – the extent to which the teacher helps, encourages, and is interested in the students.
- *Task Orientation* – the extent to which it is important to the class to stay on task and complete class work.
- *Involvement* – the extent to which students participate actively in their class activities and discussions.
- *Equity* – the extent to which the teacher treats all students equally, including the distribution of praise and questioning and the inclusion in discussion.

Research has demonstrated that students in cooperative learning environments typically perform better than those in competitive or individualistic situations in terms of their reasoning, the generation of new ideas and solutions, and how well they transfer what they learn from one situation to another, as well as on traditional test measures.[30] The trust between the teacher and students and among students themselves is a key element to effective classroom environment. Tschannen-Moran explained the importance of trust in this way: "Without trust, students' energy is diverted toward self-protection and away from learning."[31]

A synthesis of research studies indicates that learning outcomes and gains are positively associated with learning environment characteristics like cohesiveness, satisfaction, task difficulty, formality, goal direction, democracy, and the material environment, but negatively associated with characteristics like friction, cliqueness, apathy, and disorganization.[32] Students' perceptions of their learning environment impact their self-concept as a learner. Byer found a positive relationship between students' perceptions of classroom social climate, students' perceptions of classroom affiliation, and academic self-concept.[33] Byer also found a positive relationship between students' perceptions of classroom involvement and academic self-concept.[34] Research also found that students' perceptions of the classroom social environment (teacher support, promotion of mutual respect, promotion of task-related interaction, student support) were related to their engagement in the classroom (self-regulation and task-related interaction).[35]

The interaction between teacher and students is a significant indicator of learning environment. Teachers and students spend much of their day interacting academically. However, social interactions and those that give the teacher opportunities to demonstrate caring, fairness, and respect have been shown to be an important element of teacher effectiveness. A teacher's ability to relate to students and to make positive, caring connections with them plays a significant role in cultivating a positive learning environment and promoting student achievement.[36]

Teachers who make the effort to engage in positive interactions with students make a difference in the academic and social development of their students. A constructive interaction with students is a motivator for students to act in accordance with the expectation of their teacher. Studies confirm that low student achievement can result from stressful student-adult relationships, while positive relationships can lead to higher levels of student participation and engagement.[37]

Teacher interactions with students have been found to have effects at all grade levels. Hamre and Pianta found that first grade teachers who engaged in positive interactions with at-risk students reduced the probability of those students experiencing failure in the early grades.[38] Barney found that middle school students developed a more positive attitude toward course content when their teachers took the time to interact with them.[39] Pressley, Raphael, Gallagher, and DiBella found that secondary teachers who got to know their students personally were able to work with them to develop and achieve goals.[40]

Cornelius-White synthesized 119 studies that examined the impact of learner-centered teacher-student relationships on student outcomes.[41] Specifically, the author focused on the teacher-students relationships that are characterized by empathy, warmth, genuineness, non-directiveness, higher-order thinking, encouraging learning/challenge, adapting to individual and social differences,

and composites of these. Overall, the meta-analysis found that these student-centered teacher variables have positive association with student cognitive (e.g., academic achievement in math, science, social science, and verbal achievement), affective (e.g., positive motivation, self-esteem/mental health, social connections), and behavioral (e.g., student participation/initiation, outcomes, attendance/absences, disruptive behavior) outcomes. The mean correlations (r = .31) are above the average compared with other educational interventions.

The following table offers an overview of five basic emotional needs of students that need to be addressed to create a classroom environment for optimal learning and growth:[42]

Student Emotional Needs and Building an Affectively Healthy Learning Environment

Domains of Student Emotional Needs	Characteristics of an Affectively Healthy Learning Environment	What Teachers Can Do?
Psychological safety	Learners know what is expected, feel safe, and protected, are able to trust others and are able to anticipate or predict the sequence of events from experience.	• Establish clearly defined classroom procedures, policies and practices. • Act responsibly and confidences. • Maintain neat, clean and orderly physical conditions within the classroom.
A positive self-image	Learners have a strong sense of personal worth and feel capable of being loved and entitled to happiness.	• Give positive feedback that can help students to become aware of their strengths and areas for growth. • Build rapport with students. • Honor each child's uniqueness. • Demonstrate acceptance and caring.
Feelings of belongings	Learners feel that they are equal to others and they are accepted and valued as a member of something larger. The whole class is characterized by bonding, class cohesiveness and a sense of group pride.	• Create an accepting, warm classroom culture. • Reduce feelings of isolation or competition by involving students in classroom activities. • Provide students with opportunities to be of service to others.
Purposeful behavior	Learners bring meaning to their efforts and sustain an intrinsic joy of learning and the achievement of solving their own problems.	• Be a model to take responsibility for and initiative in the learning process. • Set challenging but achievable expectations. • Convey clear expectations. • Express confidence and faith in their students' abilities. • Strengthen values such as responsibility, effort, honesty, perseverance, determination, and commitment.

A sense of personal competence	Learners are attaining optimal learning and performance, both cognitively and affectively.	• Provide options of learning materials and tasks based on students' ability. • Be the support and the cheerleader for the students. • Recognize the efforts exerted and the growth achieved by individual students. • Provide constructive, informative feedback to help students become better. • Celebrate success.

Allington and Johnston observed and interviewed 30 fourth-grade literacy teachers in 24 schools from five states, who were identified as exemplary through a snowball nomination process.[43] These teachers' classroom talk was found to have the following characteristics:

- The classroom talk could be described as respectful, supportive, and productive and was not only modeled by the teacher in interactions with students, but also deliberately taught, and expected.
- The talk between teacher and student was personalized and personal. Exemplary teachers used authentic conversation to learn about students. They encouraged students to engage each other's ideas. The authority was more distributed than centralized.
- "No" or "Yes" were rarely uttered by the teachers except in response to gross social transgression.

Effective teachers were found to maintain their management system by "monitoring and providing prompt feedback, pacing class activities to keep them moving, and by consistently applying classroom procedures

and consequence."[44] Wang, Haertel, and Walberg analyzed a knowledge base comprising 11,000 statistical findings connecting a variety of variables and student achievement in order to answer the question: *What helps students learn?* They found effective classroom management was one of the most influential variables in student learning. They concluded, "Effective classroom management increases student engagement, decreases disruptive behaviors, and makes good use of instructional time."[45] Their definition of effective classroom management included effective questioning/recitation strategies, learner accountability, smooth transitions, and teacher "with-it-ness."

Taylor et al. also found the most accomplished teachers were experts at classroom management. In general, they had well-established classroom routines and procedures for handling behavior problems, smooth transitions between activities, and a rapid rate of instruction, thus, allowing for high instructional density. They managed, on average, to engage virtually all (96%) of their students in the work of the classroom.[46]

Classroom management includes actions taken by teachers to establish order, engage students, and elicit student cooperation, with an ultimate purpose to establish and maintain an environment conducive to instruction and learning.[47] Two key features of effective classroom management are:

1. Good management is preventive rather than reactive.
2. Teachers help create well-managed classrooms by identifying and teaching desirable behaviors to students.

Elements of effective classroom management include establishing routines and procedures to limit disruption and time taken away from teaching and learning, maintaining

momentum and variety in instructional practices, and monitoring and responding to student activity. These elements contribute to students' active engagement in the learning process.[48] Research on the classroom management skills of effective teachers has consistently found that they establish routines for all daily tasks and needs. [49] Effective classroom managers orchestrate smooth transitions and continuity of momentum throughout the day to increase the amount of time spent on academic tasks. An exploratory study of effective versus ineffective teachers found that teachers whose students make greater achievement gains use more routines for everyday tasks than teachers whose students made less than expected achievement gains.[50]

Most effective teachers admit that rules, procedures, and routines take precedence over academic lessons during the first week of school, noting that organization takes a considerable investment of time but has tremendous payback benefits.[51] Another research team noted that teachers who spend more time establishing instructional routines at the beginning of the school year did not need to exert as much effort on similar tasks later in the year.[52] The investment in initial organizational strategies yielded significant gains in reading scores throughout the year. In comparison, achievement gains were lower among students whose teachers did not demonstrate similar organization skills.

A study conducted by one research team found that students' perception of rule clarity and teacher monitoring are positively related to their development of academic interest in secondary school mathematics classes.[53] Another empirical study revealed that the top quartile teachers (i.e., the most effective teachers as identified by the high academic achievement of the students they taught) were more organized with efficient routines and procedures for daily tasks, and they communicated higher behavioral expectations to students than ineffective teachers. The top teachers also were found to have less disruptive student behaviors (on average, once every two hours) than did the less effective teachers (on average, a disruption every 12 minutes).[54] Disruptive behavior takes away precious classroom learning time. Teachers who can implement effective classroom management can decrease disruptive classroom behaviors and increase student engagement in academic tasks. Disruptive behaviors are particularly problematic for classrooms in that they can interfere with learning, compete with instruction, create an unsafe learning environment, and make it less likely that students will achieve academic objectives.[55] Teachers often report disruptive behavior as a major classroom concern. Based on a poll of the America Federation of Teachers, 17% of responding teachers said they lost four or more hours of teaching time per week due to disruptive student behavior.[56]

Goldstein stated that teachers may inadvertently contribute to student misbehavior if they do not know how to effectively use praise, attention, reward, privileges, differential attention, time out, and punishment.[57] Some common mistakes made by teachers are using behavior management techniques inconsistently, having unrealistic expectations, inadvertently reinforcing undesirable behavior, and modeling negative behavior. For example, when attempting to manage problem behavior, teachers may pay attention to a child when the child is noncompliant and withdraw the attention when the child is compliant. Teachers may also over-rely on punishment, most frequently reprimands, rather than positive reinforcement.

Sample Performance Indicators for the Professional Knowledge of Teachers

7.1 Responds to disruptions in a timely, appropriate manner.
7.2 Establishes clear expectations for classroom rules, routines, and procedures and enforces them consistently and appropriately.
7.3 Models caring, fairness, respect, and enthusiasm for learning.
7.4 Promotes a climate of trust and teamwork within the classroom.
7.5 Promotes respect for and understanding of students' diversity, including – but not limited to – race, color, religion, sex, national origin, or disability.
7.6 Actively listens and pays attention to students' needs and responses.
7.7 Creates a warm, attractive, inviting, and supportive classroom environment.
7.8 Arranges the classroom materials and resources to facilitate group and individual activities.

Sample Student Evidence that Teacher met the Criteria for Proficiency

- Follow classroom procedures consistently, contributing to a safe and orderly environment.
- Show respect for classmates and the teacher.
- Expect consequences for inappropriate behaviors because they are informed.
- Work well with others.
- Report that the teacher recognizes them as unique learners and strives to acknowledge their differences.
- Engage in discussions of differences.
- Be receptive to working with other students from all groups.
- Receive and give regular acknowledgements, celebrations, and recognitions.

Sample Conference Prompts

- What are some examples of the ways you make connections with your students?
- How have you strived this year to make your classroom an inclusive one?
- What is your process for developing classroom rules and procedures?
- How do you address inappropriate behavior?
- How do you recognize and celebrate diversity in your classroom?
- How do you encourage students to celebrate other students' success?

Teacher Self-Assessment Checklist					
Performance Standard 7: Positive Learning Environment					
Quality		Exemplary	Proficient	Needs Development	Ineffective
Caring	Show concerns for students' emotional and physical well-being.				
	Create a warm and supportive classroom climate.				
	Respond to misbehavior on an individual level and privately.				
Fairness and respect	Prevent situations in which a student loses peer respect.				
	Treats students fairly.				
	Create situations for all students to succeed.				
	Show respect to all students.				
Interactions with students	Maintain professional role while being friendly.				
	Give students responsibility.				
	Value what students say.				
	Encourage student cohesiveness and cooperation.				
	Emphasize functional communication between teacher and students and among fellow students.				
Classroom Management	Use consistent and proactive discipline.				
	Establish rules, routines, and procedures early on in the school year.				
	Orchestrate smooth transitions and continuity of classroom momentum.				
	Is aware of all activities in the classroom.				
	Anticipate potential problems.				
	Use space, proximity, or movement around the classroom for nearness to trouble spots and to encourage attention.				
	Prepare materials in advance and have them ready to use.				
	Organize classroom space efficiently to support learning activities.				
	Manage the physical factors (e.g., spatial environment, visual environment) to optimize student learning.				
	Use effective questioning, smooth transitions, and challenging but interesting activities to increase student engagement and minimize disruption.				
Discipline of students	Interpret and respond to inappropriate behavior promptly.				
	Implement rules of behavior fairly and consistently.				
	Reinforce and reiterate expectations for positive behavior.				
	Use both punishment and positive reinforcement to encourage desirable student behavior.				

Fact Sheet #10 - Performance Standard 8: Academically Challenging Environment

ACADEMICALLY CHALLENGING ENVIRONMENT

The teacher creates a student-centered, academic environment in which teaching and learning occur at high levels and students are self-directed learners.

The nature of classroom climate is a function of numerous variables, for instance, the implicit rules of the group structure, the style of leadership of the dominant members of the group, norms, cultural traditions, expectancies, affective history, and demographic composition of the group members.[1] Based on research findings, Evans, Harvey, Buckley, and Yan also concluded that classroom climates described as positive have been found to be related to important educational outcomes such as enhanced academic achievement, constructive learning processes, and reduced emotional problems. Nevertheless, classroom climates can also be negative and toxic and related to undesirable outcomes, such as increased bullying and aggression and social and emotional maladjustment.[2]

Learning can be viewed as a cognitive development process in which individuals actively construct systems of meaning and understanding of reality through their interactions and experiences with their environments.[3] In this cognitive developmental process, a quality learning environment is crucial to students' learning, and it is the teacher's responsibility to create conditions of active engagement in the classroom. It is not surprising to see that every decision that effective teachers make and every action they take in their classrooms, either instructional or managerial, serve the ultimate purpose of student academic learning and growth.

Various studies have found that students' perceptions of the classroom environment explain a substantial amount of variance in student achievement, after controlling for their background characteristics, across grade levels, and across subject areas.[4] Classroom learning environment is associated with students' academic behaviors and academic achievement. Students are more engaged with their learning when they receive high expectations, believe that being in school will enable them to do something positive in their lives, have the ability to learn new things, create new challenges, and prepare them for college.[5] A study by Barth et al. found that negative classroom environments are associated with a lack of academic focus and lower student outcomes.[6] Various teacher characteristics that are identified as contributing to positive climate relate to teaching methods – both instructional strategies and discipline management skills – for instance, clear and well-structured procedural rules, together with opportunities for active participation and engagement.[7] To illustrate:

- Effective teachers implement effective classroom management to establish order, engage students, and elicit student cooperation, with an ultimate purpose to establish and maintain an environment conducive to instruction and learning.[8]
- Classroom activities have an academic focus. The teacher protects instruction from disruption and makes the most out of every instructional moment. Additionally, the teacher orchestrates smooth transitions and maintains momentum throughout teaching and learning.[9]
- The teacher assumes responsibility for student learning, sets high (but reasonable) expectations for all students, and supports students in achieving them.

The teacher uses effective questioning and challenging, but interesting, activities to increase student engagement in learning and student accountability.[10]

The following set of attributes of high quality learning environments, drawn from the socio-cultural constructivist perspective, are helpful in describing prominent attributes of an academically robust learning environment:

- *Active engagement*: learners are directly involved in actions that support cognition and intentional learning.
- *Authenticity and relevance*: learners attribute value to the learning task and see the relationship between the knowledge to be gained and their personal life.
- *Collaboration and community*: noncompetitive social interaction of learners with others about the nature of the content and its meaning to themselves and others allowing for the co-construction of knowledge.
- *Learner autonomy*: the learner has some degree of control over or self-selection of the content or methods of learning.
- *Cognitive complexity*: learning tasks are sufficiently representative of reality, with a myriad of web-like interacting forces that must be organized and made sense of.
- *Generativity*: learner engagement in disciplined inquiry that involves using existing knowledge to discover or formulate new ideas, concepts, or information.
- *Multiple perspectives*: experiences allow learners to see the same information in different ways, from different points of view or use it for different purposes.
- *Pluralism*: learners develop a flexible view of reality, rather than a fixation on one single view of reality as correct.
- *Reflectivity and metacognitive awareness*: learners think about their own learning

processes, are involved in identifying strategies to increase their learning, and self-monitor progress.
- *Self-regulation and ownership*: learners are asked to assume personal responsibility for their own learning.
- *Transformation*: learners are expected to comprehend meaning and to use insights gained to reorganize, synthesize, or transform information into new forms or for some new purposes.
- *Productivity*: learners are expected to do something with knowledge required, or use it in some way that is beneficial to themselves or others.[11]

Building on the above attributes, practical instructional and managerial strategies that can help establish and maintain an academically robust learning environment include the following:

- Establishing a clear academic focus.
- Developing well-organized and well-planned lessons.
- Making explicit learning objectives.
- Maximizing instructional time.
- Pacing class activities and transitioning between tasks smoothly.
- Keeping students on task.
- Making learning meaningful.
- Identifying and communicating desirable behavior.
- Consistently applying rules and procedures.
- Monitoring student behavior.
- Taking preventive rather than reactive management actions.
- Building cooperation among teachers and students.
- Focusing on common interests and values;
- Pursuing common goals.
- Determining the appropriate level of task difficulty for students.
- Providing an appropriate instructional pace.[12]

An academically challenging learning environment is often reflected in the degree of teachers' expectations for student performance. When children come to school with lower levels of language and cognitive development, or more behavioral and attention problems, teachers frequently expect less from them, rather than providing them with a rich, challenging curriculum and supports for learning. The cycle of low expectations and low performance perpetuates when students who are considered less able are required to read less and asked to recall only simple facts and events, while high performing students are challenged to engage in advanced cognitive learning. Holding high performance expectations has an important impact on teachers' instructional practices. By having reasonable expectations for students' growth, teachers can plan carefully linked experiences and provide the foundation for students to meet high expectations. The beliefs that teachers have about their students and their ability to learn can positively or negatively impact their actual learning. The reality is that "students typically don't exceed their own expectation, particularly with regard to academic work. But students will go beyond what they think they can do under certain conditions, one of which is that their teachers expect, challenge, and support them to do so."[13]

The expectations a teacher holds for students, whether consciously or subconsciously, are demonstrated through his or her interactions with the students during instruction.[14]Student academic performance is influenced by a teacher's expectations and goals for student achievement. In a study of 452 sixth graders, findings revealed that teachers' high expectations served as a significant predictor of student performance both socially and academically.[15]Rubie-Davies found that just by one single school year, the students' self-

perceptions of their own abilities in academic areas altered substantially in line with teachers' expectations.[16] To make students experience challenges and success, the teacher provides opportunities to use existing skills and knowledge as well as attain new competencies.[17]

Teacher expectations do influence students' learning. The effects of teacher expectations are stronger among stigmatized groups, such as African American students and students from low income families. Students that are frequently the targets of lower expectations are typically most affected academically.[18] For instance, student perceptions of teachers' expectations are especially important to the academic engagement and efficacy of African American students. Tyler found that the emotional, behavioral, and cognitive engagement and efficacy of African American students were all predicted by their perceptions of teacher expectations.[19] However, it has also been found that teacher expectations for strong academic performance and educational attainment for ethnic minorities or low-income students are generally lower than those for their economically advantaged, European American counterparts.[20] Teacher expectations run short where they are needed most. Low teacher expectation of students was identified as one of the five main factors related to the underachievement of African American and Latino students.[21]

There are different ways that teacher expectations influence student achievement. First, teachers are likely to put forth greater effort when they perceive that they are teaching high ability students.[22] Secondly, according to Ferguson,[23] teacher perceptions and expectations are expressed (unconsciously) through the type of goals teachers set for students, the skills and resources used during instruction, as well as

the types of reinforcement that teachers use in the classroom. Warren found that teachers' low expectations and lack of efficacy often resulted in lowered teaching standards, less teacher effort, and the use of watered-down curriculum for low achieving students, especially in poor urban schools.[24] That ultimately impacts students' achievement, academic engagement, and motivation. Through Cotton's review, multitudes of ways in which lowered teacher expectations manifest in the classroom were identified.[25] Students who are the target of teachers' low expectations are given fewer opportunities to learn new materials than high expectation students. The wait-time to answer a question is less than what is allotted for high expectation students. Low expectation students are given the answers to questions or the teacher calls on some other students rather than giving them clues or repeating or rephrasing questions, as is done with high expectation students. Students with low teacher expectation receive inappropriate feedback (e.g., more frequent and severe criticism for failure; insincere praise) or reinforcement that is not a result of desired performance. They also tend to receive less friendly and responsive classroom interactions (e.g., less smiling, affirmative head nodding, leaning forward, and eye contact). They are provided briefer and less informative feedback, less stimulating and more lower-cognitive level questions, as well as less frequent use of effective and time-consuming instructional practices.

Additionally, students often recognize teacher bias and conform to teacher expectations. Children, from their years in school, are highly sensitive to differential teacher expectations and behavior. This type of sensitivity cuts across grades, gender, and ability levels. Research has suggested that students perceive low achieving students as typically receiving more vigilance directed towards them, fewer chances, more negative feedback and direction, more negative affect, and more frequent work- and rule-oriented treatment. In contrast, students typically perceive high achievers as being the recipients of higher expectations and academic demands, more emotional supports and special privileges, and increased opportunities to make choices.[26] This phenomenon can be particularly troublesome when teachers stereotype whole groups of students based on personal characteristics such as race or gender.[27] Teacher expectations are often connected to what is termed self-fulfilling prophecy. A self-fulfilling prophecy occurs when a false description of a phenomenon induces a new behavior that leads to the originally false description coming true.[28] Hauser-cram et al. posited that children in stigmatized groups are more likely to have negative or low teacher expectations which likely lead to self-fulfilling prophecies of low academic performance.[29]

Sample Performance Indicators for the Professional Knowledge of Teachers

8.1 Maximizes instructional time.
8.2 Conveys the message that mistakes should be embraced as a valuable part of learning.
8.3 Encourages productivity by providing students with appropriately challenging and relevant material and assignments.
8.4 Provides transitions that minimize loss of instructional time.
8.5 Communicates high, but reasonable, expectations for student learning.
8.6 Provides academic rigor, encourages critical and creative thinking, and pushes students to achieve goals
8.7 Encourages students to explore new ideas and take academic risks.

Sample Student Evidence that Teacher met the Criteria for Proficiency

- Transition smoothly and without disruption among small and large groups and independent learning.
- Use classroom space and resources efficiently to support their own learning and that of peers.
- Manage time and resources.
- Engage in learning activities for the entire class period.
- Work both independently and cooperatively in purposeful learning activities.
- Keep records of their own progress, behavior, and accomplishments.
- Analyze work against benchmarks and articulate why it meets, exceeds, or does not meet GPS/CCGPS.
- Monitor their behavior with teacher guidance, adjusting behavior when appropriate to support learning.
- Report that they feel successful and respected as learners.

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Sample Conference Prompts

- How do you handle situations where students finish instructional tasks at varying rates?
- How do you plan for substitute teachers?
- What strategies do you use to get the class period started without time wasted?
- How have you sought guidance from colleagues or offered to help other teachers maximize instructional time?
- How do you provide feedback to students?
- How do you help students take responsibility for their own learning and behavior?
- How do you convince students to believe in themselves?

Teacher Self-Assessment Checklist					
Performance Standard 8: Academically Challenging Environment					
Quality		Exemplary	Proficient	Needs Development	Ineffective
Academic Rigor	Focus classroom time on teaching and learning.				
	Maximize instructional time.				
	Limit disruption and interruptions.				
	Maintain momentum within and across lessons.				
	Carefully link learning objectives and activities.				
	Design challenging but achievable tasks that are relevant to students' lives and experiences, or to current events.				
	Develop objectives, questions, and activities that reflect higher- and lower- cognitive skills as appropriate for the content and the students.				
	Ensure the interactions in classroom have a task orientation.				
Student Motivation and Engagement	Link learning to students' real-life experiences.				
	Organize content for effective presentation.				
	Check student understanding and retain student attention by asking questions.				
	Consider student attention span and learning styles when designing lessons.				
	Be supportive and persistent in keeping students on tasks and encourage them to actively integrate new information with prior learning.				
	Let students have some degree of control over the content or methods of learning to encourage their ownership and autonomy of learning.				
High Expectations	Set clearly articulated high expectations for strong academic performance for all students, including the students who are ethnic minorities or from low-income families.				
	Orient the classroom experience toward improvement and growth.				
	Stress student responsibility and accountability.				
	Monitor student learning closely, and make certain that alternative teaching methods are in place.				

Fact Sheet #11 - Performance Standard 9: Professionalism

PROFESSIONALISM

The teacher exhibits a commitment to professional ethics and the school's mission and participates in professional growth opportunities to support student learning, and contributes to the profession.

Teacher professionalism encompasses key characteristics – professional competence, performance, and conduct – that reflect teachers' goals and purposes, capabilities, values and beliefs, and directly impact the effectiveness of teaching.[1] As a profession, teachers value and practice the principles, standards, ethics, and legal responsibilities of teaching.[2] And, as with any profession, they must be committed to and skilled in the areas of expertise that define teaching. Professionalism should reflect three essential elements of any true profession:

Three Essential Elements of Professionalism

Elements	Descriptions[3]
Professional standards and ethics of the profession	• Adhere to legal and ethical guidelines. • Adhere to standards defined for the profession. • Demonstrate professional demeanor and positive interaction with others. • Respect the diversity of ethnicity, race, gender, and special needs.
Continuous self-professional development	• Act as reflective practitioner. • Acquire and refine professional knowledge and skill. • Engage in ongoing professional renewal. • Act, as appropriate, as risk taker, stepping out of comfort zone. • Embrace practices of a life-long learner.
Contributions to the profession	• Serve as role model for other educators. • Serve on school, district, regional, and state educational committees, work groups, etc. • Participate in professional associations. • Contribute to the development of the profession (e.g., through presentations, writing).

Teaching seems to differ from many other professions and occupations in the aspect that the kind of person a teacher is, and the way he or she behaves, seem to have considerable implications for the professional practice.[4] For educators, students, and for the general public, good teaching is inconceivable as apart from the teacher's personal qualities. Teachers' daily practice is grounded in the beliefs, values, and attitudes they hold toward the profession, the students, the school, and themselves.[5] Carr posited that many of the skills featured in competence models of professional training – such as the abilities to match general curricular prescriptions to individual needs, to maintain student engagement and administer classroom management – depend on the teachers' ethical or personal qualities of empathy, care, respect, fairness, motivation, perseverance, and strong belief that they can succeed in making a difference in students' learning.[6]

Caring: Caring about students and respecting them as individuals are prevalent in the literature descriptions of effective teachers.[7] Caring is central to student learning – the glue that binds teachers and students together and makes life in classrooms meaningful.[8] Caring fosters a type of teacher-student connection that encourages possibilities for learning that may not otherwise occur.[9] Good teachers are often described as warm, friendly, and caring; conversely, ineffective teachers often are said to create a tense classroom and are described as cold, abusive, and uncaring.[10] When students perceive that their teachers care about them, they respond by "optimizing their commitment to learning and putting

forth greater efforts to reach their potential."[11] In classroom learning, when students are supported by a caring teacher, they are more likely to ask questions, to take chances, and to share their inner thoughts in creative writing and through other forms of expression.[12]

Teacher dispositions and beliefs are two other variables related to student achievement. They are important qualities that build up a teacher's professional demeanor. Carter used multiple data collection instruments, such as surveys, interviews, observations, and personal records, to develop a better understanding about the characteristics and dispositions of 99 effective teachers.[13] When these teachers were asked to list three characteristics of exceptional teachers, the most mentioned themes are as follows:

- Flexible, adaptable, will search for what works.
- Excellent management skills, organized, discipline issues, etc.
- Caring, compassionate.
- Love working with children, love children.
- Believe all children can learn at high levels, high expectations.

These exemplary teachers were then asked to report two strengths they possessed themselves. The most frequently mentioned strengths included being hard-working and dedicated, possessing excellent communication skills, being enthusiastic and energetic, and being caring and kind. Exemplary teachers regard the ethic of care and respect as a vital foundation for students' best learning and a prerequisite for effective teaching. They reach out to know their students by using multiple sources of knowledge (e.g., solicited critique, dialogues and questions, knowing students informally,

knowing from colleagues, and knowing students' cultures).[14]Several studies sought the input of students themselves in identifying characteristics of highly effective teachers.[15] These studies revealed that students described effective teachers as caring, dedicated, motivating, encouraging, nurturing, supportive, and respectful.

Caring[16], self-efficacy[17], and enthusiasm[18] are just a few examples of teacher characteristics that have been demonstrated to influence both cognitive and affective learning. Classroom observations often reveal that effective teachers demonstrate more respect and caring for students than do less effective teachers.[19] Effective teachers use care and respect to build relationships with their students that are conducive to academic learning. Teachers' expressions of care not only enhance students' social skills and self-worth but also encourage their academic development.[20]When students perceive that their teachers care about them, they exert higher level of motivation, social responsibility, and affective learning[21]and they respond by "optimizing their commitment to learning and putting forth greater efforts to reach their potential."[22]

Enthusiasm and motivation: Enthusiasm and motivation are two essential attitudes that impact teacher effectiveness and, ultimately, student achievement. Enthusiasm "reflects the degree of enjoyment, excitement and pleasure that teachers typically experience in their professional activities."[23] Teachers who are more enthusiastic about teaching exhibit higher quality instructional behavior, such as monitoring student learning, providing students with more cognitive autonomy support, offering more social support to students, and using higher levels of cognitive challenge. Teacher motivation also is expressed in a range of teacher behaviors that are perceived to be

conducive to student learning, such as enthusiasm in content area taught, interest about students' personal and developmental needs, participation in content-related activities outside of class time, and displaying value and emotion for students.[24]

Motivation and enthusiasm are contagious in classrooms. Teachers who display enthusiasm and energy in the classroom often increase student interest and motivation to learn.[25] Among various teacher variables, enthusiasm is the most powerful unique predictor of students' intrinsic motivation and vitality. The students who received instruction from an enthusiastic teacher reported greater intrinsic motivation regarding the learning material and experienced higher levels of vitality.[26] They also exhibited higher rates of on-task behavior.[27]

Efficacy: In addition, researchers found positive associations between student achievement and three types of teacher efficacy-related beliefs: academic emphasis, faculty trust in students and parents, and teachers' collective efficacy beliefs about the school system.[28] Teachers of high self-efficacy set themselves higher goals and stick to them. They invest more effort and persist longer than those low in self-efficacy. A growing body of empirical evidence supports that teachers' self-perceived abilities to accomplish desired outcomes are related to the effort they invest in teaching, the goals they set, and their persistence when setbacks occur.[29] The reviews of research on teacher self-efficacy have summarized that teachers' self-efficacy is associated with their teaching practices in classrooms and student outcomes such as students' own self-efficacy beliefs and student engagement, motivation, and achievement.[30] Compared to teachers with lower self-efficacy beliefs, teachers with stronger perceptions of self-capability tend to

use more challenging teaching techniques, try innovative strategies, and employ classroom instruction that are more organized and better planned, student centered, humanistic.

Professionalism and Professional Growth: Another key attribute of professionalism is a commitment to continuous improvement and perpetual learning. Interestingly, effective teachers monitor and strengthen the connection between their own development and students' development.[31] Evidence indicates that teachers who receive substantial professional development can help students achieve more. For example, based on the findings of one meta-analysis, teachers who receive substantial professional development (in this instance, 49 hours) can boost their students' achievement about 21 percentile points, and this effect size is fairly consistent across content areas.[32]

Effective teachers invest in their own education. They take responsibility for their own learning, actively engage in self-directed learning based on a set of established goals and in community with like professionals, they tend to become more self-directed and take responsibility for their own learning.[33] Hammerness et al. developed a framework of teacher learning. This framework envisions that teachers need to conduct professional learning in the following five domains: a *vision* for their practice; a set of *understandings* about teaching, learning, and children; *dispositions* about how to use this knowledge; *practices* that allow them to act on their intentions and beliefs; and *tools* that support their efforts.[34]

A Framework for Teachers' Professional Improvement[35]

Domain	Description	More Detailed Descriptions
Vision	Image of what is possible and desirable in teaching	A set of images of good practice that inspire and guide professional learning and practice.
Understanding	Deep knowledge of content, pedagogy, students, and social contexts	• Possess a coherent and rich conceptual map of the discipline (knowledge); an understanding of how knowledge is developed and validated within different social contexts (methods); an understanding of why the subject is important (purposes); and finally, an understanding of how one can communicate knowledge of that subject to others (form). • Understand students' thinking, experiences, development, and learning processes.
Tools	Conceptual and practical resources for use	• Theoretical tools include learning theories, frameworks, and ideas about teaching and learning, such as zone of proximal development, culturally relevant teaching. • Practical tools include particular instructional approaches and strategies, and resources such as textbooks, assessment tools.
Practices	Developing, practicing, and enacting a beginning repertoire	The knowledge and tools mentioned above need to integrate into a set of practices. These practices include a variety of instructional activities to promote student learning, such as designing and carrying out a lesson plan, explaining concepts, implementing problem-based learning, planning debates, providing feedback, etc.
Dispositions	Habits of thinking and action regarding teaching and children	These dispositions include reflection upon practice, taking an inquiry stance, determination and persistence in working with children toward success, which may be characterized by the inclination to take responsibility for children's learning and the will to continue to seek new approaches to teaching.

Effective teachers continuously practice self-reflection, self-evaluation and self-critique as learning tools. They are curious about the art and science of teaching and about themselves as effective teachers. They often portray themselves as students of learning. They learn by continuously studying their classroom experiences in an effort to improve practice. They constantly improve lessons, think about how to reach particular children, and seek and try out new approaches in the classroom to better meet the needs of their learners.[36] Reflection constitutes a disciplined way of thinking that entails calling into question one's existing beliefs and routines in light of new evidence and altering teaching behaviors accordingly.[37] By examining, or reexamining, the content and context of their own behaviors in the classroom they are able to refine or even alter what they do and how they do it. Some researchers define reflective teachers as introspective. They seek a greater understanding of teaching through scholarly study and professional reading. Effective teachers invite feedback; by eliciting information and criticism from others, they broaden their perspectives and gain insight to what may have been previously missed. Through reflective practice, effective teachers monitor their teaching because they have a strong commitment to students learning and want to make a difference in the lives of students.[38]

Professionalism and Contributing to the Profession: Effective teachers act individually and collectively to advance the teaching profession, and act as shapers, promoters, and well-informed critics of educational policies, instructional innovations, and internal changes that impact on student learning.[39] Effective teachers are willing to share their ideas and assist other teachers with difficulties. They volunteer to lead work teams and to be mentors to new teachers. Effective teachers are informal leaders on the cutting edge of reform who are not afraid to take risks to improve education for all students.[40] Their opinions usually contribute to effecting positive changes at school or district level. A teacher can contribute to the teaching profession by engaging in various types of study, inquiry, and even experimentations to develop personal best practices. Individually, teachers are powerful resources to enrich the professional knowledge base about academic standards, curriculum, pedagogy, and assessment by reflecting and sharing personal knowledge of "what works" and "what does not work." Collectively, teachers can network with professional associations and collaborate with social/business agencies to advance overall school improvement.

Research also has found that an effective teacher:

- Links professional growth goals to professional development opportunities.[41]
- Is empowered to make changes to enhance learning experiences, resulting in better student retention, attendance, and academic success.[42]
- Selects professional development offerings that relate to the content area or population of students taught, resulting in higher levels of student academic success.[43]

- Is cognizant of the legal issues associated with educational records, and respects and maintains confidentiality.[44]

Sample Performance Indicators for the Professional Knowledge of Teachers

9.1 Carries out duties in accordance with federal and state laws, Code of Ethics, and established state and local school board policies, regulations, and practices.

9.2 Maintains professional demeanor and behavior (e.g., appearance, punctuality and attendance).

9.3 Respects and maintains confidentiality.

9.4 Evaluates and identifies areas of personal strengths and weaknesses related to professional skills and their impact on student learning and sets goals for improvement.

9.5 Participates in ongoing professional growth activities based on identified areas for improvement (e.g., mentoring, peer coaching, course work, conferences) and incorporates learning into classroom activities.

9.6 Demonstrates flexibility in adapting to school change.

9.7 Engages in activities outside the classroom intended for school and student enhancement.

Sample Student Evidence that Teacher has met the Criteria for Proficiency

- Provide thoughtful feedback to teacher about new ideas and strategies tried by the teacher.
- Report that the teacher regularly adapts instruction to improve learning.
- Report that the teacher allows them to actively participate in lessons.
- Improve learning and achievement related to the teacher's learning.
- Report that the teacher and others at the school work together to support student learning.
- Offer their input toward school improvement through the teacher.

Sample Conference Prompts
- What impact, if any, have professional interactions with colleagues such as collaboration, coaching, mentoring, or participating in professional learning community activities had on your professional development this year?
- How do you incorporate your professional reading and reflection into your professional practice?
- What has been your most meaningful professional learning experience this year?
- How has participation in professional learning impacted student achievement?
- How have you been involved in the school improvement process this year?
- In what ways has your practice been influenced by the school improvement process, if at all?
- How has student achievement been impacted by implementing the school improvement plan?

Teacher Self-Assessment Checklist					
Performance Standard 9: Professionalism					
Quality		Exemplary	Proficient	Needs Development	Ineffective
Enthusiasm	Show joy for the content material.				
	Take pleasure in teaching.				
	Demonstrate interest about students' personal and developmental needs.				
Professional Standards and Ethics of the Profession	Adhere to legal and ethical guidelines, standards for the profession, and local school board policies.				
	Demonstrate professional demeanor and positive interaction with others.				
Professional Development	Involve in acts of searching and inquiring to find a solution that will solve problems encountered.				
	Demonstrate involvement in learning activities inside and outside school.				
	Assess and audit the gaps in professional practice.				
	Incorporate learning from professional development activities into classroom practice.				
Contribution to the learning community	Find, implement, and share new instructional strategies.				
	Network, share practices through dialogue, modeling, and demonstration within and across schools.				
	Share practices through mentoring, coaching, team teaching and shadowing.				
	Support school change and initiatives.				
Reflective Practice	Know areas of personal strengths and weaknesses.				
	Compare instructional practice to the best practices supported by extant research.				
	Engage in structured reflection and inquire into own practice.				
	Be analytical and evaluative about professional knowledge.				
	Set high expectations for personal classroom performance.				
	Demonstrate high efficacy.				

Fact Sheet #12 - Performance Standard 10: Communication

COMMUNICATION

The teacher communicates effectively with students, parents or guardians, district and school personnel, and other stakeholders in ways that enhance student learning.

The ability to communicate and collaborate is one of the essential requisites for teacher effectiveness.[1] In fact, at the very core of effective teaching is effective communication. Extant research provides evidence that students taught by teachers with a high level of clarity learn more than those taught by teachers with lower clarity.[2] Teachers with high clarity are perceived to be more capable of conveying ideas effectively and communicating with students in a compelling manner. Closely connected to this notion is the concept of "instructional communication competence" which has been studied widely in educational research. Instructional communication competence was defined by Cornett-DeVito and Worley as:

> The teacher-instructor's motivation, knowledge, and skill to select, enact and evaluate effective and appropriate, verbal and nonverbal, interpersonal and instructional messages filtered by student-learners' perceptions, resulting in cognitive, affective and behavioral student-learner development and reciprocal feedback.[3]

One research team identified, interviewed, and observed 11 award-winning teachers to develop a better understanding of their instructional communication practices.[4] Their findings included the following themes related to communication practices in the classroom:

- *Understand the ebb and flow of the classroom* The teachers used instructional objectives to plan classroom activities effectively, but they were not constrained by predefined plans. They adapted to the flow of the class and allowed for spontaneity. Additionally, they used effective communication to orient students to learning and help them integrate new information with previously learned information.
- *Use a wide repertoire of communication skills* The teachers used a variety of communication behaviors, such as immediacy, humor, and clarity to sustain a positive and interactive environment.
- *Create relationships with students* The teachers communicated with students about shared experiences to establish interpersonal rapport, and they communicated in an approachable manner through proxemics, kinetics, knowing first names, etc. They also encouraged an open, warm, and communicative environment that invited students' comments, questions, and responses.

The communication skills of a teacher also play an important role in the collaboration with colleagues and other personnel in schools, and in the partnerships with parents and other community members. After all, teaching is communicating and, to a large extent, advocating for learners. Educating a child cannot be one person's work. Certainly, teachers must be responsible and accountable for what is under their control – the academic and nonacademic interactions with their students. Beyond this traditional responsibility, however, good teachers know they must reach beyond the walls of the classroom to solicit collaboration and support from school colleagues on behalf of their students. Furthermore, they understand the

need to reach beyond the schoolhouse door to communicate and gain cooperation with families and others in a larger community.[5]

Effective collaboration empowers teachers to re-conceptualize themselves as change agents and advocates for their students. Some defining characteristics associated with the important roles of collaborator and advocate are:

- Being an advocate of better strategies for meeting students' learning needs, by being an active learner who seeks, applies, and communicates professional knowledge of curriculum, instruction, assessment, and student development.
- Being an advocate of teaching as a profession by appreciating and practicing principles, ethics, and legal responsibilities.
- Being an advocate for the well-being of the whole educational organization by initiating, valuing, and maintaining collaboration and partnerships with various stakeholders.[6]

Effective teachers not only communicate competently with their students, but also they communicate actively with their professional peers to share best practice, seek advice and suggestions, and conduct collaborative inquires. Change is the constant theme in today's education, and teachers are increasingly challenged to keep abreast of innovations and new developments. They need to communicate with colleagues or others who possess needed information.[7]

Teachers who have a democratic vision about their profession act collaboratively and cooperatively with colleagues and other educational stakeholders. They no longer confine their responsibility to the particular classroom in which they teach; rather, they are committed to making a contribution to

the students taught by other teachers, in the school, the district, and the community by and large.[8]Michael Fullan corroborated this vision by proposing that teacher preparation programs should enable each teacher to initiate, value, and practice collaboration and partnerships with students, colleagues, parents, community, government, and social and business agencies.[9] Additionally, teachers of democratic professionalism serve as advocates for the well-being of the educational cause. They act individually and collectively to effect social justice and equity in teaching and learning. They are engaged in purposeful and critical reflection and dialogues with others on issues that have immediate impact on day-to-day classroom teaching, as well as larger issues and contexts that have indirect influence on social equity in education.[10]

Research findings show that teachers who effectively collaborate often:

- Possess strong communication skills.[11]
- Offer clear explanations and directions.[12]
- Recognize the levels of involvement ranging from networking to collaboration.[13]
- Use multiple forms of communication between school and home.[14]
- Use informal contacts at school events, the grocery store, and at other community places to keep the lines of communication open.[15]

In addition, involvement of families and community can help students become more focused on academic learning. A growing body of research suggested that creating more connections and greater cooperation among the school, family, and community contexts could improve student behavior and discipline, enhance students' academic success, and reinforce stronger self-regulatory skills and work orientation.[16]

Epstein asserted that students are influenced by three spheres of influence: family, school, and community contexts in which the students develop.[17] The extent to which these three contexts overlap is contingent upon the nature and degree of communication and collaboration among school educators, parents, and community members. A meaningful and purposeful overlap is conducive to better student learning. School teachers play an important role in ameliorating such overlap. Research indicates that among various factors (such as resources, parents' sense of efficacy, etc.) parents' perceptions of teacher invitation have the most significant influence on their decision to be more involved with their children's education.[18] Teachers can increase family and community involvement through the following collaborative activities:[19]

- Helping families establish home environments to support children as students.
- Designing effective forms of school-to-home and home-to-school communication.
- Recruiting and organizing families to help the school and support students.
- Providing families with information and ideas to support students with homework.
- Including parents in decision-making and developing parent leaders.
- Identifying and integrating resources and services from the community to strengthen schools, students, and families.

LePage also suggested some effective ways to improve teacher-parent communication.[20] They include home visits, frequent positive calls home (not centering on students' academic problems, misbehavior, or negative attitudes), on-line connections for homework and information sharing, parent-teacher-student conferences, exhibitions of student work, and parent participation in school activities.

Sample Performance Indicators for the Professional Knowledge of Teachers

10.1 Uses verbal and non-verbal communication techniques to foster positive interactions and promote learning in the classroom and school environment.

10.2 Engages in ongoing communication and shares instructional goals, expectations, and student progress with families in a timely and constructive manner.

10.3 Collaborates and networks with colleagues and community to reach educational decisions that enhance and promote student learning.

10.4 Uses precise language, correct vocabulary and grammar, and appropriate forms of oral and written communication.

10.5 Explains directions, concepts, and lesson content to students in a logical, sequential, and age-appropriate manner.

10.6 Adheres to school and district policies regarding communication of student information.

10.7 Creates a climate of accessibility for parents and students by demonstrating a collaborative and approachable style.

10.8 Listens and responds with cultural awareness, empathy, and understanding to the voice and opinions of stakeholders (parents, community, students, and colleagues).

10.9 Uses modes of communication that are appropriate for a given situation.

Sample Student Evidence that Teacher has met the Criteria for Proficiency

- Observe that both school and home share common expectations for their progress and well-being.
- Give examples of how the teacher involves their families in classroom activities on a regular basis.

- Report that the teacher initiates contacts with their families regularly for both positive feedback and concerns.
- Are comfortable having the family members visit the classroom.

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Sample Conference Prompts

- How did you involve family members and community partners in your classroom?
- What do you find is the most effective way to contact family members of your students? Why do you think this is the most effective method?

Georgia Department of Education
Teacher Keys Effectiveness System

Teacher Self-Assessment Checklist					
Performance Standard 10: Communication					
Quality		Exemplary	Proficient	Needs Development	Ineffective
Communication Skills	Explain content with a high level of clarity in classroom.				
	Explain rules, expectations, and concepts in a logical, sequential, and age-appropriate manner.				
	Use a wide repertoire of communication behaviors (such as immediacy, humor) to sustain a positive and interactive learning environment.				
	Encourage an open, warm, communicative climate in classroom that invites students' comments, questions, and responses.				
	Exhibit active listening.				
Parental Involvement	Display interest and concern about the students' lives outside school.				
	Keep a log of parent communication.				
	Provide a description of record-keeping system and how it is used to inform parents, students, and administrators.				
	Create a climate of accessibility for parents and students.				
	Share instructional goals, expectations, and student progress with families in a timely and constructive manner.				
	Use a variety of strategies to encourage parent-teacher communication and connections, such as home visits, frequent positive calls home, parent-teacher-student conferences, exhibitions of student work, and parent participation in school activities.				
	Outreach parents who have social, economic, racial, and/or language barriers to get involved in their children's education.				
Collaboration	Participate in collegial activities.				
	Reduce isolation and develop a more consistent curriculum through collaboration with peers from the same grade level and subject level.				
	Share knowledge and engage in collaborative problem-solving.				
	Interact with and solicit feedback from colleagues, parents, and students.				
	Collaborate and network with colleagues to reach educational decisions.				
	Collaborate with the community to identify and integrate resources and services that can support student learning.				

Fact Sheet #13: Multiple Data Sources

DOCUMENTING TEACHER PERFORMANCE
WITH MULTIPLE DATA SOURCES

Use of Multiple Data Sources
Documentation is the process of recording sufficient information about the teacher's performance to support ongoing evaluation and to justify any personnel decisions based on the evaluation. The basic question is: How will the teacher demonstrate performance of the identified standards?[354] The complexity of professional roles in today's schools requires a performance evaluation system that reflects that complexity of the job. Given the complexity of teachers' work, attempting to document the work with one method or data source simply is not sensible or feasible. Peterson et al. concisely provided the rationale for using multiple data sources in teacher evaluation when they stated, "no single data source works for all persons…because good teaching comes in a variety of forms and styles."[355] Multiple data sources enable the supervisor to obtain a more accurate picture of performance and assist the teacher in increasing student success.

Using multiple data sources in the teacher evaluation process offers numerous advantages over single source data collection processes[356]. Some of the advantages are:

- A more complete portrait of a teacher's performance.
- Data collection in more naturally occurring situations. Integration of primary and secondary data sources in the evaluation.
- Greater objectivity and reliability in documenting performance.
- Documentation of performance that is more closely related to actual work.
- A more legally defensible basis for evaluation decisions.
- More teacher support and involvement in teacher evaluation when they feel that it is pertinent to their own performance and fair in its use of information in their individual case.

What Data Sources Will Be Included in the
Teacher Assessment on Performance Standards (TAPS)?

Required:
The following types of data sources are required components in TAPS for documenting teacher quality. The rich data about teacher performance provided by these sources will identify areas of individual strengths and weaknesses and inform appropriate professional activities.

- Formative observations: The evaluator conducts a structured, planned observation — either announced or unannounced — typically of a teacher who is presenting a lesson to or interacting with students.
- Walkthrough Observations: formative observations, such as the walkthroughs (frequent brief observations) are intended to provide more frequent information on a wider variety of contributions made by the teacher. Evaluators are encouraged to conduct formative observations by observing instruction and work in non-classroom settings (i.e. meetings, parent conferences, team planning).
- Documentation: This includes artifacts that provide documentation for the teacher performance standards. Documentation should emphasize naturally occurring artifacts from teachers' work (i.e., lesson plans, instructional units, student assessment).
- Surveys of Instructional Practice: Student survey results will inform the rating of standards 3, 4, 7, and 8 at the Formative and Summative Level and will impact the TEM score.

The following information sources may also be useful in documenting teacher performance. These suggested data sources for teacher evaluation can be used for both tenured and non-tenured teachers.

- Self-Assessment: Self-assessment is a process that teachers reflect on their practice in order to understand, critique, and improve it.
- Other data sources (e.g., conferences, examination of student work, learning team meetings, conversations with students and parents, etc.) that are perceived as appropriate by the local school districts.

How will Multiple Data Sources be used in the Evaluation?
Some teacher performance standards are better documented through classroom observation (e.g., Instructional Strategies or Positive Learning Environment) whereas other standards may require additional documentation. For example, Standard 2 – Instructional Planning - may necessitate review of the teacher's lesson plans and Standard 5 - Assessment Strategies - may necessitate review of the teacher's classroom assessments. Such evidence often is collected by the teacher and presented in documentation as a complement to the supervisor-conducted observations.

These data sources are not stand-alone, but are complementary to each other and should be integrated in the process of evaluation to provide a richer portrait of teacher performance. The flaws of one data source are often the strengths of another, and by combining multiple sources, evaluators can make more solid judgments regarding teacher performance and make decisions that are supported by multiple types of data. For instance, when comparing observations, documentation can contain a variety of

materials that reflect many of the tasks of teaching (either within or without the classroom) and provide evidence related to standards of performance that are easily observable.

Good evaluation and supervision uses a combination of data sources to gauge teachers' performance on the standards.[357] In contrast with traditional teacher evaluation systems which depend on checklists and obligatory yearly classroom observations, the *TAPS* intends to use different data sources to engage teachers in ongoing assessments that continually provide feedback and the opportunity to examine knowledge, practices, and effectiveness so that they may continue to grow as professionals.

Fact Sheet #14–Observation

OBSERVATION AS A DATA SOURCE FOR TEACHER EVALUATION

Introduction

Observations are intended to provide information on a wide variety of contributions made by teachers in the classroom or to the school community as a whole. Observations can be conducted in a variety of settings and take on a variety of forms, including quick, drop-by classroom visits, to more formative, pre-planned observational reviews, using validated instruments for documenting observations.[1] Furthermore, observations may be announced or unannounced. Evaluators are encouraged to conduct observations by observing instruction and non-instructional routines at various times throughout the evaluation cycle.

Formative Observation: During a formative observation, the evaluator conducts a structured or semi-structured, planned observation – either announced or unannounced – typically of a teacher who is presenting a lesson to, or interacting with, students. Evaluators can use formative observations as one source of information to determine whether a teacher is meeting expectations for performance standards. Formative classroom observations should last a specified period of time – for example, 30 or 45 minutes, or the duration of a full lesson. For maximum value, the building level administrator should ensure that formative observations occur throughout the year.

Walkthrough Observation: Formative Observation/Walkthroughs: Formative observations including walkthroughs are intended to provide more frequent information on a wide variety of contributions made by teachers in the classroom or to the school community as a whole. Evaluators are required to conduct formative observations by observing instruction and non-instructional routines at a minimum of four classroom visits per year per teacher throughout the evaluation cycle. Walkthroughs shall be 10-15 minutes in length each. The electronic platform will assist evaluators in capturing walkthrough documentation. Walkthroughs will be used as a documentation data source for formative assessments and to serve as evidence which supports and enhances the TKES standards ratings in formative or summative assessments. Additionally, walkthroughs should be used as a means to connect with School Improvement Plans and/or specific TKES standards (i.e., Differentiation, Assessment Uses) or behavioral indicators. These formative observations typically are less structured than formative observations. An important factor for evaluators to remember when collecting formative observation data is to focus on specific, factual descriptions of performance and to obtain a representative sampling of performance observations through regular, repeated visits to classrooms.[i]

Advantages of Observation

Observations, including formative and walkthrough observations, are intended to provide direct, naturalistic information on the work of a teacher, student behaviors, and the dynamic interactions between teacher and learners. In addition to classroom observations, observations can be conducted in a variety of job-relevant settings (for example, a conference with a parent, a committee meeting, or a presentation to the school staff).

Concerns about Observation

Observations are an important source of teacher performance information, but should never be used as a sole source for documenting evaluation performance. Direct observation has major limitations, such as:

- The artificial nature of scheduled observations (when a special lesson is prepared for a special classroom visit).
- The limited focus of teacher duties and responsibilities that may be observed in a given time period.
- The infrequency of the observations.
- Only a portion of the full repertoire of teacher duties and responsibilities can be observed (e.g., selected teacher responsibilities may not be performed during the classroom visit).
- Inflated rating and limited feedback in some situations

Given the complexity of the job responsibilities of teachers, it is unlikely that an evaluator will have the opportunity to observe and provide feedback on all of the performance standards in a given visit. If the purpose of a teacher evaluation system is to provide a comprehensive picture of performance in order to guide professional growth, then classroom observations should be only one piece of the data collection puzzle.

How is Observation Aligned with Teacher Standards?

Observation may obtain a sample of a teacher's performance, in or out of the classroom, on all the ten identified standards.

Fact Sheet #15–Documentation

DOCUMENTATION AS A DATA SOURCE FOR TEACHER EVALUATION

Introduction

Documentation of a teacher's performance can serve as valuable and insightful evidence for detailing the work that teachers actually do. Evaluators may request documentation when a standard is not observed during an announced or unannounced observation. Documentation should emphasize naturally-occurring artifacts from teachers' work (i.e., lesson plans, instructional units, student assessments).

Documentation of teacher practice and process is an important part of a comprehensive approach for documenting teacher performance. Generally, a teacher's evaluation documentation is considered to be "a structured collection of selected artifacts that demonstrate a teacher's competence and growth".[1] Documentation serves as a system for collecting data and recording work quality during each evaluation cycle. Specifically, the documentation houses pertinent data that confirms the teacher meets the established performance standards. Written analysis and reflection about artifacts often are included in the documentation to provide insight into the rationale for the events and process documented in each entry. Documentation is designed to serve as a complement to other data sources in order to provide a fuller, fairer, more comprehensive view of teacher performance.

Advantages of Documentation

- The artifacts included in documentation provide evaluators with information they likely would not observe during the course of a typical classroom visit.
- Documentation provides the teacher with an opportunity for self-reflection, demonstration of quality work, and a basis for two-way communication with an evaluator. Tucker,

Stronge, and Gareis discussed the beneficial nature of documentation by pointing out it is:

> "Appealing for many reasons, including their authentic nature, recognition of the complex nature of teaching, encouragement of self-reflection, and facilitation of collaborative interaction with colleagues and supervisors… [It embodies] professionalism because it encourages the reflection and self-monitoring that are hallmarks of the true professional."[2]

Concerns of Documentation

- When goals and standards are not determined, the result can be unfocused and haphazard. The materials included could be idiosyncratic and biased.
- Documentation process can be time-consuming for the teacher and the evaluator. Documentation allows teachers to represent the complexities and individuality of their teaching. This is problematic, however, for the same reason.

How is Documentation Aligned with the Teacher Performance Standards?

Documentation contains a broader, more comprehensive collection of naturally-occurring materials than other data sources. A variety of evidence may go into documentation, such as: student work; unit/lesson plans; student assessments; evidence of professional development activities; professional publications; recording of teaching; samples of instructional materials; diagrams of classroom arrangement; summary of analysis on longitudinal student test scores; evidence of help given to colleagues; information from others, such as observation of teaching by qualified others; and significant correspondence and memos.[3] Therefore, it is capable of providing teachers with an opportunity to demonstrate professional competence with regard to meeting standards identified in the evaluation system.

Fact Sheet #16: Self-Assessment

DOCUMENTING TEACHER PERFORMANCE WITH SELF-ASSESSMENT

Introduction

Self-assessment is a process by which teachers judge the effectiveness and adequacy of their performance, effects, knowledge, and beliefs for the purpose of self-improvement.[1] When teachers think about what worked, what did not work, and what type of changes they might make to be more successful, the likelihood of knowing how to improve and actually making the improvements increases dramatically.[2]

Kremer-Hayon identified five major areas that are typically the foci of teacher self-assessment: classroom goals and objectives, learners, subject matter concerns, classroom achievement and progress, and teaching strategies.[3] Effective teacher self-assessment has two distinguishing characteristics:[4]

- A clear expectation for systematic data gathering and interpretation.
- A strategy to validate self-assessment using credible external evaluative sources (e.g., student academic progress).

Aiarasian and Gullickson offered several strategies to enhance teachers' self-assessment:[5]

Self-reflection tools: These involve check lists, questionnaires, and rating scales which are completed by the teacher to evaluate performance in terms of beliefs, practice, and outcomes.
Media recording and analysis: Audio and video recordings provide a useful method for the teachers and their peers to review and analyze a teacher's performance.
Student feedback: Surveys, journals, and questionnaires can provide a teacher with the students' perspective.
Documentation: Teachers have an opportunity to demonstrate their performance as they collect and analyze the various artifacts for documentation.

Student performance data: Teachers can assess their instructional effectiveness by using test results, projects, essays, and so forth.
External peer observation: Colleagues, peers, and administrators can provide useful feedback on particular aspects of another teacher's behavior.
Journaling: Teachers can identify and reflect on classroom activities, needs, and successes by keeping track of classroom activities or events.
Collegial dialogue/experience sharing/joint problem solving: By collaborating on strategies, procedures, and perceptions, teachers are exposed to the practices of colleagues, which can serve as a catalyst for them to examine their own practices.

Advantages of Self-Assessment

Self-assessment is a critical component of the evaluation process and is strongly encouraged based on the following advantages:

- Give teachers more "voice" and control about their professional growth.
- Make teachers more responsible for demonstrating their own competence.
- Provide opportunities for teachers to enhance reflection, understanding, and improvement of practices, and make teachers more likely to question their taken-for-granted expectations, norms, beliefs, and practices.[6]

Concerns of Self-Assessment

There are many personal and situational factors that can present barriers to the conduct of valid, meaningful self-assessment, such as:[7]

- A variety of formal self-assessment strategies (such as peer observation) are not adopted because the lack of time to implement,

analyze, and interpret the information provided.

- Motivation and willingness to participate and persevere in self-assessment depends on personal (e.g., ability of reflection, sense of self-efficacy) and organizational (e.g., collegial and administrative support, trust and openness) factors.

- The standards and criteria used for self-assessment by individual teachers tend to be tacit, idiosyncratic, and changeable. Teachers tend to use spontaneous and intuitive judgments rather than more formal standards.

How does the Self-Assessment Align with the TAPS Teacher Standards?

Self-assessment can be used by teachers to judge the adequacy of their beliefs, knowledge, skills, and effectiveness in all the ten identified standards. It can lead to a self-initiated formative evaluation where teachers develop awareness, reflect on, and improve their performance on each standard.

Fact Sheet #17: Surveys of Instructional Practice

DOCUMENTING TEACHER PERFORMANCE
WITH STUDENT SURVEYS

Introduction

The purpose of student surveys is to collect information that will help the teacher set goals for continuous improvement and to provide feedback for professional growth and development.   Called **Surveys of Instructional Practice**, the student surveys within the Georgia Teacher Keys Effectiveness System provide student perception data as an additional source of documentation of teacher performance for four of the ten performance standards within the TAPS component of the system. These four standards reflect the direct experience of students in classrooms: Instructional Strategies, Differentiated Instruction, Positive Learning Environment, and Academically Challenging Learning Environment. Student survey data will be used by administrators as an additional source of documentation for teacher performance when completing the formative and summative assessments.

Student surveys provide information that may not be accurately obtained in classroom observations. Aleamoni recommended student feedback as a main source of information about (1) accomplishment of major educational goals, such as increased motivation; (2) rapport between students and the teacher; (3) elements of a classroom, such as the textbook, the homework, and instruction; and (4) communication between the students and the teacher.[1]

Three different surveys designed to match the developmental level of students (one each for Grades 3-5, Grades 6-8, and Grades 9-12) will be administered according to a detailed Survey Administration Protocol published annually by the Georgia Department of Education. Survey data will be collected through a process that matches students with their teacher(s) of record. All surveys will be completed anonymously to promote honest feedback. Purposeful question construction will prompt students to electronically select only one response per survey statement with no additional commentary.

Teachers who teach self-contained classes (e.g., elementary teachers, special education teachers) will have all the students in their class surveyed. For departmentalized teachers (e.g., middle and high school teachers, elementary PE and music teachers) the site administrator will select the appropriate classes.

All appropriate accommodations will be made for students with disabilities and English Language Learners, based on Individual Education Plans (IEPs) or language instruction education plans (extended time, read aloud, dual language dictionaries, etc.). Severe/Profound special education students, if sampled for participation in the surveys, may or may not participate, with needed accommodations, as determined to be appropriate by the IEP committee. Surveys will be read to Visually Impaired students. Auditory devices may also be utilized. The use of a toggle switch within the electronic platform will allow the survey to be read through headphones for students requiring the accommodation.

District and site administrators will identify a time frame each school year or each semester in which to administer the surveys. Teachers of record will not be involved in administering the survey to their own students; rather, a certified specialist (e.g., media specialist, instructional technology specialist) will administer the survey in a common media center or computer lab, if at all possible. All surveys will be accessed and administered through the GaDOE TLE Electronic Platform.

Survey results will be analyzed by the Georgia Department of Education and reported to the principal, the district, and teacher.

Advantages of Student Surveys

Student surveys provide information about students' perceptions of how the teacher is performing. There is ample evidence to support the use of student surveys in teacher evaluation.

- Students are the primary consumers of the teacher's services. They have direct knowledge about classroom practices on a regular basis. Students have the breadth, depth, and length of experience with the teacher. They are in the key position to provide information about teacher effectiveness.[2]
- Students' perceptions are beneficial for teacher improvement. Teachers look to their students rather than to outside sources for indications of their teaching performance.[3]
- Student observations of teachers are unobtrusive and occur in the most naturalistic settings.[4]
- Students have the ability to provide perspectives that principals cannot offer. They also have the ability to rate teachers reliably. Researchers compared students' ratings of meritorious and non-meritorious teachers with ratings from expert practitioners. They concluded that the students were able to discriminate between the two groups as well as the qualified evaluators.
- Researchers also compared the validity of ratings by students, principals, and the teachers, themselves. **They found students' ratings were the best predictor of student achievement, thus demonstrating that students provide valid feedback on teacher performance.[5]**

Concerns about Student Surveys

While incorporating student data into teacher evaluation, several issues need to be taken into consideration:

- Student surveys should be restricted to descriptions of life in the classroom.
- Student surveys should be based on discrete and visible behaviors as a way to increase reliability.
- Student survey data for several years may be needed to establish patterns of performance.[6]
- The Survey Administration Protocol must be carefully followed.
- The Georgia Code of Ethics for Educators requires all teachers to follow all GaDOE required testing protocols and procedures to ensure the integrity of the survey data is not compromised.

How Are Surveys of Instructional Practice Aligned with the TAPS Performance Standards?

Students will answer questions that address teacher performance for standards to which they can respond from personal experience in the classroom. Called **Surveys of Instructional Practice**, the student surveys within the Georgia Teacher Effectiveness System provide student perception data as an additional source of documentation of teacher performance for four of the ten performance standards within the TAPS component of the system. These four standards reflect the direct experience of students in classrooms: 3. Instructional Strategies, 4. Differentiated Instruction, 7. Positive Learning Environment, and 8. Academically Challenging Learning Environment.

Fact Sheet #18: Objective Setting for Student Growth

HOW TO USE STUDENT LEARNING OBJECTIVES IN MEASURING TEACHER EFFECTIVENESS

Introduction

One approach to linking student growth to teacher performance involves building the capacity for teachers and their supervisors to interpret and use student achievement data to set target objectives for student improvement. Setting objectives – not just any objective, but objectives set squarely on student performance – is a powerful way to enhance professional performance and, in turn, positively impact student achievement.

Characteristics of student learning objectives (SLOs)

- o *Focuses on student learning by specifying learning outcomes*
- o *Is specific, measureable, attainable, relevant and time bound.*

- Focuses attention on instructional or program improvement
- Involves the following processes:
  - o Examines trend data and current performance;
  - o Develops outcomes/targets for improvement;
  - o Establishes progress rates for meeting objectives;
  - o Measures academic progress on a regular basis.[1]
- Places the individual student at the center of assessment by monitoring individual student progress over time.[2]

Research

Researchers found that objective setting is particularly effective under the following conditions:

- The objectives are proximal rather than distal (objectives are oriented to the here-and-now rather than to some ultimate objective for the distant future, although it is important to be conscious of the connection between here-and-now tasks and the accomplishment of ultimate objectives).
- The objectives are specific (but not too specific) rather than global.
- The objectives are challenging (difficult but reachable rather than too easy or too hard).
- Interventions are used that impact directly on the experience of learners.
- There are high teacher expectations of students.
- Formative assessment is emphasized.[3]

Advantages of Objective Setting

Using student objective setting as a data source for teacher evaluation has many advantages, such as:

- Makes explicit the connection between teaching and student learning.
- Increases effectiveness of instruction through continuous modification of practices based on student data.
- Serves as an important data source for evaluating teachers who teach grades and subject areas that are not tested on state tests (CRCT and EOCT).
- Helps teachers identify students in needs of additional or different forms of instruction.
- Raises student achievement.[4]

Concerns of Objective Setting

Despite the potential benefits of student objective setting, there are possible negative consequences for students and teachers, and these are summarized in the table below:[5]

Possible Negative Consequences for Students	Possible Negative Consequences for Teachers
Objective setting could pose a threat to underachievers. If they are given low target objectives, the students may underperform to their teachers' low expectations.	Individual objective setting may not be practical or cost effective for teachers teaching certain grades or subject areas.
Objectives imply a narrowing of the many and varied purposes of education. This could result in a narrowing of important student learning opportunities.	The outcomes of student learning are influenced by many external factors that cannot be controlled by the evaluatees.
	Teachers are at risk of being blamed and treated as scapegoats when their students do not meet objectives.

Fact Sheet #19 – Performance Rubrics in Evaluation

RATING TEACHERS WITH PERFORMANCE RUBRICS

What are performance rubrics?
It is important to consider the question of: *What is expected* of the teacher and *How will we know* if the teacher is fulfilling the performance standard. This fact sheet addresses the question of: *How well* is the teacher fulfilling the performance standard?

During formative and summative evaluation, rubrics are used to guide evaluators in assessing and documenting *how well* a standard is performed. A performance rubric is a summary rating scale that describes acceptable performance levels for each of the ten performance standards. The rating scale provides a description of levels on a continuum from *Exemplary* to *Ineffective*.

Performance appraisal rubrics are not behavioral objectives grounded in quantity (e.g., "four times out of five"). Rather, they are qualitative tools designed to:

- Delineate the type and quality of performance within each rating.
- Distinguish the qualitative differences across the progressive ratings.
- Base the final rating on the documented evidence.
- Restrict the scope of judgment that can be used in determining a given rating.

The *Teacher Keys Effectiveness System Handbook* provides examples of rubrics that are tailored to each of the ten performance standards. These examples use a four-level rubric depicting a continuum of teacher effectiveness on each standard. The levels are: *Exemplary*, *Proficient*, *Needs Development*, and *Ineffective*. The rubrics are applied in both summative, which comes at the end of the evaluation cycle, and in formative (ongoing, throughout-the-evaluation-cycle) settings.

Note: The rating of "Proficient" is the expected level of performance.

The ratings for each performance standard are based on multiple sources of information (i.e., observation and documentation) and are completed only after pertinent data from both sources are reviewed. The integration of data provides the evidence used to determine the performance ratings for both formative evaluation and summative evaluation of teachers.

Why Rate Teacher Performance Standards with Rubrics?
There are many advantages in using rubrics to rate teacher performance. Some of the advantages are:

- Rubrics make assessing teacher performance quick and efficient. They also help evaluators justify the ratings they assign to teachers.
- Rubrics are easy to use and self-explanatory. Rubrics make sense to both the evaluators and the evaluatees at a glance.
- Rubrics make the expectations for teacher performance very clear. They also make the evaluation process more fair and transparent.
- Rubrics ensure consistency (reliability) among evaluators while they assess *how well* a standard is performed.
- Rubrics enable evaluators to acknowledge effective performance (i.e., *Exemplary* and *Proficient*) and provide two levels of feedback for teachers not meeting expectations (i.e., *Needs Development* and *Ineffective*). Therefore, rubrics provide teachers with more informative feedback about their strengths and areas in need of improvement, thus helping teachers to

focus on ways to enhance their teaching practices.

- At their best, rubrics can be used for the purpose of supporting professional development as well as for evaluation and accountability. For instance, a well-developed rubric on Standard 2-Instructional Planning, not only tells teachers that good planning must be evident in their performance, but also informs them of what an effective performance looks like and guides them in how to do it. In addition, the gradation of quality also describes what less than proficient performance looks like, such as "the teacher plans without adequately using state and local school district curricula and standards, or without using effective strategies, resources, or data to meet the needs of all students." A rubric that reflects and reveals problems in teacher performance can identify areas of weakness and be informative for professional development decisions.

How can performance rubrics work best?
Despite improved fairness and objectivity, rating a teacher's performance with rubrics is not a fine science. There still will be subjectivity in judgment. To illustrate, evaluators may feel differences in the definitions of performance levels are blurred (i.e., the levels of *Proficient* and *Needs Development*. If Evaluator A views a given aspect of a teacher's performance and rates it *Proficient* and Evaluator B views the same performance and rates it *Needs Development*, then there is less trustworthiness in the ratings. Rating scales should not perpetuate highly subjective reviews of a teachers' performance.

It is recommended that rubrics should be (1) applied systematically, (2) used with improved trustworthiness of evaluators' ratings through inter-rater agreement

(reliability), and (3) based on the best possible performance evidence available. In using performance rubrics, the evaluators should also understand that determining the quality of performance is more than examining a set of facts. It requires consideration of the context of the work, results, and so forth. Thus, evaluation, ultimately, *is* about judgment – albeit judgment based squarely on performance.

A few guidelines that will further enhance the value and defensibility of ratings based on performance appraisal rubrics includes the following:

1. When comparing the documented evidence with the performance rubric, start with the *Proficient* rating and move up or down the scale only when the evidence justifies it.
2. When all of the collected evidence doesn't fit within a single rating rubric (which typically will be the case), select the rating where the **totality of evidence and most consistent practice** exists.
3. Provide teachers with the full set of performance appraisal rubrics so that they have full disclosure of the level of performance that is expected and a fair opportunity to meet those expectations.
4. Consistently train evaluators in the use of the performance appraisal rubrics, with special attention given to practicing the rubrics in simulated settings.

How will performance rubrics be used in the revised teacher evaluation system?
Evaluators make judgments about performance of the ten teacher standards based on all available evidence. After collecting information gathered through observation and documentation, the evaluator applies the four-level rating scale to evaluate a teacher's performance on all teacher expectations for the summative evaluation.

Therefore, the summative evaluation represents where the **totality of evidence and most consistent practice** exists, based on various data sources.

Summative ratings should apply for each of the ten performance standards. In determining the final summative rating, the electronic platform will:

- Apply numbers 0 (*Ineffective*) through 3 (*Exemplary*) to the Rating Scale
    Exemplary = 3
    Proficient = 2
    Needs Development = 1
    Ineffective = 0

- Calculate the overall TAPS point score through adding the contribution of each standard to the summative computation.

- Appropriately scale the final TAPS score to the final summative Teacher Effectiveness Measure score through using the scale determined by the Georgia Department of Education.

Fact Sheet #20 – Use Evaluation to Provide Feedback on Teacher Improvement

USING TEACHER EVALUATION TO IMPROVE TEACHER PERFORMANCE

Why teacher evaluation alone is not enough?

Teacher evaluation is not an end in itself, but a means to an end—teacher improvement. Teacher professional growth is one of the essential reasons that a teacher evaluation system is designed and implemented. David et al. suggest that:

> School-based administrative and professional leadership play essential roles in determining the meaning and value of teacher evaluation in schools, and how teacher evaluation can extend beyond its ritualistic traditions to improve teaching and learning.[1]

The leadership makes the difference between "perfunctory summative teacher evaluation and meaningful assessment of the teaching and learning process that has the potential to enhance the quality of teaching and student learning."[2]

How is teacher evaluation connected to teacher improvement?

If a teacher's performance does not meet the expectations established by the school, the teacher will be placed on a Professional Development Plan for improvement. This plan is designed to support a teacher in addressing areas of concern through targeted supervision and additional resources. It may be used by an evaluator at any point during the year for a teacher whose professional practice would benefit from additional support. An improvement plan can also be implemented based on a certain number of *Needs Development* or *Ineffective* ratings on performance standards during a certain period of performance. This is a process that requires the evaluators to provide meaningful feedback on teacher performance. Feedback with the following characteristics is useful and will lead to more meaningful and successful professional development:[3]

- Feedback focused on teaching and learning rather than other areas.
- Feedback that is contextual rather than context free. (The context that should be considered includes the school's mission and improvement goals; the performance standards, curriculum and instructional goals; level of expertise; teaching styles and instructional goals; and the students' cultural background, prior learning, current needs.)
- Feedback that is generated through analysis of deep, rich evaluation data (i.e., the data collected from multiple observations and multiple documentation options) rather than efficiently gathered, simple data.
- Feedback that is generated based on long-term, continuous data gathering rather than "one-shot" evaluations.

Forms of professional development

Professional development takes many forms. Gordon summarized 12 professional development frameworks:[4]

Framework	Description
Training	A cycle of skill development, classroom application, assessment, reflection, peer support
Co-Teaching	Teachers plan lesson together, teach lesson together, collaborate in post-lesson analysis
Lesson Study	Group identifies gap between desired and actual practice, set goals, carries out series of study lessons
Clinical Supervision	Pre-conference, classroom observation, post-conference

Peer Coaching	Peers engage in coaching cycles to transfer training skills to classroom, learn about teaching, or foster reflective decision making
Study Groups	Small groups of teachers explore professional literature, provide collegial support, or work collaboratively to improve curriculum and instruction
Action Research	Individual or group identifies focus area, gathers data, designs action plan, implements plan, evaluates results
Reflective Writing	Includes journal writing, case writing, autobiography
Teacher Induction and Mentoring	Induction programs support beginning and new-to-the-district teachers, often include mentoring by experienced teachers
Intensive Assistance	Special assistance for teachers not meeting performance expectations
Self-Directed Professional Development	A teacher conducts a self-analysis of professional needs, then plans, implements, and assesses an individualized professional development program
Portfolio Development	Can be for projects, the school year, or career; includes artifacts and reflections on beliefs, experiences, self-assessment, professional growth, and so on

While working with teachers on performance improvement, the evaluators should link learning about instructional changes or innovations to teachers' past experiences.[6] The improvement plan should also include realistic timelines, expectations for improved performance, and evidence of changes in performance.[7] At the end of implementation, teacher evaluation can be used for the assessment and improvement of the professional development plan. Based on the evaluation of teaching, professional development frameworks can be added, modified, or deleted, and the relationship of multiple frameworks can be reshaped.[8]

Schools can use a combination of various frameworks within their overall professional development program. The results of teacher evaluation can provide important information to assist in the selection of frameworks to use.[5]

Fact Sheet #21–Evaluation Conferences

HOW TO CONDUCT A SUCCESSFUL EVALUATION CONFERENCE

What an evaluation conference is and why it is important?

Throughout the teacher evaluation process, communication occurs between the evaluators and those being evaluated. However, the formal summative conference is the most significant and high-stakes communication event of the whole process. While the large majority of teacher and administrators in one study agree that "conferences between teachers and administrators are an important component of teacher evaluation," only 34 percent of teachers and 12 percent of principals agree that such conferences are done well.[1] Essentially the evaluation conference confirms what has been communicated throughout the evaluation period. With regular feedback letting the teacher know where he or she has excelled and where there are concerns, there should be no surprises in the summary evaluation conference.[2] As early as the 1960s, MacGregor pointed out that an evaluation conference serves multiple purposes for teachers:[3]

- Administrative: to document performance for use in personnel decision making.
- Informative: to inform the employee about his or her work performance.
- Motivational: to motivate employees to higher levels of performance.

In addition, a good evaluation conference can also serve problem-solving, strategy-developing, and goal-setting functions.[4]

What makes an evaluation conference effective?

Helm and Maurice suggested that the success of an evaluation conference is contingent on the careful preparation, not only by the principal but also by the teacher. They summarized steps that a principal and a teacher should take to prepare for an evaluation conference:[5]

Helm and Maurice also summarized what literature says about the characteristics of effective evaluation conferences[6]:

- Two-way communication: Principals who are good listeners can obtain more useful information about teacher's performance and development needs, and greater teacher commitment.
- Balanced review of past performance and plans to improve future performance: An evaluation conference is more than summarizing past or present performance. It also includes setting performance goals and developing professional growth plans.
- Recognition of teacher strengths and successes: Emphasizing what the teacher has done well can enhance his or her motivation and morale for better performance.
- Identification and analysis of problems affecting the teacher's performance: Encourage the teacher to identify and analyze the reasons for unmet performance expectations. The principal also identifies performance problems overlooked by the teacher, and pursues joint problem-solving by being willing to give the support the teacher needs.
- Teacher initiation of goals for the next evaluation cycle. Teacher-initiated goal-setting can create a sense of ownership and increase the commitment to accomplish the goals. The principal should also be prepared to

offer goals when the teacher is unwilling or unable to suggest some.

Steps by the Principal	Steps by the Teacher
Set date, time, and place of evaluation conference after confirming with the teacher his or her availability at that time.	Collect, organize, and analyze any documentation generated during the evaluation period (sample assignment, tests, student work, pictures of display, etc.).
Ask the teacher to organize, review, and submit any performance documentation collected.	Identify major strengths and successes of the year.
Ask the teacher to be prepared to discuss successes, unmet challenges, factors interfering with his or her best performance, and what the principal or school system can do to help the teacher achieve his or her goals.	Identify any unmet expectations or goals and analyze possible reasons for failure to meet them. Pay careful attention to factors both within and outside the teacher's control.
Review any job description, previous evaluation, or documentation about the teacher's performance, along with any performance goals that were set for the evaluation period.	Identify areas for growth (improvement or new directions) and possible goals or objectives for the next year.

Complete a tentative evaluation and prepare notes summarizing the teacher's successes and concerns.	Identify how the principal or school system can help the teacher achieve greater effectiveness.
Plan a "script" for addressing concerns tactfully.	
Prepare questions to enable the teacher to provide meaningful analysis of his or her strengths and areas for improvement.	

Fact Sheet #22: TKES & FOUNDATIONAL DOCUMENTS CROSSWALK

THE TEACHER KEYS EFFECTIVENESS SYSTEM FOUNDATIONAL DOCUMENTS CROSSWALK: CLASS KEYS^{SM}, SCHOOL KEYS^{SM}, STANDARDS-BASED CLASSROM RUBRIC, AND GEORGIA FRAMEWORK FOR TEACHING

The Teacher Keys Effectiveness System (TKES) Crosswalk lists standards in each of the five domains and identifies the connections among the foundational documents guiding the development of the Teacher Keys Effectiveness System. Teachers and administrators should consider the crosswalk as a reference tool when planning for the teacher evaluation system. The crosswalk demonstrates where the Teacher Keys Evaluation |System, CLASS Keys^{SM}, School Keys^{SM}, High Impact Practice Rubric for Standards-Based Classrooms (Implementation Resource) and the Georgia Framework for Teaching intersect. Professional learning, school improvement initiatives, and Professional Growth Plans of individual teachers can be guided by this crosswalk.

	Teacher Keys Effectiveness System (TKES)	CLASS Keys^{SM}	School Keys^{SM}	High Impact Rubric for Standards-Based Classrooms	Georgia Framework for Teaching
Planning	**1. Professional Knowledge** The teacher demonstrates an understanding of the curriculum, subject matter, pedagogical knowledge, and the needs of students by providing relevant learning experiences.	**Curriculum & Planning** 1.1, 1.2, 1.3 **Professionalism** 1.3, 3.1, 3.2	**Professional Learning** 1.5, 2.4, 2.6, 3.2 **Curriculum** 1.2, 2.1 **School Culture** 2.2, 2.3	**Concepts** 1, 8	1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 2.3, 3.4, 3.5, 4.7, 5.2, 6.1, 6.4, 6.5
	2. Instructional Planning The teacher plans using state and local school district curricula and standards, effective strategies, resources, and data to address the differentiated needs of all students.	**Curriculum & Planning** 2.1, 2.2, 2.3 **Standards-based Instruction** 1.1, 1.5 **Professionalism** 1.2, 3.1, 3.2	**Instruction** 1.1, 1.2, 2.5, 2.7 **Assessment** 1.2, 1.3, 1.4 **Professional Learning** 1.5, 2.4, 2.6, 3.2 **Planning & Organization** 4.1, 4.2	**Concepts** 1, 3, 4, 6, 10	1.1, 1.3, 1.5, 1.6, 3.1, 3.2, 3.3 4.3, 5.1, 5.2, 5.7, 6.1, 6.4, 6.5

	Teacher Keys Effectiveness System (TKES)	CLASS Keys^{SM}	School Keys^{SM}	High Impact Rubric for Standards-Based Classrooms	Georgia Framework for Teaching
Instructional Delivery	**3. Instructional Strategies** The teacher promotes student learning by using research-based instructional strategies relevant to the content to engage students in active learning and to facilitate the students' acquisition of key knowledge and skills.	**Standards-based Instruction** 1.1, 1.2, 1.3, 1.5, 2.2 **Professionalism** 3.1, 3.2	**Instruction** 2.1, 2.2, 2.3 **Planning & Organization** 2.2 **Professional Learning** 1.5, 2.4, 2.6, 3.2	**Concepts** 5, 6, 9	1.2, 2.2, 2.5, 3.4, 3.5, 4.2, 4.8, 5.2, 5.3, 5.4, 5.6, 6.1, 6.4, 6.5, 6.6, 6.7
	4. Differentiated Instruction The teacher challenges and supports each student's learning by providing appropriate content and developing skills which address individual learning differences.	**Standards-based Instruction** 1.3, 1.4, 2.1 **Professionalism** 1.3, 3.1, 3.2	**Instruction** 2.3, 2.5, 3.3 **School Culture** 2.2, 2.3 **Professional Learning** 1.5, 2.4, 2.6, 3.2	**Concepts** 4, 5	2.3, 2.5, 3.1,3.2, 3.4, 3.5, 4.7, 4.8, 5.3, 5.4, 5.5, 5.6, 6.1, 6.4, 6.5, 6.6, 6.7
Assessment of and for Learning	**5. Assessment Strategies** The teacher systematically chooses a variety of diagnostic, formative, and summative assessment strategies and instruments that are valid and appropriate for the content and student population.	**Curriculum & Planning** 2.3 **Assessment of Learning** 1.1, 1.2, 1.3 **Professionalism** 3.1, 3.2 **Student Achievement** 1.1, 1.2	**Assessment** 1.2, 1.3, 1.4, 2.1, 2.2, 2.3 **Instruction** 2.4 **Professional Learning** 1.5, 2.4, 2.6, 3.2	**Concepts** 5, 6, 8, 10	1.6 4.1, 4.2, 4.3, 4.4, 4.6, 4.7, 4.8, 5.2, 5.4, 5.7, 6.1, 6.4, 6.5, 6.6, 6.7
	6. Assessment Uses The teacher systematically gathers, analyzes, and uses relevant data to measure student progress, to inform instructional content and delivery methods, and to provide timely and constructive feedback to both students and parents.	**Curriculum & Planning** 2.3 **Assessment of Learning** 1.1, 1.2, 1.3, 2.1 **Standards-based Instruction** 2.3	**Assessment** 1.1, 1.2, 1.3, 1.4, 2.1, 2.2, 2.3, 3.1 **Instruction** 2.4, 2.6 **Professional Learning** 1.5, 2.4, 2.6, 3.2	**Concepts** 5, 6, 8, 9, 10	1.3, 1.5, 1.6 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 5.2, 5.4, 5.7, 6.1, 6.4, 6.5, 6.6, 6.7

	Teacher Keys Effectiveness System (TKES)	**CLASS Keys**[SM]	**School Keys**[SM]	**High Impact Rubric for Standards-Based Classrooms**	**Georgia Framework for Teaching**
		Professionalism 3.1, 3.2 **Student Achievement** 1.1, 1.2			
Learning Environment	**7. Positive Learning Environment** The teacher provides a well-managed, safe, and orderly environment that is conducive to learning and encourages respect for all.	**Professionalism** 1.1, 1.2, 1.3, 1.4, 2.1, 4.1	**School Culture** 2.1, 2.2, 2.3, 2.4 **Instruction** 3.3 **Planning & Organization** 2.1, 2.2, 4.1 **Student, Family, Community** 1.1, 1.4	**Concept** 10	2.3, 2.4, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 3.7, 4.4, 4.6, 6.1, 6.2, 6.4, 6.5, 6.6, 6.7
	8. Academically Challenging Environment The teacher creates a student-centered, academic environment in which teaching and learning occur at high levels and students are self-directed learners.	**Professionalism** 1.2, 1.3, 1.4, 2.1, 3.1, 3.2, 4.1	**School Culture** 2.2, 2.3, 2.4 **Instruction** 3.3 **Student, Family Community** 1.1, 1.4 **Professional Learning** 1.5, 2.4, 2.6, 3.2 **Planning & Organization** 2.1, 2.2	**Concept** 10	1.3, 1.5, 2.3, 2.4, 2.6, 3.1, 3.3, 3.4, 4.4, 4.6, 6.1, 6.2, 6.4, 6.5, 6.7

	Teacher Keys Effectiveness System (TKES)	**CLASS Keys**[SM]	**School Keys**[SM]	**High Impact Rubric for Standards-Based Classrooms**	**Georgia Framework for Teaching**
Professionalism and Communication	**9. Professionalism** The teacher exhibits a commitment to professional ethics and the school's mission and participates in professional growth opportunities to support student learning, and contributes to the profession.	**Professionalism** 1.3, 1.4, 2.1, 3.1, 3.2, 4.1	**School Culture** 2.2, 2.3, 2.4 **Instruction** 3.3 **Student, Family Community** 1.1, 1.4 **Professional Learning** 1.5, 2.4, 2.6, 3.2 **Planning & Organization** 2.1, 2.2	**Concept** 10	1.3, 1.5, 2.3, 2.4, 2.6, 3.1, 3.3, 3.4, 4.4, 4.6, 6.1, 6.2, 6.4, 6.5, 6.7
	10. Communication The teacher communicates effectively with students, parents or guardians, district and school personnel, and other stakeholders in ways that enhance student learning.	**Standards-based Instruction** 2.2, 2.3 **Assessment of Learning** 1.1, 1.2, 1.3, 2.1 **Professionalism** 1.1, 1.2, 1.3, 1.4, 2.1, 3.1, 3.2, 4.1 **Student Achievement** 1.1, 1.2	**Instruction** 1.3, 2.6, 3.3 **Assessment** 1.1, 1.4, 2.2, 2.1, 2.3, 3.1 **School Culture** 2.1, 2.2, 2.3, 2.4 **Planning & Organization** 2.1, 2.2, 4.1, 4.2 **Student, Family, Community** 1.1, 1.4 **Professional Learning** 1.5, 2.4, 2.6, 3.2	**Concepts** 2, 5, 6, 7, 8, 10	1.6, 2.3, 3.1, 3.2, 3.3, 3.4, 3.5, 3.7, 4.1, 4.3, 4.4, 4.6, 4.7, 6.1, 6.5, 6.7

Fact Sheet #23: The Georgia Growth Model

STUDENT GROWTH PERCENTILES

The Challenge

Historically, Georgia's assessment system has only enabled educators and other stakeholders to ask questions such as, "What percentage of students met the state standard?" or, "Did more students meet the state standard this year compared to last year?" As a result of this challenge, Georgia has selected the Student Growth Percentile (SGP) model as its growth model for instructional improvement, accountability, and educator effectiveness. Implementing a growth model will allow Georgia to move beyond questions about status to ask critical growth-related questions such as:

- Did this student grow more or less than academically-similar students?
- Are students growing as much in math as in reading?
- Did students grow as much this year as last year?
- What level of growth is necessary for students to reach or exceed proficiency?
- Did students grow sufficiently toward meeting state standards?

The SGP model will provide a wealth of rich information on student, classroom, school, district, and state performance on Criterion-Referenced Competency Tests (CRCT) and End of Course Tests (EOCT) and, eventually, on the common assessments developed by the Partnership for Assessment of Readiness for College and Careers (PARCC). In addition to providing information to enhance our understanding of student achievement, SGPs will work in conjunction with other factors as part of the state's new evaluation system. SGPs are an accurate and fair way to capture the progress students make throughout the course of an academic year. This model provides Georgia with a comprehensive indicator system that can be used at multiple levels (class, school, system, and state).

What is Growth?

There are three typical ways of describing student achievement: status, improvement, and growth. Status measures compare student achievement to a target [such as the Annual Measurable Objectives (AMO) used to calculate Adequate Yearly Progress, (AYP)]. Improvement measures compare student achievement across time using different groups of students (e.g., 3rd grade math achievement in 2009 vs. 2010). Growth measures compare student achievement across time using the *same* students.

As with student achievement, there are different methods of measuring growth: categorical, gain score, value added, and normative (the last two are not mutually exclusive). Categorical growth compares the change in student performance categories across time (e.g., a student moves from "Did Not Meet" to "Meets"). Gain score growth compares the change in scale scores across time (e.g., the mean scale score in grade 6 in 2010 minus the mean scale score in grade 5 in 2009). This type of growth measure typically requires a vertical or developmental scale (a continuous scale spanning multiple grades in the same content area), which Georgia's current assessment program does not include. Value-added models are designed to estimate a teacher's effect on student achievement through the use of prior achievement data and other student characteristics. Actual growth is compared to statistical estimates of expected growth and the difference between the two is considered to be value added. Normative models compare current achievement to prior achievement using the historical growth attained by the student population. SGPs are a normative model.

Understanding SGPs
SGP describes a student's growth relative to other students with similar prior achievement (students who have a similar score history). The SGP not only shows how an individual student is progressing from year to year, but it also shows how groups of students, schools, districts, and the state are progressing. SGPs do not require a vertical scale in order to describe student growth.

SGPs are a normative quantification of growth. They describe a student's growth relative to his or her academic peers – other students with the similar prior achievement. Each student obtains a growth percentile, which describes his or her "rank" on current achievement relative to other students with similar score histories. A growth percentile can range from 1 to 99. Lower percentiles indicate lower academic growth and higher percentiles indicate higher academic growth. Students also receive a growth projection, which describes the amount of growth needed to reach or exceed proficiency in subsequent years.

There are multiple ways of summarizing SGPs for groups of students (such as that for a classroom or a school district). Most commonly, a group's SGP is the median growth percentile for each student in the group. The median is obtained by rank ordering the percentiles for all students in the group and selecting the middle percentile (50% of the group would have a higher percentile and 50% a lower percentile). Additionally, the percentage of students demonstrating at or above a specified level of growth (for example, 60th percentile growth) can be reported. Finally, the growth percentile range can be divided into intervals (e.g., 1 – 25, 26 – 50, 51 – 75, 76 – 99) and the percentage of students demonstrating growth in each interval can be reported. Growth can be compared across grade levels and across subject areas, meaning summary measures also can be aggregated across grade levels and content areas.

An Example
Anna's reading growth percentile is 54. The median reading growth percentile for Anna's school is 65. This means that Anna grew at a rate greater than 54% of academically-similar students in reading. The typical student in Anna's school demonstrated 65th percentile growth in reading, meaning the typical student grew at a rate greater than 65% of academically-similar peers (those students in her school who share a similar history of scores on the reading test). Anna grew at a lower rate in reading compared to the other students in her school on *average*.

Growth Over Time
The fact that SGPs are normative, meaning growth percentiles describe a student's growth relative to other students in the state, raises the question, "How do we compare results from year to year?" A baseline will be used as a reference point so that change in overall growth can be observed from year to year. Without using a baseline, the median SGP for the state would be 50 every year – half of students would be below 50 and half would be above 50. Establishing the baseline for comparison allows the state to observe change in overall educational effectiveness over time. The baseline will be an average of multiple years of data in order to allow for a more stable comparison.

Growth to Proficiency
A second question resulting from SGPs' normative nature is adequacy: "How do we know if a student's growth is enough to put that student on track to reach or exceed proficiency?" SGPs analyze historical student assessment data to model how students performed on earlier assessments, how they performed on later assessments, and what level of growth they demonstrated in between. This information is used to create growth projections for each student. The growth projection tells us, based on where students are now, how much they need to grow to reach or exceed proficiency in the future.

For example, 6th-grade student Anna's reading growth percentile is 54. She scored a 750 on the 6th-grade reading CRCT, which is in the "Does Not Meet" performance level. How much will Anna need to grow in reading next year in order to score at or above 800 ("Meets") on the 7th-grade CRCT? The SGP growth projection provides just that. Given Anna's current 6th-grade achievement, she will need to grow at the 65th percentile to score "Meets" or at the 85th percentile to score "Exceeds" on the 7th-grade CRCT next year. What if we were interested in how much Anna has to grow for the next two years to score at or above 800 ("Meets") on the 8th-grade CRCT? The growth projection might tell us that Anna will need to grow at the 60th percentile for two years to score "Meets" or at the 75th percentile for two years to score "Exceeds" on the 8th-grade CRCT. The Georgia Growth Model will include multi-year projections, giving a long-term view of what is required for students to reach or exceed proficiency. *Note that these numbers are for this example only and do not represent actual data-based growth estimates.*

Fact Sheet #24: Evaluator Credentialing

EVALUATOR CREDENTIALING FOR IMPROVED TEACHER EVALUATION

What does evaluator credentialing mean?
Credentialing is the process of establishing the qualifications of licensed professionals, organizational members or organizations, and assessing their background and legitimacy. For the Teacher Keys Effectiveness System, credentialing is intended to verify evaluator proficiency. To ensure that evaluators meet proficiency in the implementation of an evaluation system, individuals receive systematic instruction and successfully demonstrate the ability to do the work required. Evaluator credentialing may require a formal assessment to show competency and may include oral and/or written performance tasks, evaluation reports, continuing education, or a host of other potential measurements. Evaluator credentialing is ultimately used to ensure that an evaluator has at least the minimum qualifications to perform the duties of administering the Teacher Keys Effectiveness System.

Training of Evaluators
In 2007, Brandt claimed that districts rarely require evaluators to be trained. Mathers agreed, "One of the greatest challenges facing the consistent application of teacher evaluation practices is the paucity of trained and knowledgeable evaluators. Lack of training leads to the misuse of the evaluation instruments, the misinterpretation of results, and, ultimately the lack of overall utility of the results for improving the performance of teachers." (Mathers, 2008)

Dr. James H. Stronge advocated for training in 2003 when he stated that " a clear understanding of the performance standards determines the actual quality of the evaluation process and influences how an administrator approaches data collection, documentation, data analysis, conferencing, goal setting, report writing, and remediation."

Evaluators must receive proper training because lack of training can threaten the reliability of the evaluation and the objectivity of the results.
Without adequate training, evaluators may be unaware of the potential bias they are introducing during their observations. (Mujis, 2006)
Laura Allen of Fordham University states that most pre-service training for school administrators…does not adequately address all the complex issues involved in doing teacher observations that result in improved teacher practice. Principals need to understand what good teaching looks like and how to analyze it if they are going to help teachers improve instruction. (Allan, 2007)
Stronge lent strong support for evaluation training for administrators when he stated that it "ensures integrity in the process and garners teacher confidence in both the administrator and the procedures." (Stronge, 2003)

Many questions arise from evaluators and teachers as they come to a common understanding of effective practice.
Being a proficient evaluator requires knowledge, skills, collaboration, and deliberate practice. Training and assessment of evaluators verify the minimum proficiency needed to conduct quality evaluations. Ongoing professional learning and collaborative discussions ensure that evaluators are continuing to provide reliable and valid evaluations. This is of primary importance in education as it is an ever-evolving field. It could be said that ensuring the proficiency of evaluators is vital to an increase in teacher effectiveness and student achievement.

What does the research say about credentialing evaluators?

In The Teacher Evaluator Training & Certification: Lessons Learned from the MET Project, McClellan states, "As the evaluation of teachers is used for increasingly high stakes personnel decisions, it becomes essential that the judgments made by evaluators are accurate and defensible, both professionally and legally. With the recognition of the vital role that teachers play in promoting student learning, it has become essential for the evaluators to demonstrate that they can accurately assess (and diagnose for the purpose of supporting improvement) the quality of classroom instruction that they observe." (McClellan, 2012)

Odden writes that "the literature on performance evaluations in both education and the private sector has shown that many systems are not understood by the individual being evaluated, do not have reliable scores across multiple evaluators, and most important, do not meet criterion-validity standards – but often are still used for consequential decisions." (Odden, 2004)

Just as evaluation standards provide guidance for making decisions when conducting evaluations, evaluator competencies that specify the knowledge, skills and dispositions central to effectively accomplishing those standards have the potential to further increase the effectiveness of evaluation efforts. (Stevahn, 2005) Evaluator credentialing, therefore, is pivotal as it lays the foundation for reliability and validity of the teacher evaluation system.

How is evaluator credentialing determined?

Evaluator credentialing is a multi-step process. Competencies that establish the knowledge, skills, and abilities for effective evaluation have to be identified before training can begin and proficiency can be defined. In other words, what do we want our evaluators to know, understand, and be able to do with regard to teacher evaluations?

Training develops an in-depth understanding of the evaluation system and provides practice implementing it. Proficient evaluators develop a systematic approach to teacher evaluation using classroom observations and documentation review, provide specific feedback to teachers and interpret assessment and survey data to inform/assess teacher effectiveness and student performance.

How will Georgia determine evaluator credentialing?

The Georgia Department of Education Division of Teacher and Leader Effectiveness recommends participation in Teacher Keys Effectiveness System Training and successful completion of the Evaluator Credentialing Assessment. Ongoing professional learning is necessary to maintain and deepen level of proficiency.

Evaluators who score below desired proficiency ratings on the Evaluator Credentialing Assessment will need additional opportunities to deepen their understanding of the evaluation system and hone their evaluator skills before implementing the evaluation process.

Allan, L. (2007). *Training Administrators to Observe and Evaluate Teachers: Implementation of a Teacher Observation and Evaluation Program.* New York: ETD Collection for Fordham Univeersity.
Brandt, C. M.-S. (2007). E*xamining District Guidance to Schools on Teacher Evaluation Policies in the Midwest Region.* Washington, DC: U.S. Dept of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Midwest.
Mathers, Carrie M. O. (2008). *Effective Teacher Evaluation: Options for States and Districts.* Washington, DC: National Comprehensive Center for Teacher Quality.
McClellan, Catherine M. A. (2012). *Teacher Evaluator Training & Certification: Lessons Learned from the Measures of Effective Teaching Project.* San Francisco: Teachscape.
Stevahn, Laurie J. A. (2005). Establishing Essential Competencies for Program Evaluators. *American Journal of Evaluation* , 43-59.
Mujis, D. (2006). Measuring Teacher Effectiveness: some methodological reflections. *Educational Research and Evaluation* , 53-74.
Odden, A. (2004). Lessons Learned About Standards-Based Teacher Evaluation Systems. *Peabody Journal of Education* , 126-137.
Stronge, J. H. (2003). *Handbook on Teacher Evaluation: Assessing and Improving Performance.* Larchmont: Eye on Education

Dr. John D. Barge, State School Superintendent
"Making Education Work for All Georgians"

Chapter 3

Teacher Keys Effectiveness System Research Synthesis

2013-14

Georgia Department of Education

Dr. John D. Barge, State School Superintendent
"Making Education Work for All Georgians"

TEACHER KEYS EFFECTIVENESS SYSTEM

Research Synthesis of Georgia Teacher Assessment on Performance Standards

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TABLE OF CONTENTS

FIGURES

SECTION 1

INTRODUCTION

Synthesis on Extant Research Related to Georgia Teacher Assessment on Performance Standards

In recent years, an increased alignment between teacher-effectiveness research and teacher evaluation has emerged. Such connection between research and practice facilitates the development of evaluation systems that are based on realistic, research-informed performance standards, therefore, making the measurement of teacher performance and feedback more accurate and useful.

Performance standards are used to collect and present data to document teacher effectiveness that is based on a comprehensive conception of the job responsibilities for teachers. Standards are intended to provide a balance between structure and flexibility. They also define common purposes and expectations, thereby guiding effective professional practices. The ultimate goal is to support the continuous growth and development of each teacher by monitoring, analyzing, and applying pertinent data compiled within a system of meaningful feedback. A fair and solid set of performance standards can provide sufficient detail and accuracy so that both teachers and evaluators (i.e., principal, supervisor) understand the full range of teacher performance and identify areas for professional improvement. This report provides an empirical review of relevant research against which the relative strength of the teacher competencies and related performance standards developed by the Georgia Department of Education can be considered.

SECTION 2

AN OVERVIEW OF EXTANT RESEARCH RELATED TO GEORGIA TEACHER ASSESSMENT ON PERFORMANCE STANDARDS

Standard 1: Professional Knowledge

The teacher demonstrates an understanding of the curriculum, subject content, pedagogical knowledge, and the needs of students by providing relevant learning experiences.

Classroom teaching is a complex activity that demands teachers possess substantial thinking skills and a solid knowledge-base. Knowledge of subject-matter is a prerequisite for effective classroom instruction. A teacher's understanding of subject facts, concepts, principles, methodology, and important generalizations determine his or her pedagogical thinking and decision-making. Furthermore, according to research, the professional knowledge that is essential to be an effective teacher extends well beyond knowledge of subject matter to encompass the factors identified in the following table.[394]

Figure 1: Key elements of Professional Knowledge

Knowledge Area	Focus
• Subject-matter knowledge	Content to teach
• Pedagogical knowledge	How to teach
• Curricular knowledge	What to teach
• Learner knowledge	Whom to teach
• Cultural/community knowledge	Sensitivity to settings where one teaches

Content-knowledge, the disciplinary understanding of the subject taught, exerts a significant influence on teachers' classroom behavior. Various studies suggest that teachers with

stronger content-knowledge are more likely to use practices that can help students construct and internalize knowledge, such as:

- Asking higher-level questions.

- Encouraging students to explore alternative explanations.

- Involving students in more inquiry-based learning.

- Allowing more student-directed activities.

- Engaging students in the lessons.[395]

Many researchers have explored the impact of teachers' content-knowledge on student achievement. They have measured teachers' content-knowledge through tallying coursework taken by the teachers and administering questionnaires or classroom observations. The literature has been consistent in the findings about the positive association between teacher content-knowledge and students' learning at all grade levels, particularly in mathematics.[396]

Research has found that when a teacher's subject content-knowledge is insecure – for instance, when a teacher is teaching unfamiliar areas of curriculum – their ability to give appropriate and effective explanations in the classroom is limited, rendering them ineffective.[397] Teachers who lack subject content-knowledge usually lack confidence in the classroom, which in turn, has significant impact on their planning and teaching. For instance, they are more likely to adopt closed and constrained pedagogy – developing the pedagogy to a more discursive style, keeping a tighter rein on what is taught, avoiding asking open-ended questions and conducting discussion sessions, and being more authoritative in what they plan and execute in the classroom.

Effective teaching requires teachers to have not only sufficient knowledge in their own fields, but also an interdisciplinary understanding that ranges across multiple branches of human knowledge. The real-world does not completely organize itself according to the disciplines or the traditional school subjects. Many phenomena cannot be adequately understood solely from one disciplinary perspective.[398] Making connections across subject areas is an effective way to engage students in challenging, integrated, and exploratory learning around personal and social concerns that appeal to them. In addition, the integration of disciplines can prompt students to learn to think critically, and develop a common core of knowledge necessary for success.[399] Effective teachers use a wide variety of sources and make meaningful connections to sustain students' inquiry across disciplines.

Effective teaching resides not simply in the knowledge a teacher has accrued, but also in how this knowledge is translated into student learning in classrooms.[400] For instance, teachers who are highly proficient in mathematics or writing will help others learn mathematics or writing only if they are able to use their own knowledge to enact learning activities that are appropriate to students. Therefore, a teacher's subject-matter knowledge and pedagogical knowledge are complementary and interdependent. These two knowledge categories can be synthesized by what Shulman called "pedagogical content knowledge," which he defined as "the blending of content and pedagogy into an understanding of how particular topics,

problems, or issues are organized, represented, and adapted to the diverse interests and abilities of learners, and presented for instruction."[401]

The professional knowledge of effective teachers reaches beyond merely the knowledge of subject-matter (content knowledge) and instructional strategies (pedagogical knowledge); indeed, professional knowledge also encompasses an understanding of students and environmental contexts.[402] Effective teachers often use the knowledge of their students, for instance, knowledge of students' learning ability, prior achievement, cultural background, and personal interests, to decide what to teach and how to teach. Based on this expansive knowledge, teachers can anticipate the conceptions, misconceptions, and possible difficulties their students are likely to encounter while learning particular content.

Research has found that an effective teacher:

- Possesses a great deal of knowledge about the content- and curriculum- areas taught, and knows how the material fits into the educational landscape.[403]

- Is certified in his or her field, resulting in higher levels of student achievement on standardized tests.[404]

- Determines and teaches the essential knowledge and skills through effective instruction.[405]

- Cares about students as individuals and makes them feel valued.[406]

- Adapts teaching to address student learning styles.[407]

- Acknowledges his or her perspective and is open to hearing their students' worldviews.[408]

- Is culturally competent.[409]

- Seeks to know about the cultures and communities from which students come.[410]

Standard 2: Instructional Planning

The teacher plans using the state's and local school-district's curricula, effective strategies, resources, and data to address the differentiated needs of all students.

In general terms, planning means the "act or process of making or carrying out plans."[411] Instructional planning is a process of the teacher using appropriate curricula, instructional strategies, resources and data during the planning process to address the diverse needs of students. A teacher's teaching begins before he or she steps into the classroom and starts talking. Prior to each lesson, unit, semester, or school year, while teachers are planning the content of instruction, selecting teaching materials, designing the learning activities and grouping methods, and deciding on the pacing and allocation of instructional time, they actually are determining what learning opportunities their students are going to have. Teachers could use state or district curriculum standards, school district curriculum goals and objectives, and learning outcomes developed by professional organizations to plot the scope and sequence of subject topics. Teachers also could apply their knowledge of research-based practices to plan what strategies and techniques will be adopted to deliver instruction. Nevertheless, the most informative source for any instructional planning resides in the teachers' classrooms – the students.

Effective teachers also evaluate the quality of available resources when designing a unit or lesson. They use criteria such as appropriateness for grade level, alignment to national, state, or local standards, accuracy of information, the time allowed for the lesson or unit, and the learning benefits that come from using the resource.[412] Effective teachers maximize the instructional benefits of resources while minimizing time allocated to less relevant or unnecessary material.

Research indicates the following key questions that teachers need to consider for effective instructional planning:

4) What should be taught?

5) How should it be taught?

6) How should instruction and student learning be assessed?

What should be taught? Effective student-learning requires a progressive and coherent set of learning objectives. Effective teachers excel in delineating the intended outcomes of each lesson and describing the behaviors or actions that students should be able to perform after participating in the learning activities. In deciding what should be taught, expert teachers often use prescribed textbooks, but they hardly ever follow traditional plans. In fact, they frequently have a blueprint in their minds that has been formed and re-formed over time. Perhaps because of their expertise gained over time through a constant process of planning/reflection/refining, these expert teachers are more prone to rely far less on written, formalized lessons than on their well-formed and fluid mental planning model. Expert teachers conceive a lesson along two dimensions simultaneously:

3) The teacher's own actions, thoughts, and habits.

4) The students' thinking and understanding of the content.

Thus, effective teachers not only plan what to teach, but more importantly, they plan for whom they are going to teach. They exert effort to reach beyond their comfort zone of disciplinary thinking and actions to incorporate their students' learning preferences.

How Should It Be Taught? Once the learning objectives are developed, evidence suggests that expert teachers are more competent in translating their instructional plans into actions than non-expert teachers.[413] Additionally, effective teachers follow the pre-defined plan while remaining open to changes and continuously adjusting their instruction based on student needs. Further, expert teachers anticipate the difficulties students might encounter while learning the content of the lesson. They consider students' thinking in order to assess the success of the lesson plan and then modify their instruction promptly.[414] Having a lesson plan cannot ensure that the actual lesson will be implemented as prescribed. The classroom environment ebbs and flows. Consequently, teachers need to be opportunistic and tap into their pedagogical and content resources in a fluid and flexible manner in order to proceed smoothly.[415]

How Should Instruction and Student-Learning Be Assessed? When the learning objectives are set up, in addition to aligning activities to them, teachers also need to link the assessment plan to the learning objectives. Alignment of curriculum, learning activities, and assessment is integral to any quality instructional design. This type of alignment is referred to as "opportunity to learn." Before the actual instruction starts, teachers need to decide upon valid and reliable assessment techniques that are available to elicit student-learning data, and judge the success of the instructional plan. Additionally, teachers should communicate to their students about what they are expected to achieve, and inform them about how they will be assessed after participating in the learning activities.

Teachers must consider a variety of factors when planning instruction, including how to pace the actual delivery in the classroom. The feasibility of a particular lesson largely depends on student ability and variation, content-goals and mandated objectives, time and material resources, and so forth. Many of these factors present teachers with constraints that are beyond their immediate control. For example, there is a prescribed, fixed amount of time each day in which formal instruction may occur. Typically, hours of the day are chunked into units that are dedicated to the study of a certain subject or discipline as determined by a legislative body, school board, or school administrator. Within those chunks of time, however, teachers traditionally have enjoyed a great deal of flexibility and autonomy. That is, what they did with class time was largely up to them. Over the past decade that flexibility has begun to wane – a by-product of high-stakes testing. Teachers report a narrowing of the curriculum that focuses on tested items and breadth of content while sacrificing depth.[416]

Many school districts require teachers to follow strict pacing guides, which prescribe how much time to spend on certain lessons or concepts. Pacing guides are intended to be instruments that teachers use to measure the amount of instructional time devoted to certain topics in light of the total content that must be taught. Properly used, pacing guides are tools to steer daily instructional decisions within the context of the entire curriculum. Used improperly, however, pacing guides unduly restrict the proper ebb and flow of the classroom

and restrict the instructional pace, regardless of student ability. On this topic, one writer stated:

> Pacing guides are not an inherently bad idea. Their effects depend on their design and how district and school leaders use them. The best pacing guides emphasize curriculum guidance instead of prescriptive pacing; these guides focus on central ideas and provide links to exemplary curriculum material, lessons, and instructional strategies.[417]

Thus, pacing is an important component of instructional planning. It allows teachers to see the curriculum in its entirety and avoid the trap of overemphasizing one area of content at the expense of others. Because instructional time with students is fixed, teachers must value class time.

In the process of classroom instruction, a teacher needs to make decisions regarding how to pace learning activities and how to allocate instructional time on a regular basis. Anderson, Evertson, and Brophy concluded that "at some point during the lesson, the teacher must make a fundamental decision about whether the group as a whole can or cannot meet the objectives of a lesson."[418] When should a teacher decide to move on to the next goals? Should the teacher wait until every single student in the class masters the new content or skill? Should the teacher steer the class to new directions as long as half of the class attained the learning goal?

Ideally, students are sensitive to the difficulty of the content and objectives to be learned and will allocate their study time accordingly – they will devote more time to more difficult learning. However, Perrin, Banks and Dargue found that students' control of pace is not perfect and they do not always increase study sufficiently for more difficult learning objectives.[419] An optimum learning approach is to create adaptive learning strategies that diagnose student-learning needs on specific learning areas, develop learning activities that conform to the evolving skill level of the student, and adjust time/pace on a content-area according to student performance. This purposeful way of scheduling and rescheduling the learning progress, with flexible incorporation of additional practice and review, can significantly increase the study time allocated to challenging content-areas and increase student-learning outcomes.

One important misconception that many teachers hold about learning is to perceive it as a mechanical process of information being transferred from textbooks to students who acquire it through listening, reading, and memorization.[420] However, in reality, the way learners interact with new information is influenced by their experiences and prior knowledge and beliefs, and they often fail to remember, understand, and apply new information that has no connection to them and no context for acquiring meaning.[421] Materials and equipment serve as a supportive rather than a central role in the curriculum and instruction.[422] That is, the school district's core curricula and the teachers' instructional strategies should not be dictated by textbooks. On one hand, materials aligned with curriculum and instruction is indispensable for each student's academic success. Effective teaching is much more than the acting out of scripts written by the publishers of textbooks and tests.[423] Students are

frequently conditioned in their approach to learning by experience in teacher-centered, textbook-driven classrooms. Hill stated:

> Traditional textbooks are fact- rather than process-oriented. They stress "what" instead of "how" and "why"…when teachers allow textbooks to dominate instruction they are unlikely to meet today's educational demands for critical thinking, problem-solving, skill-building, and inquiry about the real world.[424]

In addition, some topics are too specific to be included in textbooks and some are too new to be included in textbooks. To enrich students' learning, teachers need to be well-informed and resourceful investigators, and expect their students to cultivate the same qualities.[425] Furthermore, to prepare students for the world outside the school, teachers need to "develop ways for them to learn from information as they will encounter in real-life situations — information that is not predigested, carefully selected, or logically organized."[426]

Planning is preparation for action. Without prior thought and planning, ongoing review, adjustment as the plan unfolds in practice, and reflection on what worked, what didn't, and how to improve, teachers seldom improve practice. Indeed, planning is an essential tool for effective teaching. Teaching is a complex activity that involves careful preparation and planning, both for short-term learning purposes and for long-term learning purposes. Misulis commented that "regardless of the teaching model and methods used, effective instruction begins with careful, thorough, and organized planning on the part of the teacher."[427]

Comparatively, novice teachers have more difficulty responding to individual student needs in their planning. They tend to develop a "one-size fits all" approach to planning, whereas more experienced teachers build in differentiation and contingencies at different points during the lesson.[428] To further assist with meeting individual needs, effective teachers typically plan a blend of whole-group, small-group, and individualized instruction.

As an illustration, Haynie examined the planning practices of ten effective and ten less-effective teachers, whose effectiveness was identified by their students' achievement gains. He found that most top teachers collaborated with one or more teachers while planning lessons; however, the less effective teachers reported they always planned lessons alone. The top teachers also were not restricted by pacing guides, and reached beyond prepared resources to plan their own activities, while the less-effective teachers used resources already prepared. In addition, the top teachers used student assessment data in the planning of instruction. Based on data drawn from frequent assessments, they made data-driven decisions about what goals and objectives to address.[429]

Allington and Johnston also found that the instruction of effective teachers was multi-sourced.[430] Exemplary teachers were inclined to stretch the reading and writing beyond the textbooks. Although effective teachers did often dip into prescribed textbooks, they hardly ever followed traditional plans for these materials. For instance, while planning for a lesson in social science, the effective teachers usually used historical fiction, biography, information on the Internet and in magazines, and other non-traditional content sources.

Borko and Livingston investigated the pedagogical expertise in instructional planning by comparing novice teachers and experienced teachers.[431] They found that novices showed

more time-consuming, less efficient planning. While implementing the planned lessons, their attempts to be responsive to students were likely to lead them away from scripted lesson plans. The novice teachers were less successful in translating their instructional plans into actions than expert teachers. The expert teachers were better able to predict where in a course the students were likely to have problems and to predict misconceptions the students would have and areas of learning these misconceptions were likely to affect.

Various research studies have found that effective teachers tend to have the following behaviors while making planning decisions:

- Construct a blueprint of how to address the curriculum during the instructional time.[432]

- Collaborate with one or more teachers while planning, rather than plan lessons alone.[433]

- Facilitate planning units in advance to make intra- and interdisciplinary connections.[434]

- Use student assessment data to plan what goals and objectives to address.[435]

- Plan for the context of the lesson to help students relate, organize, and make knowledge become a part of students' long-term memory.[436]

- Sequence material to promote student's cognitive and developmental growth.[437]

- Use knowledge of available resources to determine what resources they need to acquire or develop.[438]

- Plan instruction in a multi-sourced manner.[439]

- Take into account the abilities of their students and the students' strengths and weaknesses, as well as their interest level.[440]

Standard 3: Instructional Strategies

The teacher promotes student-learning by using research-based instructional strategies relevant to the content area to engage students in active learning and to promote key skills.

Instruction is a process in which teachers apply a repertoire of instructional strategies to communicate and interact with students around academic content, and to support student engagement. An array of studies reveals that teachers who have similar professional qualifications (e.g., degree, certification, years of experience) instruct differently in their classroom and vary significantly in their ability to help students grow academically.[441] However, the primary difference between effective and ineffective teachers does not lie in the amount of knowledge they have about disciplinary content,[442] the type of certificate they hold,[443] the highest degree they earned,[444] or the years they have been in the teaching profession.[445] Rather, the difference lies more fundamentally in the manner in which they deliver their knowledge and skills while interacting with the students in their classrooms.[446] Numerous studies reveal that schools and teachers with the same resources yield strikingly different results in terms of student-learning. Thus, it seems clear that these differences depend on how the resources are used by those who work in instruction.[447] Selected research-supported key elements of effective instructional delivery include:

Figure 2: Key Elements of Effective Instructional Delivery

Key Elements	Descriptions
Differentiation	The teacher uses multiple instructional materials, activities, strategies, and assessment techniques to meet students' needs and maximize the learning of all students.[448]
Variety	The teacher implements a variety of classroom techniques and strategies that enhance student motivation and decrease discipline problems.[449]
Cognitive challenge	The teacher provides in-depth explanations of academic content and covers higher-order concepts and skills thoroughly.[450]
Student engagement	The teacher is supportive and persistent in keeping students on task and encouraging them to actively integrate new information with prior learning.[451]
Recognizing patterns of student learning and adjusting	The teacher recognizes the schema or pattern in student-learning, makes inferences about the situation (such as identifying the difficulties the students are having), and promptly adjusts the materials, learning activities, and assessment techniques to maximize student learning.[452]
Questioning	The teacher uses multiples levels (particularly higher cognitive levels) of questioning to stimulate student thinking and monitor student-learning.[453]
Relevance	The learning process and the outcomes of learning have authentic bearing on students' lives.[454]

Note: This list is not intended to be a comprehensive set of research-based instructional strategies, but rather an indicative set of those strategies for which there exists solid evidence of success.

Students arrive at school with a variety of backgrounds, interests, and abilities. This means that a one-size-fits-all approach to instruction is ineffective, probably counterproductive, and perhaps even unethical. If the goal of instruction is to provide an opportunity for all students to learn, then the instructional practices that teachers choose to employ in the classroom matter — and matter greatly.[455] In an analysis of educational productivity in the United States and other countries, teachers' classroom instruction was identified as one of the most significant variables having a great effect on student affective, behavioral, and cognitive outcomes.[456] For instance, the instructional practice of reinforcement has a magnitude of 1.17 standard deviations on educational outcomes. The effect of cues, engagement, and corrective feedback is approximately one standard deviation each. Personalized and adaptive instruction, tutoring, and diagnostic-prescriptive methods also have strong effects on student-learning, with effect sizes[*] of .57 (i.e., 22 percentile gain), .45 (i.e., 17 percentile gain), .40 (i.e., 16 percentile gain), and .33 (i.e., 13 percentile gain), respectively.[457]

An essential aspect of effective instruction that helps build and sustain student engagement is relevance of the instruction. Making instruction relevant to real-world problems is among the most powerful instructional practices a teacher can use to increase student-learning.[458] This kind of instruction allows students to explore, inquire, and meaningfully construct knowledge of real problems that are relevant to their lives. Moreover, students are motivated and engaged when their learning is authentic, especially when the real-world tasks performed have personalized results. Research indicates that students have higher achievement when the focus of instruction is on meaningful conceptualization, especially when it emphasizes their own knowledge of the world.[459]

Questioning can be another highly effective instructional tool when used properly.[460] In particular, the types of questions asked, wait-time, and types of responses play a role in the propitious use of questioning.[461] There are substantial differences in the adept use of questioning between effective teachers and ineffective teachers. On the negative side, in a study of mathematics classrooms, Craig and Cairo found that teachers asked more than 99% of the questions. They also found that teachers tended to provide little wait-time, asked recall-and-use questions, and designated a particular student to answer a question.[462] On the positive side, one case study found that teachers deemed effective asked approximately seven times higher cognitive-level questions than those considered ineffective.[463]

Effective teachers ask questions that are sensitive to students' differential levels of learning abilities, and those that are more closely aligned with learning outcomes and learning activities. Effective teachers try to accommodate their teaching to students of different levels. They take students' individual needs into account while differentiating the learning objectives, learning activities, and assessments, so that ALL students can engage with meaningful learning. Effective teachers have also been found to be more self-reflective and critical about their own classroom instruction. They are more adept in planning, evaluating,

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[*] *Effect size* is a measure of the magnitude of a treatment effect. Effect size helps us determine if the treatment effect is practically significant. The effect size can be interpreted as the average percentile standing of the students who received the treatment, relative to the average of untreated students. For instance, the strategy of mastery-learning has an effect size of 0.58 on student achievement. An effect size of .58 would translate into a percentile gain of approximately 20 points.

and modifying their instructional process, and more skillful in deploying strategies flexibly to attain their instructional goals.[464]

The complexities of teaching involve the focus on not only the breadth of content and skills that students should possess, but also on the depth of the content and skills.[465] Effective teachers focus on meaningful connections rather than isolated facts and ideas.[466] A study of student performance on the NAEP found that when teachers emphasized facts over reasoning, students performed more poorly than those of teachers who emphasized reasoning.[467] Effective teachers emphasize meaning. They encourage students to respond to questions and activities that require them to discover and assimilate their own understanding, rather than to simply memorize material.[468] These teachers also present and engage students in content at various levels of complexity, using a broad range of objectives and activities and employing activities and questions that address higher and lower levels of cognitive complexity.

Based on a synthesis of over 500,000 studies of student achievement, Hattie suggested that teachers account for 30% of student achievement variance, with the rest attributable to school, family, and student variables.[469] It is estimated that only about 3% of the contribution teachers make to student-learning is associated with teacher experience, educational level, certification status, and other readily observable characteristics. The remaining 97% of teachers' effects on student achievement is associated with intangible aspects of teacher quality that defy easy measurement, such as classroom practices.[470] Thus, teachers' practices inside classrooms have not only statistical significance, but also practical significance in terms of student-learning. Numerous studies and literature reviews have begun to focus upon identifying the classroom practices of effective teachers.[471] Figure 3 summarizes the findings of two literature reviews conducted by Hattie on a range of variables relating to student achievement.[472] The elements highlighted below are descriptors of classroom-level instructional practices and their corresponding effect sizes.

Figure 3: Impact of Teacher Instructional Strategies on Student Achievement[473]

Variables	Effect Size	Source of Influence
Providing formative evaluation	.90	Teacher
Acceleration	.88	School
Teacher clarity	.75	Teacher
Feedback	.73	Teacher
Teacher-student relationships	.72	Teacher
Metacognitive strategies	.69	Teacher
Students' prior achievement	.67	Student
Not labeling students	.61	Teacher
Problem-solving instruction	.61	Teacher
Direct instruction	.59	Teacher
Mastery-learning	.58	Teacher
Concept-mapping	.57	Teacher
Socioeconomic status	.57	Home
Class environment	.56	Teacher
Challenge level of learning goals	.56	Teacher
Peer tutoring	.55	Teacher
Parental involvement	.51	Home
Expectations	.43	Teacher
Matching students' learning styles	.41	Teacher
Cooperative learning	.41	Teacher
Advance organizers	.41	Teacher
Higher cognitive questioning	.46	Teacher
Peer effects	.38	Student
Time on task	.38	Teacher
Computer-assisted instruction	.37	Teacher
Frequent testing/ Effects of testing	.34	Teacher
Homework	.29	Teacher
School aims and policies	.24	School
Affective attributes of students	.24	Student
Finances	.23	School
Individualization	.23	Teacher
Teaching test-taking and coaching	.22	Teacher
Physical attributes of students	.21	Student
Personality	.19	Student
Family structure	.17	Home
Ability grouping	.18	School
Reducing class size from 25 to 13	.13	School
Teacher subject-matter knowledge	.09	Teacher

Student control over learning	.04	Teacher
Retention	-.16	School
Television	-.18	Home

Techniques that have been found to substantially increase student achievement include direct instruction, simulated instruction, and integrated instruction.[474] Integrating technology has also been associated with better academic achievement.[475] In addition, instruction that includes hands-on activities and cooperative groups has been associated with increased academic performance.[476] Furthermore, questioning as an instructional strategy has also been found to be effective among students.[477] A study of student reading growth revealed that the more teachers focused on higher-level questions, the better students performed in reading.[478] Teachers also provided wait time for students to reflect on their answers.[479] Throughout instruction, effective teachers model and provide scaffolding to support student achievement.[480] While extant empirical studies focus on specific techniques and their impact on student achievement, the common thread among the studies is the focus on using a variety of instructional strategies.

Selected instructional practices exhibited by effective teachers are noted in the following list. The effective teacher:

- Stays involved with the lesson at all stages so that adjustments can be made based on feedback from the students.[481]

- Uses a variety of instructional strategies, as no one strategy is universally superior with all students.[482]

- Uses research-based strategies to enhance the time students spend with teachers by making instruction student-centered.[483]

- Involves students in appropriate and challenging learning activities, such as cooperative learning, to enhance higher-order thinking skills.[484]

- Knows that instructional strategies that use students' prior knowledge in an inquiry-based, hands-on format facilitate student learning.[485]

- Uses remediation, skills-based instruction, and differentiated instruction to meet individual student's learning needs.[486]

- Uses multiple levels of questioning aligned with students' cognitive abilities.[487]

There is no single classroom practice that is necessarily effective with all subject-matter and all grade levels.[488] Effective teachers recognize that no single instructional strategy can be used in all situations. Rather, they develop and call on a broad repertoire of approaches that have proven successful for them with students of varying abilities, backgrounds, and interests.[489] Effective instruction involves a dynamic interplay among content to be learned, pedagogical methods applied, characteristics of individual learners, and the context in which the learning is to occur.[490] Ultimately, subject-matter knowledge, pedagogical skills, and an inspiration for instructional innovation and development can liberate individual teachers to explore the diversification and richness of daily practice.

Standard 4: Differentiated Instruction

The teacher challenges students by providing appropriate content and developing skills which address individual learning differences.

Effective teachers differentiate instruction and individualize for the range of student needs, abilities, and preferences in the classroom. Instead of using uniform strategies for all students, effective teachers design instruction that motivates each student, and they communicate content in such a way that students are able to comprehend based on their individual prior learning and ability. Because students learn in a variety of ways and at a variety of rates, teachers should deliver their lessons with appropriate variety. As Weiss explained, differentiation to maximize the learning of individual students is the cornerstone of effective teaching. He pointed out that "we do our kids a disservice by choosing one pedagogy and using it all the time."[491] Carolan and Guinn stated that: "Diversity is a gold mine. It offers all members of a diverse group multiple ideas, perspectives, and solutions to problems. Teachers can nurture this diversity early on by maximizing the potential of each student in their classroom."[492] Effective teachers tend to recognize individual and group differences among their students and accommodate those differences in their instruction.[493] They adapt instruction to meet student needs, which requires careful assessment and planning for all students in the classroom, as well as the ability to select from a range of strategies to find the optimal match to the context.[494] Differentiation requires teachers to reflect on students as individuals. They also need to be clear about what students should know, understand, and be able to do as the result of a segment of learning, and they also need to have a repertoire of instructional approaches to manage and facilitate flexible student-centered instruction.[495]

Studies on student achievement and on perceptions of teacher effectiveness have emphasized the importance of appropriate differentiation in instruction, including the following findings:

- Students are most engaged and achieve most successfully when instruction is appropriately suited to their achievement levels and needs.[496]

- Instructional differentiation requires careful monitoring and assessment of student progress, as well as proper management of activities and behavior in the classroom. Placing students into groups based on ability without tailoring instruction to the different groups is insufficient to support academic success.[497]

- Effective teachers know and understand their students as individuals in terms of their abilities, achievement, learning styles, and needs, and give greater emphasis to individualization in their teaching.[498]

A meta-analysis of the extant research suggests that instruction based on learning styles is positively related to student attitudes and achievement.[499] Dunn et al. conducted a meta-analysis of 36 experimental studies to examine the effects of teaching students through their learning-style preferences.[500] They found that instructional interventions designed to meet the learning needs of the students showed a statistically significant difference in achievement over students not being accommodated, with an effect size of .353. That means students

whose learning styles are accommodated would achieve 75% of a standard deviation higher than their counterparts whose learning styles are not accommodated. Dunn et al. also extended this finding to at-risk students, reporting that mean achievement increased nearly one standard deviation (i.e., approximately 84th percentile versus 50th percentile) when teachers accommodated for learning styles.[501] Implementing a variety of classroom techniques and strategies also enhances student motivation and decreases discipline problems.[502] Furthermore, differentiated instruction enables teachers to adjust their curriculum, materials, learning activities, and assessment techniques to ensure that all students in a mixed-ability classroom can have different avenues to process new knowledge and develop skills, while having equal access to high-quality learning.[503]

Studies have found that a learning unit that has been enhanced or modified based on student learning abilities can improve students' learning outcomes compared with a regular textbook unit.[504] Furthermore, students from all socioeconomic backgrounds and of different prior achievement levels make significant gains during the implementation of a differentiated unit. They also present higher motivation for learning. These studies indicate that teachers can differentiate the regular teaching materials, through the use of flexible grouping practices based on pre-assessment of student-learning, and the increase of the breadth (i.e., interest, choices, and learning-style variation) and depth (lessons for different ability levels), to create more meaningful learning for students. Beck also noted that accommodating student differences can be beneficial in many ways.[505] First, it motivates teachers to broaden their instructional versatility and creativity. Second, students are more likely to respond favorably to the subject-content that is presented in a way that is compatible to their learning preferences. Third, students' positive attitudes can lead to higher commitment to learning and decrease behavioral problems. Research and best practice indicate that teachers can differentiate at least three classroom elements as shown in Figure 4, according to students' readiness and preference.

Figure 4: How to Differentiate[506]

Content	What do we want our students to know? How do we present the curriculum so that all children can learn the content?	Differentiation can take the form of varying the modalities in which students gain access to important learning, for example by (a) listening, reading, and doing; (b) presenting content in incremental steps, like rungs on a ladder, resulting in a continuum of skill-building tasks; and (c) offering learners a choice in the complexity of content with which they will begin a learning task that matches their current level of understanding and from which every learner can experience academic success.
Process	What do we want our students to be able to do? How can we integrate basic and higher-level thinking skills into the	Differentiation takes the form of grouping flexibly, for example, by (a) varying from whole class, to collaborative groups, to small groups, to individuals; and (b) providing incentives to learn based on a student's

	curriculum?	individual interests and current level of understanding.
Product	What do we want our students to create? How can we teach them to become more self-directed learners?	Differentiation can also take the form of varying assessment methods, such as (a) providing students a menu of choices that may include oral responses, interviews, demonstrations and reenactments, portfolios, and formal tests; (b) keeping each learner challenged at his or her level of understanding with content at or slightly above his or her current level of functioning; and (c) allowing students to have some choice in the means in which they can express what they know — for example, writing a story, drawing a picture, or telling about a real-life experience that involves what is being taught.

As general education classrooms are increasingly inclusive, differentiation is becoming more essential to enable all students to achieve their optimal levels of learning. Despite the importance of differentiation, teachers are still not implementing it on a regular basis. Many teachers are resistant to differentiation because:

- They do not receive administrative support.

- They fear that straying from the mandated curriculum may result in lower standardized test scores.

- They have classroom management or student behavioral problems.

- They are resistant to long-term changes in teaching style.

- They do not have time to plan for differentiation.

- They fear that students' parents may not agree with the practice.[507]

Carolan and Guinn pointed out that many educators mistakenly think that differentiation means teaching everything in at least three different ways. A differentiated classroom does look different from a one-size-fits-all classroom, but often the differences between students are less dramatic. For instance, differentiation can be in the form of developing a metaphor matched to a student's cognitive ability and personal interests, or pushing the thinking of an advanced student during a whole-class discussion.[508] Through observations and interviews with five outstanding teachers, they found that their strategies that addressed student individual needs had four common characteristics:

- Offering personalized scaffolding, often inventing supports on the spot as a student faltered. In order to deliver tailored explanations, these teachers had a rich mental database of examples, metaphors, and enrichment ideas to draw on.

- Using flexible means or multiple paths to reach defined ends.

- Mining subject-area expertise. These teachers not only knew the landscape of their subject-matter, they also showed multiple ways to navigate it and translate it into their instruction in a manner that led to student-learning.

- Creating a caring classroom in which student differences in ability, culture, language, or interests were seen as assets, rather than hurdles.

Standard 5: Assessment Strategies

The teacher systematically uses a variety of diagnostic, formative, and summative assessment strategies and instruments that are valid and appropriate for the content and student population.

A teacher's skill in assessment must be more than merely testing students or measuring achievement. Teacher assessment skill "must center not on *how [they] assess* student achievement but on *how [they] use assessment* in pursuit of student success."[509] Researchers usually draw a distinction between *assessment of learning* and *assessment for learning*. Gronlund described assessment *of* learning as "a broad category that includes all of the various methods for determining the extent to which students are achieving the intended learning outcomes of instruction."[510] Assessment of student-learning can emerge in various formats, such as teacher observation, oral questioning, journal entries, portfolio entries, exit cards, skill inventories, homework assignments, project products, student opinions, interest surveys, criterion-referenced tests, or norm-based tests. [511] In comparison, assessment *for* learning involves the teacher gathering, analyzing, and using data, including state and district assessment data, to measure learner progress, guide instruction, and provide timely feedback. Educators distinguish three different types of assessment based on the purpose and principles that drive assessment:

- Diagnostic assessment – the purpose of diagnostic assessment is to ascertain, prior to instruction, each student's strengths, weaknesses, knowledge, and skills and to permit the teachers to remediate, accelerate, or differentiate the instruction to meet each student's readiness for new learning.

- Formative assessment – the purpose of formative assessment is the assessment that is integral to the instructional process to help teachers adjust and modify their teaching practices so as to reflect the progress and needs of the students.

- Summative assessment – summative assessment can occur at the end of a semester or a school-year to determine the student attainment of the standards of certain subject areas.

The practice of assessing student-learning is essential for effective instruction and learning. High-quality assessment provides teachers with the information regarding the extent to which students have attained the intended learning outcomes, and it informs teachers' instructional decision-making (what to teach and how to teach) as well. The goals of assessment are to provide teachers with evidences of student-learning and to facilitate teachers in making informed decisions on revising instruction and advancing student-learning.

Assessment can facilitate instruction and learning in many ways, including:
- Providing diagnostic information regarding students' mental readiness for learning new content.

- Providing formative and summative information needed to monitor student progress and adjust instruction.

- Keeping students motivated.

- Holding students accountable for their own learning.

- Providing opportunities to re-expose students to content.

- Helping students to retain and transfer what they have learned.[512]

Research has indicated that teachers who introduce assessment into their classroom practice can affect substantial achievement gains. In their 1998 research review, Black and Wiliam examined a multitude of empirical studies to determine whether improvement in classroom assessments can lead to improvement in learning.[513] They found that formative assessment has substantial positive effects on student achievement, with effect size ranging from 0.3 to 0.7 standard deviations. Particularly, they found that formative assessment is more effective for low achievers than for other students, thus, reducing an achievement gap while raising achievement overall at the same time.[514] Wenglinsky found that teachers' use of frequent assessment and constructive feedback had a positive effect on student mathematics and science achievement at all grade levels.[515] Stronge et al. also noted that effective teachers and ineffective teachers differed in their student assessment practices.[516] In particular, effective teachers were found to provide more differentiated assignments for students than those deemed ineffective.

Research has found that an effective teacher:

- Gives regular feedback and reinforcement.[517]

- Offers timely and specific feedback.[518]

- Gives homework and offers feedback on the homework.[519]

- Uses open-ended performance assignments.[520]

- Analyzes student assessments to determine the degree to which the intended learning outcomes align with the test items and student understanding of objectives. [521]

- Interprets information from teacher-made tests and standardized assessments to guide instruction and gauge student progress by examining questions missed to determine if the student has trouble with the content or the test structure.[522]

Assessments are more likely to have a positive influence on student-learning when they exhibit the following characteristics:

- Aligned with the framework of learning targets and instruction.

- Of sufficient validity and reliability to produce an accurate representation of student-learning.

- Accompanied with frequent informative feedback, rather than infrequent judgmental feedback.

- Involve students deeply in classroom review and monitoring.

- Processes and results are timely and effectively communicated.

- Documented through proper record-keeping of learning results.[523]

As noted earlier, there are multiple methods for assessing student-learning. Guskey found that teachers and administrators believed student portfolios were the most important type of assessment tool used to measure student-learning, while division, state, and national assessments ranked the lowest.[524] Interestingly, homework ranked in the middle of Guskey's analysis of assessment types. Regardless of the type of assessment used, the more important issue is the practical value of the assessment in use. Tomlinson suggested that teachers must find a proper fit between students and the method being used to assess their learning.[525] Assessment, she posited, is a form of communication. Teachers must allow students to communicate their learning in a manner best suited to their needs.

Given the prevalence of standardized assessments at the state, regional, and national levels in the United States, and in numerous countries around the globe, a brief summary on this particular type of assessment seems in order. Extant literature has documented both positive and negative impacts of standardized assessments on teachers' instruction and assessment at the classroom level. The positive evidence indicates that standardized tests motivate teachers to:

- Align their instruction to standards.
- Maximize instructional time.
- Work harder to cover more material in a given amount of instructional time.
- Adopt a better curriculum or more effective pedagogical methods.[526]

However, other research reveals that high-stakes assessments force teachers to:

- Narrow the curriculum.
- Focus on memorization, drills, and worksheets.
- Allocate less time to higher-order skills.
- Restrict their teaching to formulated approaches of instruction.[527]

Standardized assessment is not primarily concerned with what is going on in the daily classroom. Consequently, teachers should maintain a balance between state- /national-level assessments and classroom-level assessments to optimize student-learning.

Standard 6: Assessment Uses

The teacher systematically gathers, analyzes, and uses relevant data to measure student progress, to inform instructional content and delivery methods, and to provide timely and constructive feedback to both students and parents.

Effective teachers not only assess student-learning, but also they use the results of student assessment systematically and intelligently. That is a commonly adopted strategy by effective teachers and an integral attribute of their instruction. Using assessment means assessment of student-learning is not just the end, but also the means to reach an end, by continuously monitoring success and, step-by-step, moving to desired learning outcomes. Assessment is a waste of time and effort if its results are shelved and collect dust. The essence of assessment is how it can lead to improvements in teaching and learning.[528] Assessment use can be defined as the practice that helps teachers use student performance data to continuously evaluate the effectiveness of their teaching and make more informed instructional decisions.[529] The purposes of assessment use include:[530]

- Gathering important information about student understanding to make prompt instructional modification — evidence of students' knowledge and understanding.

- Providing timely and informative feedback to students — the nature of feedback given to students.

- Enabling students to set and attain meaningful goals — shifts in the way that students learn.

A review of research by Natriello[531] and Crooks[532] and more recently by Black and Wiliam[533] has demonstrated that substantial student-learning gains are possible when teachers introduce assessment results into their classroom practice. Assessment data can be used for tasks such as setting annual, intermediate, and ongoing goals. Assessment results also can be used to visually depict goals and visions, motivate students, and celebrate achievements and progress.[534] Effective teachers provide instruction and support that leads to quality learning opportunities on a day-to-day basis. Additionally, an experimental study reached the following conclusions for teachers who monitored their students' progress on a regular basis:

- They effected greater student achievement than those who used conventional monitoring methods.

- They had more improvement in their instructional structure.

- Their pedagogical decisions reflected greater realism and responsiveness to student progress.

- Their students were more knowledgeable of their own learning and more conscious of learning goals and progress.[535]

The practice of assessing and documenting student growth is essential for effective instruction and learning. It determines the effectiveness of a period of teaching (e.g., a lesson, a unit, a semester, or a school year) in terms of student-learning and provides a basis

for continuing instruction. Collecting evidence of students' learning progress provides teachers with day-to-day data on students' mental preparedness for certain learning targets and facilitates teachers in making data-based decisions for instruction modification. The data can come from small-group discussion with the teacher and a few students, whole-class discussion, journal entries, portfolio entries, exit cards, skill inventories, pretests, homework assignments, student opinion, or interest surveys.[536] In addition, reviewing student work (e.g., student writing samples and project-based work) is also an important way of assessing student performance on curricular goals and identifying desired changes in instructional practices.

Student progress-monitoring is a technique that can provide teachers with data on students' performance to evaluate the effectiveness of their instruction and make adjustments in their pedagogical behavior. Progress-monitoring also can help teachers set meaningful student achievement goals to tap into greater student-learning potential. Teachers who use progress-monitoring also are better informed of the strengths and weaknesses in student-learning and can better decide on what instructional modifications are necessary. Empirical research has found that when progress-monitoring is combined with goal-raising, student-learning profiles, and appropriate instructional modifications, it can help teachers build stronger instructional programs that are more varied and more responsive to students' learning needs, and effect better academic performance for students.[537] Stecker, Fuchs, and Fuchs noted that teachers affected significant growth in student-learning with progress-monitoring only when they modified instruction based on progress-monitoring data; however, frequent progress-monitoring alone did not boost student achievement.[538]

Effective teachers are often described as flexible and opportunistic. They use various techniques (such as questioning, classroom observation) to diagnose student-learning and then adjust instruction promptly to close the gap between where the students are now and where the students should be. Effective teachers are aware that when students begin to indicate unengaged behaviors, that can be the result of poorly planned activities, inadequate scaffolding and modeling, or insufficient attention to developing norms and participation routines in the classroom.[539] To address student off-task behaviors, they not only use behavior-control, but more importantly, modify their instruction to make it more engaging. Effective teachers ask appropriate questions at appropriate times to solicit information regarding how well students have mastered the basic facts, skills, or ideas in a lesson. The technique of questioning not only provides students an opportunity to think critically and become more informed about their learning, it also provides important input for teachers to make instructional modifications.

An instructional technique that is complimentary to questioning is feedback. Questions and answers from teachers to students, and back again, represent much of the academic interaction that takes place in schools. This process supports student engagement in learning and enhances teacher's ability to monitor the learning process.[540] Feedback to students that focuses on developing skills, understanding, and mastery, and treat mistakes as opportunities to learn is particularly effective.[541] Effective feedback targets students' specific misconceptions or errors that occur in a content-area or a skill-set, and that provide informative guidance on what they need to do to maximize their performance. Effective

teachers avoid simple "yes" or "no" answers. Rather, they provide informative explanations of what students are doing correctly, what they are not doing correctly, and how to fix it.[542] Students as well as teachers have strong beliefs about the importance of feedback. Students report that informative feedback makes them aware of their mistakes, highlights ways to make corrections, and informs them of teacher expectations. Teachers report that providing feedback can be arduous and painstaking, but also they feel that it is an important part of instruction.[543]

Based on a large-scale research review, Hattie found that, compared to their ineffective colleagues, effective teachers were adept at monitoring student problems and assessing their level of understanding and progress, and they provided much more relevant, useful feedback.[544] The research also shows that effective teachers are more adept at developing and testing hypotheses about learning difficulties or instructional strategies. Wenglinsky found that teachers' use of frequent assessment and constructive feedback had a positive effect on student mathematics and science achievement at all grade-levels.[545] Some other characteristics of teachers' effective use of student assessment data include:

- Aligning intended learning outcomes, instruction, and assessment to effectively keep track of students' progress.[546]

- Using high-quality homework and classroom quizzes to review student performance on key knowledge and skills, and providing meaningful and timely feedback.[547]

- Targeting areas of strength and weakness to provide appropriate remediation.[548]

When teachers monitor students' ongoing learning and use student-assessment data to inform their own teaching, they:

- Effect greater student achievement.

- Have more improvement in their instruction and make their pedagogical decisions more responsive to student-learning.

- Exhibit greater concerns about learning and a higher academic emphasis in their classroom practices.

- Are better at supervising the adequacy of student-learning, identifying students in need of additional or different forms of instruction, and modifying practices to maximize student-learning.[549]

Fuchs and Fuchs found that teacher use of ongoing student-assessment data can be beneficial to student-learning in many ways, such as:

- To identify students in need of additional or different forms of instruction.

- To enhance instructional decision-making by assessing the adequacy of student progress.

- To determine when instructional modifications are necessary.

- To prompt teachers to build stronger instructional programs that are more varied and responsive to student needs.[550]

Standard 7: Positive Learning Environment

The teacher provides a well-managed, safe, and orderly environment that is conducive to learning.

Students need an engaging, stimulating, and enriching learning environment to grow and thrive. In order to achieve this type of rich environment, effective teachers establish and communicate guidelines for expected behavior, monitor student behavior, keep students on task, and infuse humor, care, and respect into the classroom interactions, so as to develop a climate that is conducive to student-learning. As a result, research has indicated that a positive learning environment can shape student outcomes in cognitive, motivational, emotional, and behavioral domains.[551]

Among other attributes, a caring, supportive, safe, challenging, and academically robust setting helps define what it means to have a positive learning environment that is conducive to student success.[552] However it is defined, virtually all teachers and administrators, and even students themselves, recognize how valuable a positive classroom climate is to learning. The most prevalent criteria used to define learning environments are probably the physical arrangement of the classroom, discipline and routines, organization of learning activities, and the engagement of students with tasks, among others. The key features highlighted next can elucidate what research indicates about an effective learning environment.[553]

Figure 5: Key Features of an Effective Learning Environment

Defining Characteristics	Focus
Physical arrangement of the classroom	The teacher develops functional floor plans, with teacher and student work areas and furniture/materials placement for optimal benefit.[554]
Discipline and routines	The teacher establishes classroom rules and procedures early on in the school-year.[555]
Organization of learning activities	Classroom activities have an academic focus. The teacher orchestrates smooth transitions and maintains momentum throughout teaching and learning.[556]
Engagement of students	The teacher uses effective questioning, smooth transitions, and challenging but interesting activities to increase student engagement in learning and student accountability.[557]
Maximizing instructional time	The teacher protects instruction from disruption and makes the most out of every instructional moment.[558]
Communication of high expectations	The teacher assumes responsibility for student-learning, sets high (but reasonable) expectations for all students, and supports students in achieving them.[559]
Care and respect	The teacher establishes rapport and trustworthiness with students by being fair, caring, respectful, and enthusiastic.[560]

Research has found that an effective teacher:

- Is adept at organizing and maintaining an effective classroom environment.[561]

- Has a sense of "with-it-ness," which can be translated as being aware of when routines need to be altered or an intervention may be needed to prevent behavior problems.[562]

- Fosters relationships that exhibit belief in the students, and where respect and learning are central so students feel safe taking risks that are associated with learning.[563]

- Is culturally competent and attuned to students' interests both in and out of school.[564]

- Establishes good discipline, effective routines, smooth transitions, and ownership of the environment as components of establishing a supportive and collaborative climate.[565]

A review of research connecting learning environment and student achievement emphasizes a number of key dimensions, including classroom management and structure, positive classroom climate, and classroom talk:

Classroom management and structure: Teachers who emphasize structure in the classroom are more effective than those who do not.[566] In general, structure means "an aggregate of elements of an entity in their relationships to each other."[567] For our purposes in education specifically, structure involves physically orienting the classroom for instruction, preparing and organizing materials, and framing lessons in a coherent and logical manner. Effective teachers implement good classroom management to establish order, engage students, and elicit student cooperation, with an ultimate purpose to establish and maintain an environment conducive to instruction and learning.[568] Two key features of effective classroom management are:

3. Good management is preventive rather than reactive.

4. Teachers create well-managed classrooms by identifying and teaching desirable behaviors to students.

Effective teachers were found to maintain their management system by "monitoring and providing prompt feedback, pacing class activities to keep them moving, and by consistently applying classroom procedures and consequence."[569] The extant research is fairly clear that good classroom management has a positive influence on students' motivational development.

Positive classroom climate: Effective teachers build a classroom climate where error (i.e., risk taking) is welcomed, where student questioning is high, where engagement is the norm, and where students can gain reputations as effective learners.[570] Teachers who make the effort to engage in positive interactions with students make a difference in the academic and social development of their students.[571]

Classroom talk: The interaction between teacher and students, and among students, is another significant indicator of learning environment. Authority is more distributed than centralized through the communication that happens in a positive classroom environment.

Additionally, the talk between teacher and student is personalized and personal. Exemplary teachers have been found to use authentic conversation to learn about students and encourage students to engage their peers' ideas.[572]

Figure 6: Attributes of Positive Learning Environment

Positive Attributes	Descriptions
Classroom management and structure	- identifying and communicating desirable behavior - consistently applying rules and procedures - monitoring student behavior - taking preventive rather than reactive management actions - pacing class activities and transitioning between tasks smoothly - maximizing instructional time - keeping students on task - making learning meaningful[573]
Positive classroom climate	- cooperation among teachers and students - common interest and values - pursuit of common goals - a clear academic focus - well-organized and well-planned lessons - explicit leaning objectives - appropriate level of task difficulty for students - appropriate instructional pace[574]
Classroom talk	- respectful, supportive, and productive - modeled by teachers - practiced by students

A safe school always starts with individual safe classrooms. Cornell and Mayer stated that "academic success for students begins with a trusting and mutually respectful relationship between student and teacher, extends to classroom order, and culminates in a safe and supportive school climate that is profoundly and inextricably linked to learning outcomes."[575] The classroom environment refers to the conditions, circumstances and influences surrounding and affecting the development and performance of learners. The classroom climate is the shared perceptions of learners about the classroom environment. The classroom climate can range from a warm, welcoming and nurturing atmosphere to one characterized by coldness and indifference.[576]

Anderson suggested that classes have a distinctive personality or "climate" which influences the learning efficiency of their members. The properties that make up a classroom environment include interpersonal relationships among students, relationships between students and their teachers, relationships between students and both the subject being studied and the method of learning, and the students' perception of the structure of the class.[577]

As early as 1973, Moos, the first researcher who popularized the concept of classroom climate, developed a measurement scale that measures the climate within a classroom on three broad categories:[578]

- *Relationships* – the degree of which individuals in the environment help and support each other and express themselves openly and freely.

- *Personal development* – the degree to which personal self-enhancement can occur.

- *Maintenance and change in the system* – the degree to which the environment is orderly, clear in its expectations, maintains control, and is able to change.

Similarly, the scale developed by Sinclair and Fraser measures classroom environment from five aspects:[579]

- *Cooperation* – the extent to which students cooperate with each other during class and activities.

- *Teacher Support* – the extent to which the teacher helps, encourages, and is interested in the students.

- *Task Orientation* – the extent to which it is important to the class to stay on task and complete classwork.

- *Involvement* – the extent to which students participate actively in their class activities and discussions.

- *Equity* – the extent to which the teacher treats all students equally, including the distribution of praise and questioning, and the inclusion in discussion.

Research has demonstrated that students in cooperative learning environments typically perform better than those in competitive or individualistic situations in terms of their reasoning, the generation of new ideas and solutions, and how well they transfer what they learn from one situation to another, as well as on traditional test measures.[580] The trust between the teacher and students, and among students themselves, is a key element to effective classroom environment. Tschannen-Moran explained the importance of trust in this way: "Without trust, students' energy is diverted toward self-protection and away from learning."[581]

A synthesis of research studies indicates that learning outcomes and gains are positively associated with learning environment characteristics like cohesiveness, satisfaction, task difficulty, formality, goal direction, democracy, and the material environment, but negatively associated with characteristics like friction, cliqueness, apathy, and disorganization.[582] Students' perceptions of their learning environment impact their self-concept as a learner. Byer found a positive relationship between students' perceptions of classroom social climate, students' perceptions of classroom affiliation, and academic self-concept.[583] Byer also found a positive relationship between students' perceptions of classroom involvement and academic self-concept.[584] Research also found that students' perceptions of the classroom social environment (teacher support, promotion of mutual respect, promotion of task-related interaction, student support) were related to their engagement in the classroom (self-regulation and task-related interaction).[585]

The following table offers an overview of five basic emotional needs of students that need to be addressed to create a classroom environment for optimal learning and growth:[586]

Georgia Department of Education
Teacher Keys Effectiveness System

Figure 7: Student Emotional Needs and Building an Affectively Healthy Learning Environment

Domains of Student Emotional Needs	Characteristics of an Affectively Healthy Learning Environment	What Teachers Can Do?
Psychological safety	Learners know what is expected, feel safe and protected, are able to trust others, and are able to anticipate or predict the sequence of events from experience.	• Establish clearly defined classroom procedures, policies and practices. • Act responsibly and keep students' secrets and confidences. • Maintain neat, clean and orderly physical conditions within the classroom.
A positive self-image	Learners have a strong sense of personal worth and feel capable of being loved and entitled to happiness.	• Give positive feedback that can help students to become aware of their strengths and areas for growth. • Build rapport with students. • Honor each child's uniqueness. • Demonstrate acceptance and caring.
Feelings of belonging	Learners feel that they are equal to others and they are accepted and valued as a member of something larger. The whole class is characterized by bonding, class cohesiveness and a sense of group pride.	• Create an accepting, warm classroom culture. • Reduce feelings of isolation or competition by involving students in classroom activities. • Provide students with opportunities to be of service to others.

Figure 7 (cont.)

Domains of Student Emotional Needs	Characteristics of an Affectively Healthy Learning Environment	What Teachers Can Do?
Purposeful behavior	Learners bring meaning to their efforts and sustain an intrinsic joy of learning and the achievement of solving their own problems.	• Be a model to take responsibility for and initiative in the learning process. • Set challenging but achievable expectations. • Convey clear expectations. • Express confidence and faith in their students' abilities. • Strengthen values such as responsibility, effort, honesty, perseverance, determination, and commitment.
A sense of personal competence	Learners are attaining optimal learning and performance, both cognitively and affectively.	• Provide options of learning materials and tasks based on students' ability. • Be the support and the cheerleader for the students. • Recognize the efforts exerted and the growth achieved by individual students. • Provide constructive, informative feedback to help students become better. • Celebrate success.

The interaction between teacher and students is a significant indicator of learning environment. Teachers and students spend much of their day interacting academically. However, social interactions and those that give the teacher opportunities to demonstrate caring, fairness, and respect have been shown to be an important element of teacher effectiveness. A teacher's ability to relate to students and to make positive, caring connections with them plays a significant role in cultivating a positive learning environment and promoting student achievement.[587]

Teachers who make the effort to engage in positive interactions with students make a difference in the academic and social development of their students. A constructive interaction with students is a motivator for students to act in accordance with the expectation of their teacher. Studies confirm that low student achievement can result from stressful student-adult relationships, while positive relationships can lead to higher levels of student participation and engagement.[588]

Teacher interactions with students have been found to have effects at all grade levels. Hamre and Pianta found that first grade teachers who engaged in positive interactions with at-risk students reduced the probability of those students experiencing failure in the early grades.[589] Barney found that middle school students developed a more positive attitude toward course content when their teachers took the time to interact with them.[590] Pressley, Raphael, Gallagher, and DiBella found that secondary teachers who got to know their students personally were able to work with them to develop and achieve goals.[591]

Cornelius-White synthesized 119 studies that examined the impact of learner-centered, teacher-student relationships on student outcomes.[592] Specifically, the author focused on the teacher-students relationships that are characterized by empathy, warmth, genuineness, non-directiveness, higher-order thinking, encouraging learning/challenge, adapting to individual and social differences, and composites of these. Overall, the meta-analysis found that these student-centered teacher variables have positive association with student cognitive (e.g., academic achievement in math, science, social science, and verbal achievement), affective (e.g., positive motivation, self-esteem/mental health, social connections), and behavioral (e.g., student participation/initiation, outcomes, attendance/absences, disruptive behavior) outcomes. The mean correlations ($r = .31$) are above the average compared with other educational interventions.

Allington and Johnston observed and interviewed 30 fourth-grade literacy teachers from 24 schools in five states, who were identified as exemplary through a snowball nomination process.[593] These teachers' classroom talk was found to have the following characteristics:

- The classroom talk could be described as respectful, supportive, and productive, and was not only modeled by the teacher in interactions with students, but also deliberately taught, and expected.

- The talk between teacher and student was personalized and personal. Exemplary teachers used authentic conversation to learn about students. They encouraged students to engage each other's ideas. The authority was more distributed than centralized.

- "No" or "Yes" were rarely uttered by the teachers except in response to gross social transgression.

Effective teachers were found to maintain their management system by "monitoring and providing prompt feedback, pacing class activities to keep them moving, and by consistently applying classroom procedures and consequence."[594] Wang, Haertel, and Walberg analyzed a knowledge-base comprising 11,000 statistical findings connecting a variety of variables and student achievement in order to answer the question: *What helps students learn?* They found effective classroom management was the one of the most influential variables in student-learning. They concluded, "Effective classroom management increases student engagement, decreases disruptive behaviors, and makes good use of instructional time."[595] Their definition of effective classroom management included effective questioning/recitation strategies, learner accountability, smooth transitions, and teacher "with-it-ness."

Taylor et al. also found the most accomplished teachers were experts at classroom management. In general, they had well-established classroom routines and procedures for handling behavior problems, smooth transitions between activities, and a rapid rate of instruction, thus allowing for high instructional density. They managed, on average, to engage virtually all (96%) of their students in the work of the classroom.[596]

Classroom management includes actions taken by teachers to establish order, engage students, and elicit student cooperation, with an ultimate purpose to establish and maintain an environment conducive to instruction and learning.[597] Two key features of effective classroom management are:

3. Good management is preventive rather than reactive.

4. Teachers help create well-managed classrooms by identifying and teaching desirable behaviors to students.

Elements of effective classroom management include establishing routines and procedures to limit disruption and time taken away from teaching and learning, maintaining momentum and variety in instructional practices, and monitoring and responding to student activity. These elements contribute to students' active engagement in the learning process.[598] Research on the classroom management skills of effective teachers has consistently found that they establish routines for all daily tasks and needs.[599] Effective classroom managers orchestrate smooth transitions and continuity of momentum throughout the day to increase the amount of time spent on academic tasks. An exploratory study of effective versus ineffective teachers found that teachers whose students make greater achievement gains use more routines for everyday tasks than teachers whose students made less than expected achievement gains.[600]

Most effective teachers admit that rules, procedures, and routines take precedence over academic lessons during the first week of school, noting that organization takes a considerable investment of time but has tremendous payback benefits.[601] Another research team noted that teachers who spend more time establishing instructional routines at the beginning of the school-year did not need to exert as much effort on similar tasks later in the year.[602] The investment in initial organizational strategies yielded significant gains in reading scores throughout the year. In comparison, achievement gains were lower among students whose teachers did not demonstrate similar organization skills.

A study conducted by one research team found that students' perception of rule clarity and teacher monitoring are positively related to their development of academic interest in secondary school mathematics classes.[603] Another empirical study revealed that the top quartile teachers (i.e., the most effective teachers as identified by the high academic achievement of the students they taught) were more organized with efficient routines and procedures for daily tasks, and they communicated higher behavioral expectations to students than ineffective teachers. The top teachers also were found to have less disruptive student behaviors (on average, once every two hours) than did the less effective teachers (on average, a disruption every 12 minutes).[604]

Disruptive behavior takes away precious classroom learning time. Teachers who can implement effective classroom management can decrease disruptive classroom behaviors and increase student engagement in academic tasks. Disruptive behaviors are particularly problematic for classrooms in that they can interfere with learning, compete with instruction, create an unsafe learning environment, and make it less likely that students will achieve academic objectives.[605] Teachers often report disruptive behavior as a major classroom concern. Based on a poll of the America Federation of Teachers, 17% of responding teachers said they lost four or more hours of teaching time per week due to disruptive student behavior.[606]

Goldstein stated that teachers may inadvertently contribute to student misbehavior if they do not know how to effectively use praise, attention, reward, privileges, differential attention, time-out, and punishment.[607] Some common mistakes made by teachers are using behavior management techniques inconsistently, having unrealistic expectations, inadvertently reinforcing undesirable behavior, and modeling negative behavior. For example, when attempting to manage problem behavior, teachers may pay attention to a child when the child is noncompliant and withdraw the attention when the child is compliant. Teachers may also over-rely on punishment, most frequently reprimands, rather than positive reinforcement.

Standard 8: Academically Challenging Environment

The teacher creates a student-centered, academic environment in which teaching and learning occur at high levels and students are self-directed learners.

The nature of classroom climate is a function of numerous variables, for instance, the implicit rules of the group structure, the style of leadership of the dominant members of the group, norms, cultural traditions, expectancies, affective history, and demographic composition of the group members.[608] Based on research findings, Evans, Harvey, Buckley, and Yan also concluded that classroom climates described as positive have been found to be related to important educational outcomes such as enhanced academic achievement, constructive learning processes, and reduced emotional problems. Nevertheless, classroom climates can also be negative and toxic and related to undesirable outcomes, such as increased bullying and aggression, and social and emotional maladjustment.[609]

Learning can be viewed as a cognitive development process in which individuals actively construct systems of meaning and understanding of reality through their interactions and experiences with their environments.[610] In this cognitive developmental process, a quality learning environment is crucial to students' learning, and it is the teacher's responsibility to create conditions of active engagement in the classroom. It is not surprising to see that every decision that effective teachers make and every action they take in their classrooms, either instructional or managerial, serve the ultimate purpose of student academic learning and growth.

Various studies have found that students' perceptions of the classroom environment explain a substantial amount of variance in student achievement, after controlling for their background characteristics, across grade levels, and across subject areas.[611] Classroom learning environment is associated with students' academic behaviors and academic achievement. Students are more engaged with their learning when they receive high expectations, believe that being in school will enable them to do something positive in their lives, have the ability to learn new things, create new challenges, and prepare them for college.[612] A study by Barth et al. found that negative classroom environments are associated with a lack of academic focus and lower student outcomes.[613] Various teacher characteristics that are identified as contributing to positive climate relate to teaching methods – both instructional strategies and discipline management skills – for instance, clear and well-structured procedural rules, together with opportunities for active participation and engagement.[614] To illustrate:

- Effective teachers implement effective classroom management to establish order, engage students, and elicit student cooperation, with an ultimate purpose to establish and maintain an environment conducive to instruction and learning.[615]

- Classroom activities have an academic focus. The teacher protects instruction from disruption and makes the most out of every instructional moment. Additionally, the teacher orchestrates smooth transitions and maintains momentum throughout teaching and learning.[616]

- The teacher assumes responsibility for student-learning, sets high (but reasonable) expectations for all students, and supports students in achieving them. The teacher

uses effective questioning and challenging, but interesting, activities to increase student engagement in learning and student accountability.[617]

The following set of attributes of high-quality learning environments, drawn from the sociocultural constructivist perspective, is helpful in describing prominent attributes of an academically robust learning environment:

- *Active engagement*: learners are directly involved in actions that support cognition and intentional learning.

- *Authenticity and relevance*: learners attribute value to the learning task and see the relationship between the knowledge to be gained and their personal life.

- *Collaboration and community*: noncompetitive social interaction of learners with others about the nature of the content and its meaning to themselves and others allowing for the co-construction of knowledge.

- *Learner autonomy*: the learner has some degree of control over or self-selection of the content or methods of learning.

- *Cognitive complexity*: Learning tasks are sufficiently representative of reality, with a myriad of web-like interacting forces that must be organized and made sense of.

- *Generativity*: learner engagement in disciplined inquiry that involves using existing knowledge to discover or formulate new ideas, concepts, or information.

- *Multiple perspectives*: experiences allow learners to see the same information in different ways, from different points of view, or use it for different purposes.

- *Pluralism*: learners develop a flexible view of reality, rather than a fixation on one single view of reality as correct.

- *Reflectivity and metacognitive awareness*: learners think about their own learning processes, are involved in identifying strategies to increase their learning, and self-monitor progress.

- *Self-regulation and ownership*: learners are given agency and asked to assume personal responsibility for their own learning.

- *Transformation*: learners are expected to comprehend meaning and to use insights gained to reorganize, synthesize, or transform information into new forms or for some new purposes.

- *Productivity*: learners are expected to do something with knowledge required, or use it in some way that is beneficial to themselves or others.[618]

Building on the above attributes, practical instructional and managerial strategies that can help establish and maintain an academically robust learning environment include the following:

- Establishing a clear academic focus.

- Developing well-organized and well-planned lessons.

- Making explicit learning objectives.

- Maximizing instructional time.

- Pacing class activities and transitioning between tasks smoothly.

- Keeping students on tasks.

- Making learning meaningful.

- Identifying and communicating desirable behavior.

- Consistently applying rules and procedures.

- Monitoring student behavior.

- Taking preventive rather than reactive management actions.

- Building cooperation among teachers and students.

- Focusing on common interests and values.

- Pursuing common goals.

- Determining the appropriate level of task difficulty for students.

- Providing an appropriate instructional pace.[619]

An academically challenging learning environment is often reflected to the degree of teachers' expectations for student performance. When children come to school with lower levels of language and cognitive development, or more behavioral and attention problems, teachers frequently expect less from them, rather than providing them with a rich, challenging curriculum and supports for learning. The cycle of low expectations and low performance perpetuates when students who are considered less able are required to read less and asked to recall only simple facts and events, while high-performing students are challenged to engage in advanced cognitive learning. Holding high performance expectations has an important impact on teachers' instructional practices. By having reasonable expectations for students' growth, teachers can plan carefully linked experiences and provide the foundation for students to meet high expectations. The beliefs that teachers have about their students and their ability to learn can positively or negatively impact their actual learning. The reality is that "students typically don't exceed their own expectation, particularly with regard to academic work. But students will go beyond what they think they can do under certain conditions, one of which is that their teachers expect, challenge, and support them to do so."[620]

The expectations a teacher holds for students, whether consciously or subconsciously, are demonstrated through his or her interactions with the students during instruction.[621] Student academic performance is influenced by a teacher's expectations and goals for student achievement. In a study of 452 sixth graders, findings revealed that teachers' high expectations served as a significant predictor of student performance both socially and academically.[622] Rubie-Davies found that just by one single school-year, the students' self-perceptions of their own abilities in academic areas altered substantially in line with teachers' expectations.[623] To make students experience challenges and success, the teacher provides opportunities to use existing skills and knowledge as well as attain new competencies.[624]

Teacher expectations do influence students' learning. The effects of teacher expectations are stronger among stigmatized groups, such as African-American students and students from low-income families. Students that are frequently the targets of lower expectations are typically most affected academically.[625] For instance, student perceptions of teachers' expectations are especially important to the academic engagement and efficacy of African-American students. Tyler found that the emotional, behavioral, and cognitive engagement and efficacy of African-American students were all predicted by their perceptions of teacher expectations.[626] However, it has also been found that teacher expectations for strong academic performance and educational attainment for ethnic minorities or low-income students are generally lower than those for their economically advantaged, European American counterparts.[627] Teacher expectations run short where they are needed most. Low teacher expectation of students was identified as one of the five main factors related to the underachievement of African-American and Latino students.[628]

There are different ways that teacher expectations influence student achievement. First, teachers are likely to put forth greater effort when they perceive that they are teaching high-ability students. [629] Secondly, according to Ferguson,[630] teacher perceptions and expectations are expressed (unconsciously) through the type of goals teachers set for students, the skills and resources used during instruction, as well as the types of reinforcement that teachers use in the classroom. Warren found that teachers' low expectations and lack of efficacy often resulted in lowered teaching standards, less teacher effort, and the use of watered-down curriculum for low-achieving students, especially in poor, urban schools.[631] That ultimately impacts students' achievement, academic engagement, and motivation. Through Cotton's review, multitudes of ways in which lowered teacher expectations manifest in the classroom were identified.[632] Students who are the target of teachers' low expectations are given fewer opportunities to learn new materials than high-expectation students. The wait-time to answer a question is less than what is allotted for high-expectation students. Low-expectation students are given the answers to questions or the teacher calls on some other students rather than giving them clues or repeating or rephrasing questions, as is done with high-expectation students. Students with low teacher expectation receive inappropriate feedback (e.g., more frequent and severe criticism for failure, insincere praise), or reinforcement that is not a result of desired performance. They also tend to receive less friendly and responsive classroom interactions (e.g., less smiling, affirmative head-nodding, leaning forward, and eye contact). They are provided briefer and less informative feedback, less stimulating and more lower-cognitive level questions, as well as less frequent use of effective and time-consuming instructional practices.

Additionally, students often recognize teacher bias and conform to teacher expectations. Children, from their years in school, are highly sensitive to differential teacher expectations and behavior. This type of sensitivity cuts across grades, gender, and ability levels. Research has suggested that students perceive low-achieving students as typically receiving more vigilance directed towards them, fewer chances, more negative feedback and direction, more negative affect, and more frequent work- and rule-oriented treatment. In contrast, students typically perceive high-achievers as being the recipients of higher expectations and academic demands, more emotional supports and special privileges, and increased opportunities to make choices.[633] This phenomenon can be particularly troublesome when teachers stereotype whole groups of students based on personal characteristics such as race or gender. [634] Teacher expectations are often connected to what is termed "self-fulfilling prophecy." A self-fulfilling prophecy occurs

when a false description of a phenomenon induces a new behavior that leads to the originally false description coming true.[635] Hauser-Cram et al. posited that children in stigmatized groups are more likely to have negative or low teacher expectations which likely lead to self-fulfilling prophecies of low academic performance.[636]

Standard 9: Professionalism

The teacher maintains a commitment to professional ethics and the school's mission, participates in professional growth opportunities, and contributes to the profession.

Teacher professionalism encompasses key characteristics – professional competence, performance, and conduct – that reflect teachers' goals and purposes, capabilities, values and beliefs, and directly impacts the effectiveness of teaching.[637] As a profession, teachers value and practice the principles, standards, ethics, and legal responsibilities of teaching.[638] And, as with any profession, they must be committed to and skilled in the areas of expertise that define teaching. Professionalism should reflect three essential elements of any true profession:

Figure 8: Three Essential Elements of Profession

Elements	Descriptions[639]
Professional standards and ethics of the profession	• Adhere to legal and ethical guidelines. • Adhere to standards defined for the profession. • Demonstrate professional demeanor and positive interaction with others. • Respect the diversity of ethnicity, race, gender, and special needs.
Continuous self professional development	• Act as reflective practitioner. • Acquire and refine professional knowledge and skill. • Engage in ongoing professional renewal. • Act, as appropriate, as risk-taker, stepping out of comfort zone. • Embrace practices of a lifelong learner.
Contributions to the profession	• Serve as role model for other educators. • Serve on school, district, regional, and state educational committees, work groups, etc. • Participate in professional associations. • Contribute to the development of the profession (e.g., through presentations, writing).

Teaching seems to differ from many other professions and occupations in the aspect that the kind of person a teacher is, and the way he or she behaves, seems to have considerable implications for the professional practice.[640] For educators, students, and for the general public, good teaching is inconceivable apart from the teacher's personal qualities. Teachers' daily practice is grounded in the beliefs, values, and attitudes they hold toward the profession, the students, the school, and themselves.[641] Carr posited that many of the skills featured in competence models of professional training – such as the abilities to match general curricular prescriptions to individual needs, to maintain student engagement and administer classroom management – depend on the teachers' ethical or personal qualities of empathy, care, respect, fairness, motivation, perseverance, and a strong belief that they can succeed in making a difference in students' learning.[642]

Caring: Caring about students and respecting them as individuals is prevalent in the literature descriptions of effective teachers.[643] Caring is central to student-learning – the glue that binds teachers and students together, and makes life in classrooms meaningful.[644] Caring fosters a type

of teacher-student connection that encourages possibilities for learning that may not otherwise occur.[645] Good teachers are often described as warm, friendly, and caring. Conversely, ineffective teachers often are said to create a tense classroom and are described as cold, abusive, and uncaring.[646] When students perceive that their teachers care about them, they respond by "optimizing their commitment to learning and putting forth greater efforts to reach their potential."[647] In classroom learning, when students are supported by a caring teacher, they are more likely to ask questions, to take chances, and to share their inner thoughts in creative writing and through other forms of expression.[648]

Teacher dispositions and beliefs are two other variables related to student achievement. They are important qualities that build up a teacher's professional demeanor. Carter used multiple data-collection instruments, such as surveys, interviews, observations, and personal records, to develop a better understanding about the characteristics and dispositions of 99 effective teachers.[649] When these teachers were asked to list three characteristics of exceptional teachers, the most mentioned themes are as follows:

- Flexible, adaptable, will search for what works.

- Excellent management skills, organized, discipline issues, etc.

- Caring, compassionate.

- Love working with children, love children.

- Believe all children can learn at high levels, high expectations.

These exemplary teachers were then asked to report two strengths they possessed themselves. The most frequently mentioned strengths included being hard-working and dedicated, possessing excellent communication skills, being enthusiastic and energetic, and being caring and kind. Exemplary teachers regard the ethic of care and respect as a vital foundation for students' best learning and a prerequisite for effective teaching. They reach out to know their students by using multiple sources of knowledge (e.g., solicited critique, dialogues and questions, knowing students informally, knowing from colleagues, and knowing students' cultures).[650] Several studies sought the input of students themselves in identifying characteristics of highly effective teachers.[651] These studies revealed that students described effective teachers as caring, dedicated, motivating, encouraging, nurturing, supportive, and respectful.

Caring,[652] self-efficacy,[653] and enthusiasm[654] are just a few examples of teacher characteristics that have been demonstrated to influence both cognitive and affective learning. Classroom observations often reveal that effective teachers demonstrate more respect and caring for students than do less effective teachers.[655] Effective teachers use care and respect to build relationships with their students that are conducive to learning. Teachers' expressions of care not only enhance students' social skills and self-worth but also encourage their academic development.[656] When students perceive that their teachers care about them, they exert higher level of motivation, social responsibility, and affective learning,[657] and they respond by "optimizing their commitment to learning and putting forth greater efforts to reach their potential."[658]

Enthusiasm and motivation: Enthusiasm and motivation are two essential attitudes that impact teacher effectiveness and, ultimately, student achievement. Enthusiasm "reflects the degree of enjoyment, excitement, and pleasure that teachers typically experience in their professional

activities."[659]   Teachers who are more enthusiastic about teaching exhibit higher quality instructional behavior, such as monitoring student-learning, providing students with more cognitive autonomy support, offering more social support to students, and using higher levels of cognitive challenge. Teacher motivation also is expressed in a range of teacher behaviors that are perceived to be conducive to student-learning, such as enthusiasm in content-area taught, interest about students' personal and developmental needs, participation in content-related activities outside of class time, and displaying value and emotion for students.[660]

Motivation and enthusiasm are contagious in classrooms. Teachers who display enthusiasm and energy in the classroom often increase student interest and motivation to learn.[661] Among many teacher variables, enthusiasm is the most powerful, unique predictor of students' intrinsic motivation and vitality. The students who received instruction from an enthusiastic teacher reported greater intrinsic motivation regarding the learning material and experienced higher levels of vitality.[662] They also exhibited higher rates of on-task behavior.[663]

Efficacy: In addition, researchers found positive associations between student achievement and three types of teacher efficacy-related beliefs: academic emphasis, faculty trust in students and parents, and teachers' collective efficacy beliefs about the school system.[664] Teachers of high self-efficacy set for themselves higher goals and stick to them. They invest more effort and persist longer than those low in self-efficacy. A growing body of empirical evidence supports that teachers' self-perceived abilities to accomplish desired outcomes are related to the effort they invest in teaching, the goals they set, and their persistence when setbacks occur.[665] The reviews of research on teacher self-efficacy have summarized that teachers' self-efficacy is associated with their teaching practices in classrooms and student outcomes such as students' own self-efficacy beliefs and student engagement, motivation, and achievement.[666] Compared to teachers with lower self-efficacy beliefs, teachers with stronger perceptions of self-capability tend to use more challenging teaching techniques, try innovative strategies, and employ classroom instruction that are more organized and better planned, student centered, and humanistic.

Professionalism and Professional Growth: Another key attribute of professionalism is a commitment to continuous improvement and perpetual learning. Interestingly, effective teachers monitor and strengthen the connection between their own development and students' development.[667]   Evidence indicates that teachers who receive substantial professional development can help students achieve more. For example, based on the findings of one meta-analysis, teachers who receive substantial professional development (in this instance, 49 hours) can boost their students' achievement about 21 percentile points, and this effect-size is fairly consistent across content-areas.[668]

Effective teachers invest in their own education. They take responsibility for their own learning, actively engage in self-directed learning based on a set of established goals and in community with like professionals, they tend to become more self-directed and take responsibility for their own learning.[669]   Hammerness et al. developed a framework of teacher-learning. This framework envisions that teachers need to conduct professional learning in the following five domains: a *vision* for their practice; a set of *understandings* about teaching, learning, and

children; *dispositions* about how to use this knowledge; *practices* that allow them to act on their intentions and beliefs; and *tools* that support their efforts.[670]

Figure 9: A Framework for Teachers' Professional Improvement[671]

Domain	Description	More Detailed Descriptions
Vision	Image of what is possible and desirable in teaching	A set of images of good practice that inspire and guide professional learning and practice.
Understanding	Deep knowledge of content, pedagogy, students, and social contexts	• Possess a coherent and rich conceptual map of the discipline (knowledge); an understanding of how knowledge is developed and validated within different social contexts (methods); an understanding of why the subject is important (purposes); and finally, an understanding of how one can communicate knowledge of that subject to others (form). • Understanding students' thinking, experiences, development, and learning process.
Tools	Conceptual and practical resources for use	• Theoretical tools include learning theories, frameworks, and ideas about teaching and learning, such as zone of proximal development, culturally relevant teaching. • Practical tools include particular instructional approaches and strategies, and resources such as textbooks, assessment tools.
Practices	Developing, practicing, and enacting a beginning repertoire	The knowledge and tools mentioned above need to integrate into a set of practices. These practices include a variety of instructional activities to promote student-learning, such as designing and carrying out a lesson plan, explaining concepts, implementing problem-based learning, planning debates, providing feedback, etc.
Dispositions	Habits of thinking and action regarding teaching and children	These dispositions include reflection upon practice, taking an inquiry stance, determination and persistence in working with children toward success, which may be characterized by the inclination to take responsibility for children's learning and the will to continue to seek new approaches to teaching.

Effective teachers continuously practice self-reflection, self-evaluation and self-critique as learning tools. They are curious about the art and science of teaching and about themselves as effective teachers. They often portray themselves as students of learning. They learn by continuously studying their classroom experiences in an effort to improve practice. They

constantly improve lessons, think about how to reach particular children, and seek and try out new approaches in the classroom to better meet the needs of their learners.[672] Reflection constitutes a disciplined way of thinking that entails calling into question one's existing beliefs and routines in light of new evidence and altering teaching behaviors accordingly.[673] By examining or re-examining the content and context of their own behaviors in the classroom, they are able to refine or even alter what they do and how they do it. Some researchers define reflective teachers as introspective. They seek a greater understanding of teaching through scholarly study and professional reading. Effective teachers invite feedback; by eliciting information and criticism from others, they broaden their perspectives and gain insight to what may have been previously been missed. Through reflective practice, effective teachers monitor their teaching because they have a strong commitment to student-learning and want to make a difference in the lives of students.[674]

Professionalism and Contributing to the Profession: Effective teachers act individually and collectively to advance the teaching profession, and act as shapers, promoters, and well-informed critics of educational policies, instructional innovations, and internal changes that impact on student-learning.[675] Effective teachers are willing to share their ideas and assist other teachers with difficulties. They volunteer to lead work teams and to be mentors to new teachers. Effective teachers are informal leaders on the cutting edge of reform and are not afraid to take risks to improve education for all students.[676] Their opinions usually contribute to effecting positive changes at a school- or district-level. A teacher can contribute to the teaching profession by engaging in various types of study, inquiry, and even experimentations to develop personal best practices. Individually, teachers are powerful resources to enrich the professional knowledge base about academic standards, curriculum, pedagogy, and assessment by reflecting and sharing personal knowledge of "what works" and "what does not work." Collectively, teachers can network with professional associations and collaborate with social/business agencies to advance overall school improvement.

Research also has found that an effective teacher:

- Links professional growth goals to professional development opportunities.[677]

- Is empowered to make changes to enhance learning experiences, resulting in better student retention, attendance, and academic success.[678]

- Selects professional development offerings that relate to the content area or population of students taught, resulting in higher levels of student academic success.[679]

- Is cognizant of the legal issues associated with educational records, and respects and maintains confidentiality.[680]

Standard 10: Communication

The teacher communicates effectively with students, parents or guardians, district and school personnel, and other stakeholders in ways that enhance student learning.

The ability to communicate and collaborate is one of the essential requisites for teacher effectiveness.[681] In fact, at the very core of effective teaching is effective communication. Extant research provides evidence that students taught by teachers with a high level of clarity learn more than those taught by teachers with lower clarity.[682] Teachers with high clarity are perceived to be more capable of conveying ideas effectively and communicating with students in a compelling manner. Closely connected to this notion is the concept of "instructional communication competence," which has been studied widely in educational research. Instructional communication competence was defined by Cornett-DeVito and Worley as:

> The teacher-instructor's motivation, knowledge, and skill to select, enact and evaluate effective and appropriate, verbal and nonverbal, interpersonal and instructional messages filtered by student-learners' perceptions, resulting in cognitive, affective and behavioral student-learner development and reciprocal feedback.[683]

One research team identified, interviewed, and observed 11 award-winning teachers to develop a better understanding of their instructional communication practices.[684] Their findings included the following themes related to communication practices in the classroom:

- *Understand the ebb and flow of the classroom* – The teachers used instructional objectives to plan classroom activities effectively, but they were not constrained by predefined plans. They adapted to the flow of the class and allowed for spontaneity. Additionally, they used effective communication to orient students to learning and help them integrate new information with previously learned information.

- *Use a wide repertoire of communication skills* – The teachers used a variety of communication behaviors, such as immediacy, humor, and clarity to sustain a positive and interactive environment.

- *Create relationships with students* – The teachers communicated with students about shared experiences to establish interpersonal rapport, and they communicated in an approachable manner through proxemics, kinetics, knowing first names, etc. They also encouraged an open, warm, and communicative environment that invited students' comments, questions, and responses.

The communication skills of a teacher also play an important role in the collaboration with colleagues and other personnel in schools, and in the partnerships with parents and other community members. After all, teaching is communicating and, to a large extent, advocating for learners. Educating a child cannot be one person's work. Certainly, teachers must be responsible and accountable for what is under their control – the academic and nonacademic interactions with their students. Beyond this traditional responsibility, however, good teachers know they must reach beyond the walls of the classroom to solicit collaboration and support from school colleagues on behalf of their students. Furthermore, they understand the need to reach beyond the schoolhouse door to communicate and gain cooperation with families and others in a larger community.[685]

Effective collaboration empowers teachers to re-conceptualize themselves as change-agents and advocates for their students. Some defining characteristics associated with the important roles of collaborator and advocate are:

- Be an advocate of better strategies for meeting students' learning needs by being an active learner who seeks, applies, and communicates professional knowledge of curriculum, instruction, assessment, and student development.

- Be an advocate of teaching as a profession by appreciating and practicing principles, ethics, and legal responsibilities.

- Be an advocate for the well-being of the whole educational organization by initiating, valuing, and maintaining collaboration and partnerships with various stakeholders.[686]

Effective teachers not only communicate competently with their students, but also they communicate actively with their professional peers to share best practice, seek advice and suggestions, and conduct collaborative inquires. Change is the constant theme in today's education, and teachers are increasingly challenged to keep abreast of innovations and new developments. They need to communicate with colleagues or others who possess needed information.[687]

Teachers who have a democratic vision about their profession act collaboratively and cooperatively with colleagues and other educational stakeholders. They no longer confine their responsibility to the particular classroom in which they teach; rather, they are committed to making a contribution to the students taught by other teachers, in the school, the district, and the community at large.[688] Michael Fullan corroborated this vision by proposing that teacher-preparation programs should enable each teacher to initiate, value, and practice collaboration and partnerships with students, colleagues, parents, community, government, and social and business agencies.[689] Additionally, teachers of democratic professionalism serve as advocates for the well-being of the educational cause. They act individually and collectively to effect social justice and equity in teaching and learning. They are engaged in purposeful and critical reflection and dialogues with others on issues that have immediate impact on day-to-day classroom teaching, as well as larger issues and contexts that have indirect influence on social equity in education.[690]

Research findings show that teachers who effectively collaborate:

- Possesses strong communication skills.[691]

- Offer clear explanations and directions.[692]

- Recognize the levels of involvement ranging from networking to collaboration.[693]

- Use multiple forms of communication between school and home.[694]

- Use informal contacts at school events, the grocery store, and at other community places to keep the lines of communication open.[695]

In addition, involvement of families and community can help students become more focused on academic learning. A growing body of research suggested that creating more connections and greater cooperation among the school, family, and community contexts could improve student behavior and discipline, enhance students' academic success, and reinforce stronger self-

regulatory skills and work orientation.[696] Epstein asserted that students are influenced by three spheres of influence: family, school, and the community context in which the student develops.[697] The extent to which these three contexts overlap is contingent upon the nature and degree of communication and collaboration among school educators, parents, and community members. A meaningful and purposeful overlap is conducive to better student-learning. School teachers play an important role in ameliorating such overlap. Research indicates that among various factors (such as resources, parents' sense of efficacy, etc.) parents' perceptions of teacher invitation have the most significant influence on their decision to be more involved with their children's education.[698] Teachers can increase family and community involvement through the following collaborative activities:[699]

- Helping families establish home environments to support children as students.

- Designing effective forms of school-to-home and home-to-school communication.

- Recruiting and organizing families to help the school and support students.

- Providing families with information and ideas to support students with homework.

- Including parents in decision-making and developing parent-leaders.

- Identifying and integrating resources and services from the community to strengthen schools, students, and families.

LePage also suggested some effective ways to improve teacher-parent communication.[700] They include home visits, frequent positive calls home (not centering on students' academic problems, misbehavior, or negative attitudes), on-line connections for homework and information sharing, parent-teacher-student conferences, exhibitions of student work, and parent participation in school activities.

REFERENCES

Allington, R. L. (2002). What I've learned about effective reading instruction. *Phi Delta Kappan, 83*, 740-747.

Allington, R. L., & Johnston, P. H. (2000). *What do we know about effective fourth-grade teachers and their classrooms?* Albany, NY: The National Research Center on English Leaning & Achievement, State University of New York.

Anderson, G. J. (1970). Effects of classroom social climate on individual learning. *American Educational Research Journal, 7*, 135-152.

Anderson, L. M., Evertson, C. M., & Brophy, J. E. (1979). An experimental study of effective teaching in first-grade reading groups. *The Elementary School Journal, 79*, 193-222.

Anderson, K. J., & Minke, K. M. (2007). Parent involvement in education: Toward an understanding of parents' decision making. *Journal of Educational Research, 100*(5), 311-323.

Au, W. (2007). High-stakes testing and curricular control: A qualitative metasynthesis. *Educational Researcher, 36*, 258-267.

Babad, E., Bernieri, F., & Rsosenthal, R. (1991). Students as judges of teachers' verbal and nonverbal behavior. *American Educational Research Journal, 28*,211-234.

Barney, D. (2005). Elementary physical education student teachers' interactions with students. *Physical Educator, 62*(3), 130-135.

Barth, J. M., Dunlap, S. T., Dane, H., Lochman, J. E., & Wells, K. C. (2004). Classroom environment influences on aggression, peer relations, and academic focus. *Journal of School Psychology, 42*(2), 115-134.

Bembry, K. L., Jordan, H. R., Gomez, E., Anderson, M. C., & Mendro, R. L. (1998, April). *Policy implications of long-term teacher effects on student achievement.* Paper presented at the 1998 Annual Meeting of the American Educational Research Association, San Diego, CA.

Berliner, D. C. (1986). In pursuit of the expert pedagogue. *Educational Researcher, 15*(7), 5-13.

Berliner, D. C. (2004). Describing the behavior and documenting the accomplishments of expert teacher. *Bulletin of Science, Technology and Society, 24*, 200-212.

Bettencourt, E. M., Gillett, M. H., Gall, M. D., & Hull, R. E (1983). Effects of teacher enthusiasm training on student on-task behavior and achievement. *American Educational Research Journal, 20*(3), 435-450.

Black, P. J. & Wiliam, D. (1998) Assessment and classroom learning. *Assessment in Education: Principles, Policy & Practice, 5*(1), 7–73.

Borko, H., & Elliott, R. (1999). Hands-on pedagogy versus hands-off accountability. *Phi Delta Kappan, 80*(5), 394-400.

Borko, H., & Livingston, C. (1989). Cognition and improvisation: Differences in mathematics instruction by expert and novice teachers. *American Educational Research Journal, 26*(4), 473-498.

Borman, G., Strongfield, S., & Rachuba, L. (2000). *Advancing minority high achievement: National trends and promising programs and practices.* The College Examination Entrance Board.

Bradford, D. (1999). Exemplary urban middle school teachers' use of 5 standards of effective teaching. *Teaching and Change, 7*(1), 53-78.

Brighton, C. M., Hertberg, H. L, Moon, T. R., Tomlinson, C. A., & Callahan, C. M. (2005). *The feasibility of high-end learning in a diverse middle school.* Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

Buttram, J. L., & Waters, J. T. (1997). Improving America's schools through standards-based education. *Bulletin, 81* (590), 1-5.

Byer, J. L. (1999). *The effects of students' perceptions of social climate in middle school social studies classes on academic self-concept.* Unpublished doctoral dissertation, University of Southern Mississippi.

Byer, J. L. (2002). The consistency correlation between students' perceptions of classroom involvement and academic self-concept in secondary social studies classes. *Journal of Social Studies Research, 26*(1), 3-11.

Cameron, C.E., Connor, C.M., Morrison, F.J., Jewkes, A.M. (2008). Effects of classroom organization on letter-word reading in first grade. *Journal of School Psychology, 46,* 173-192.

Camphire, G. (2001). Are our teachers good enough? *SEDLetter, 13*(2). Retrieved November 12, 2001, from http://www.sedl.org/pubs/sedletter/v13n2/1.htm

Carlson, E., Lee, H, & Schroll, K. (2004). Identifying attributes of high quality special education teachers. *Teacher Education and Special Education, 27,* 350-359.

Carolan, J., & Guinn, A. (2007). Differentiation: Lessons from master teachers. *Educational Leadership, 64*(5), 44-47.

Carr, D. (2009). *Professionalism and ethics in teaching.* New York: Routledge.

Carter, P. J. (2003). *A review of highly effective teachers in Hamilton County: Analysis of current trends and implications for improvement.* Chattanooga, TN: Public Education Foundation. Retrieved November 7, 2008, from http://pef. ddngroupb.com/.

Case, R. (1991). The anatomy of curricular integration. *Canadian Journal of Education, 16*(2), 215-224.

Catt, S., Miller, D., & Schallenkamp, K. (2007). Your are the key: Communicate for learning effectiveness. *Education, 127*(3), 369-377.

Cawelti, G. (Ed.). (2004). *Handbook of research on improving student achievement* (3rd ed.). Arlington, VA: Educational Research Service.

Cauley, K. M., & McMillan, J. H. (2009) Formative assessment techniques to support student motivation and achievement. *Clearing House, 83*(1), 1-6.

Cercone, K. (2008). Characteristics of adult learners with implications for online learning design. *AACE Journal, 16* (2), 137-159.

Chappius, S., & Stiggins, R. J. (2002). Classroom assessment for learning. *Educational Leadership, 60*(1), 40-43.

Chaskin, R. J., & Rauner, D. M. (1995). Youth and caring: An introduction. *Phi Delta Kappan, 76*(9), 667-674.

Childs, A., & McNicholl, J. (2007). Investigating the relationship between subject content knowledge and pedagogical practice through the analysis of classroom discourse. *International Journal of Science Education, 29*(13), 1629-1653.

Cochran, K., DeRuiter, L., & King, R. (1993). Pedagogical content knowledge: An integrative model for teacher preparation. *Journal of Teacher Education, 4*, 18-29.

Coetzee, M., & Jansen, C. (2007). *Emotional intelligence in classroom: The secret of happy teachers.* Cape Town, South Africa: Juta & Co.

Cohen, E. G. (1994). Restructuring the classroom: Conditions for productive small groups. *Review of Educational Research, 64*(1), 1-35.

Cohen, D. K., Raudenbush, S. W., & Ball, D. L. (2003). Resources, instruction, and research. *Educational Evaluation and Policy Analysis, 25*(2), 119-142.

Collinson, V., Killeavy, M., & Stephenson, H. J. (1999). Exemplary teachers: Practicing an ethic of care in England, Ireland, and the United States. *Journal for a Just and Caring Education, 5* (4), 349-366.

Corbett, D. & Wilson, B. (2004). What urban students say about good teaching. *Educational Leadership, 60*(1), 18-22.

Corbett, D., Wilson, B., & Williams, B. (2002). *Effort and excellence in urban classrooms: Expecting and getting success with all students.* New York: Teacher College Press.

Cornelius-White, J. (2007). Leaner-centered teacher-student relationships are effective: A meta-analysis. *Review of Educational Research, 77*(1), 113-143.

Cornell, D. G., & Mayer, M. J. (2010). Why do school order and safety matter? *Educational Research, 39*(1), 7-15.

Cornett-DeVito, M., & Worley, D. W. (2005). A front row seat: A phenomenological investigation of students with learning disabilities. *Communication Education, 54*, 312-333.

Cotton, K. (2000). *The schooling practices that matter most*. Portland, OR: Northwest Regional Educational Laboratory; and Alexandria, VA: Association for Supervision and Curriculum Development.

Cotton, K. (2001). *Expectations and student outcomes.* Northwest Regional Educational Laboratory, School Improvement Research Series. Retrieved November 1, 2009, fromhttp://www.nwrel.org/scpd/sirs/4/cu7.html.

Covino, E. A., & Iwanicki, E. (1996). Experienced teachers: Their constructs on effective teaching. *Journal of Personnel Evaluation in Education, 11*, 325-363.

Craig, J. & Cairo, L. (2005, December). *Assessing the relationship between questioning and understanding to improve learning and thinking (QUILT) and student achievement in mathematics: A pilot study.* Charleston, WV: Appalachia Educational Laboratory, Inc.

Crooks, T. J. (1988). The impact of classroom evaluation practices on students. *Review of Educational Research, 58*(4), 438-481.

Cruickshank, D. R., & Haefele, D. (2001). Good teachers, plural. *Educational Leadership, 58*(5), 26-30.

Czerniak, C. M., Weber, W. B., Sandmann, A., & Ahern, J. (1999). A literature review of science and mathematics integration. *Science and Mathematics Integration, 99*(8), 421-430.

Danielson, C. (2001). New trends in teacher evaluation. *Educational Leadership, 5*(5), 12-15.

Danielson, C. (2002). *Enhancing student achievement: A framework for school improvement.* Alexandria, VA: Association for Supervision and Curriculum Development.

Darling-Hammond, L. (2000). Teacher quality and student achievement: A review of state policy evidence. *Education Policy Analysis Archives, 8*(1). Retrieved January 22, 2004 from http://olam.ed.asu.edu/epaa/v8n1/.

David, J. L. (2008). Pacing guides. *Educational Leadership, 66*(2), 87-88.

Day, S.L. (2002). Real kids, real risks: Effective instruction of students at risk of failure. *NASSP Bulletin, 86*, Retrieved May 1, 2005 from http://www.principals.org /news/bultn_realkids0902.html.

Dolezal, S. E., Welsh, L. M., Pressley, M., & Vincent, M. M. (2003). How third-grade teachers motivate student academic achievement. *The Elementary School Journal, 103,* 239-267.

Dunn, R., Griggs, S., Olson, J., Beasley, M., & Gorman, B. (1995). A meta-analytic validation of the Dunn and Dunn model of learning-style preference. *Journal of Educational Research, 88*(6), 353-362.

Dunn, R., Honigsfeld, A., Doolan, L. S., Bostrom, L., Russo, K., Schiering, M. S., et al. (2009). Impact of learning style instructional strategies on students' achievement and attitudes: Perceptions of educators in diverse institutions. *Clearing House, 82*(3), 135-140.

Educational Review Office. (1998). *The capable teacher.* Retrieved January 19, 2002, from http://www.ero.govt.nz/Publications/eers1998/98no2hl.html

Educational Testing Service. (n.d.). *ETS Poll: Americans willing to pay for teacher quality, still demand standards and accountability.*

Education USA Special Report. (n. d.). *Good Teachers: What to Look For.* A Publication of The National School Public Relations Association.

Eisner, E. W. (1999). The uses and limits of performance assessment. *Phi Delta Kappan, 80*(9), 658-660.

Emmer, E. T., Evertson, C. M., & Worsham, M. E. (2003). *Classroom management for secondary teachers.* Boston: Allyn and Bacon.

Emmer, E. T., & Stough, L. M. (2001). Classroom management: A critical part of educational psychology, with implications for teacher education. *Educational Psychologist, 36*(2), 103-112.

Engel, D. E. (1994). School leavers in American society: Interviews with school dropouts/stopouts. In R. C. Morris (Ed.). *Using what we know about at-risk Youth,* pp. 3-22. Lancaster, PA: Technomic Publishing.

Epstein, J. L. (1995). School/family/community partnerships: Caring for the children we share. *Phi Delta Kappan, 76*, 701-712.

Epstein, J. L. (2001). *School, family, and community partnerships: Preparing educators and improving schools.* Boulder, CO: Westview.

Epstein, J. L., & Sheldon, S. B. (2002). Present and accounted for: Improving student attendance though family and community involvement. *The Journal of Educational Research, 95*(5), 308-318.

Evans, I. M., Harvey, S. T., Buckley, L., & Yan, E. (2009). Differentiating classroom climate concepts: Academic, management, and emotional environments. *New Zealand Journal of Social Sciences Online, 4*, 131-146. Retrieved January 13, 2010, from http://royalsociety.org.nz/Site/publish/Journals/kotuitui /2009/ 011.aspx.

Fan, X., & Chen, M. (2001). Parental involvement and students' academic achievement: A meta-analysis. *Educational Psychology Review, 13*(1), 1-22.

Ferguson, R. F. (1998). Teachers' perceptions and expectations and the Black-White test score gap. In C. Jencks and M. Phillips (Eds.), *The Black-White test score gap.* Washington, DC: The Brookings Institution Press.

Ferguson, R. F. (2002*). What doesn't meet the eye: Understanding and addressing racial disparities in high-achieving suburban schools.* Cambridge, MA: Harvard University Press.

Fuchs, L. S., Deno, S. L., & Mirkin, P. K. (1984). The effects of frequent curriculum-based measurement and evaluation on pedagogy, student achievement, and student awareness of learning. *American Educational Research Journal, 21*(2), 449-460.

Fraser, B. (1989). Twenty years of classroom climate work: Progress and prospects. *Journal of Curriculum Studies*, *21*(4), 307-327.

Fraser, B. J., & Fisher, D. L. (1982). Predicting students' outcomes from their perceptions of classroom psycho-social environment. *American Educational Research Journal, 19*, 498–518.

Fuchs, L. S., & Fuchs, D. (2003). *What is scientifically-based research on progress monitoring?* Washington, DC: National Center on Student Progress Monitoring.

Fuchs, L. S., Fuchs, D., & Phillips, N. (1994). The relation between teachers' beliefs about the importance of good work habits, teacher planning, and student achievement. *The Elementary School Journal, 94*(3), 331-345.

Fullan, M. G. (1993). Why teachers must become change agents. *Educational Leadership, 50*(6), 12-17.

Goh, S. C., Young, D. J., & Fraser, B. J. (1995). Psychosocial climate and student outcomes in elementary mathematics classrooms: A multilevel analysis. *The Journal of Experimental Education, 64*(1), 29-40.

Goldhaber, D. (2002). The mystery of good teaching. *Education Next, 2*(1), 50-55. Retrieved December 7, 2008, from http://www.hoover.org/publications/ednext /3368021.html.

Goldstein, S. (1995). *Understanding and managing children's classroom behavior.* New York: John Wiley & Sons, Inc.

Good, T. L., & Brophy, J. E. (2002). *Looking in classrooms* (9th ed.). Boston: Allyn & Bacon.

Gottfredson, D.C., Marciniak, E.M., Birdseye, A. T., & Gottfredson, G. D. (1995). Increasing teacher expectations for student achievement. *Journal of Educational Research, 88*(3), 155-163.

Gronlund, N. E. (2006). *Assessment of student achievement* (8th ed.)*.* Boston: Pearson. p. 3.

Guo, S., Tsai, C., Chang, F. M., & Huang, H. (2007). The study of questioning skills on teaching improvement. *The International Journal of Learning, 14*(8), 141-145.

Guskey, T. R. (2002). Does it make a difference? Evaluating professional development. *Educational Leadership, 59*(6), 45-51.

Haberman, M. (1995). *STAR teachers of children in poverty.* West Lafayette, IN: Kappa Delta Pi.

Haertel, G. D., & Walberg, H. J., & Haertel, E. H. (1981). Socio-psychological environments and learning: A quantitative synthesis. *British Educational Research Journal, 7*(1), 27-36.

Hamilton, L., & Stecher, B. (2004). Responding effectively to test-based accountability. *Phi Delta Kappan, 85*(8), 578-583.

Hammerness, K., Darling-Hammond, L., Bransford, J., Berliner, D., Cochran-Smith, M., McDonald, M., et al. (2005). How teachers learn and develop. In L. Darling-Hammond & J. Bransford (Ed.), *Preparing teachers for a changing world: What teachers should learn and be able to do*, pp. 358-389.San Francisco: Jossey-Bass.

Hamre, B. K. & Pianta, R. C. (2005). Can instruction and emotional support in the first-grade classroom make a difference for children at risk of school failure? *Child Development, 76*(5), 949-967.

Hanushek, E., Kain, J. F., & Rivkins, S. G. (2004). Why public schools lose teachers. Journal of Human Resources, 39(2), 326-354.

Harap, H. (1955). The use of free and inexpensive learning materials in the classroom. *The School Review, 63*(7), 378-383.

Harris, D. N., & Sass, T. R. (2007). *Teacher training, teacher quality and student achievement*. Washington, DC: National Center for Analysis of Longitudinal Data in Education Research. Retrieved April 4, 2009, from www.caldercenter.org/PDF /1001059_Teacher_Training.pdf

Hattie, J. (2003). *Teachers make a difference: What is the research evidence?* Retrieved December 12, 2008, from http://www.leadspace.govt.nz/leadership/pdf/john _hattie.pdf.

Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to student achievement.* New York: Routledge.

Hauser-Cram, P., Sirin, S. R., & Stipek, D. (2003). When teachers' and parents' values differ: Teachers' ratings of academic competence in children from low-income families. *Journal of Educational Psychology, 95*, 813-820.

Haynie, G. (2006, April). *Effective Biology teaching: A value-added instructional improvement analysis model.* Retrieved February 7, 2009, from http://www.wcpss.net/evaluation-research/reports/2006/0528biology.pdf.

Hill, H. C., Rowan, B., & Ball, D. L. (2005). Effects of teachers' mathematical knowledge for teaching on student achievement. *American Educational Research Journal, 42,* 371-406.

Hill, N. E., & Tyson, D. F. (2009). Parental involvement in middle school: A meta-analysis assessment of the strategies that promote achievement. *Developmental Psychology, 45*(3), 740-763.

Hong, S., & Ho, H. (2005). Direct and indirect longitudinal effects of parental involvement on student achievement: Second-order latent growth modeling across ethnic groups. *Journal of Educational Psychology, 97*(1), 32-42.

ISTE research reports: Overview: Research on IT [informational technology] in education. (n.d.). Retrieved on September 22, 2002, from http://www.iste.org /research/reports /tlcu/overview.html.

Jay, J. K. (2002). Points on a continuum: An expert/novice study of pedagogical reason. *The Professional Educator, 24*(2), 63-74.

Jensen, M., Johnson, D. W., & Johnson, R. T. (2002). Impact of positive interdependence during electronic quizzes on discourse and achievement. *Journal of Educational Research, 95*(3), 161-166.

Jeynes, W. H. (2005). A meta-analysis of the relation of parental involvement to urban elementary school student academic achievement. *Urban Education, 40*(3), 237-269.

Jeynes, W. H. (2007). The relationship between parental involvement and urban secondary school student academic achievement: A meta-analysis. *Urban Education, 42*(1), 82-110.

Johnson, B. L. (1997). An organizational analysis of multiple perspectives of effective teaching: Implications for teacher evaluation. *Journal of Personnel Evaluation in Education, 11,* 69-87.

Jones, B. D., & Egley, R. J. (2004). Voice from the frontlines: Teachers' perceptions of high-stakes testing. *Educational Policy Analysis Archives, 12*(39). Retrieved November 17, 2007, from http://epaa.asu.edu/epaa/va12n39.

Jones, G., Jones, B. D., Hardin, B., Chapman, L., Yardrough, T, & Davis, M. (1999). The impact of high-stakes testing on teachers and students in North Carolina. *Phi Delta Kappan, 81*(3), 199-203.

Kerr, K. A, Marsh, J. A., Ikemoto, G. S., Darilek, H., & Barney, H. (2006). Strategies to promote data use for instructional improvement: Actions, outcomes, and lessons from three urban districts. *American Journal of Education, 112*, 496-520.

Kuh, G. (2003). What we're learning about student engagement from NSSE. *Change, 35*(2), 24-32.

Kulik, J. A., & Kulik, C. L. C. (1992). Meta-analysis findings on grouping programs. *Gifted Child Quarterly, 36*, 73-77.

Kunter, M., Tsai Y., Klusmann, U., Brunner, M., Krauss, S., & Baumert, J. (2008). Students' and mathematics teachers' perceptions of teacher enthusiasm and instruction. *Learning and Instruction, 18*, 468-482.

Langer, J. (2001). Beating the odds: Teaching middle and high school students to read and write well. *American Educational Research Journal, 38* (4), 837-880.

Latz, A. O., Neumeister, K. L. S., Adams, C. M., & Pierce, R. L. (2009) Peer coaching to improve classroom differentiation: Perspectives from Project CLUE. *Roeper Review, 31*, 27-39.

Leinhardt, G. (1993). On teaching. In R. Glaser (Ed.), *Advances in instructional psychology*, Vol. 4, pp.1-54. Hillsdale, NJ: Lawrence Erlbaum Associates.

Leigh, A. (2010). Estimating teacher effectiveness from twp-year changes in students' test scores. *Economics of Education Review, 29*, 480-488.

LePage, P., Darling-Hammond, L., Akar, H., Guitierrez, C., Jenkins-Gunn, E., & Rosebrock, K. (2005). Classroom management. In L. Darling-Hammond and J. Bransford (Eds.), *Preparing teachers for a changing world: What teachers should learn and be able to do* (pp. 327-357). San Francisco, CA: Jossey-Bass.

Lewis, A. (2001). *Add it up: Using research to improve education for low-income and minority students.* Washington, D.C.: Poverty & Race Research Action Council. Retrieved November 18, 2004 from http://www.prrac.org/pubs_aiu.pdf

Little, J. W. (1993). Teachers' professional development in a climate of educational reform. *Educational Evaluation and Policy Analysis, 15*(2), 129-151.

Livingston, C., & Borko, H. (1989). Expert-novice differences in teaching: A cognitive analysis and implications for teacher education. *Journal of Teacher Education, 40*(4), 36-42.

Long, J. F., & Hoy, A. W. (2006). Interested instructors: A composite portrait of individual differences and effectiveness. *Teaching and Teacher Education, 22*(3), 303-314.

Ludtke, O., Robitzsch, A., Trautwein, U., & Kunter, M. (2009). Assessing the impact of learning environments: How to use student ratings of classroom or school characteristics in multilevel modeling. *Contemporary Educational Psychology, 34*,120-131.

Luiselli, J. K., Putnam, R. F., & Sunderland, M. (2002). Longitudinal evaluation of behavior support intervention in a public middle school. *Journal of Positive Behavior Interventions, 4*, 182-188.

Lumpkin, A. (2007). Caring teachers: The key to student learning. *Kappa Delta Pi Record, 43*(4), 158-160.

Marzano, R. J., Marzano, R. J., & Pickering, D. J. (2003). *Classroom management that works: Research-based strategies for every teacher.* Alexandria, VA: Association for Supervision and Curriculum Development.

Marzano, R.J., Norford, J.S., Paynter, D.E., Pickering, D.J., & Gaddy, B.B. (2001). *A handbook for classroom instruction that works.* Alexandria, VA: Association for Supervision and Curriculum Development.

Marzano, R. J., Pickering, D. J., & Pollock, J. E. (2001). *Classroom instruction that works: Research-based strategies for increasing student achievement.* Alexandria, VA: Association for Supervision and Curriculum Development.

McDonald, F. J., & Elias, P. (1976). Executive summary report: Beginning teacher evaluation study, Phase II (PR-76-18). Princeton, NJ: Educational Testing Service.

McKnown, C. & Weinstein, R.S. (2008). Teacher expectations, classroom context, and the achievement gap. *Journal of School Psychology, 46,* 235-261.

McEwan, E. K. (2002). *10 traits of highly effective teachers: How to hire, coach, and mentor successful teachers.* Thousand Oaks, CA: Corwin Press.

Merriam-Webster, Inc. (2006). *Webster's new explorer encyclopedic dictionary.* Springfield, MA: Author.

McAllister, G., & Irvine, J. J. (2000). Cross cultural competency and multicultural teacher education. *Review of Educational Research, 70*(1), 3-24.

McEwan, E. K. (2002). *10 traits of highly effective teachers: How to hire, coach, and mentor successful teachers.* Thousand Oaks, CA: Corwin Press.

McRobbie, C. J., & Fraser, B. J. (1993). Associations between student outcomes and psychosocial science environment. *The Journal of Educational Research, 87*(2), 78-85.

Miller-Cribbs, C. S., Davis, L., & Johnson, S. (2002). An exploratory analysis of factors that foster school engagement and completion among African-American students. *Children & Schools, 24*(3), 159-174.

Misulis, K. (1997). Content analysis: A useful tool for instructional planning. *Contemporary Education, 69*(1), 45-47.

Moats, L. C., & Foorman, B. R. (2003). Measuring teachers' content knowledge of language and reading. *Annuals of Dyslexia, 53*, 23-45.

Moos, R. H. (1973). Conceptualizations of human environments. *American Psychologist, 28*, 652–665.

Munoz, M. A., & Chang, F. C. (2007). The elusive relationship between teacher characteristics and student academic growth: A longitudinal multilevel model for change. *Journal of Personnel Evaluation in Education, 20*, 147-164.

National Association of Secondary School Principals (NASSP). (1997). Students say: What makes a good teacher? *Schools in the Middle, 6* (5), 15-17.

Natriello, G. (1987). The impact of evaluation processes on students. *Educational Psychologist, 22*(2), 155-175.

Noblit, G. W., Rogers, D. L., & McCadden, B. M. (1995). In the meantime: The possibilities of caring. *Phi Delta Kappan, 76*(9), 680-685.

Noddings, N. (1992). *The challenge to care in schools.* New York: Teachers College Press.

Nye, B., Konstantopoulos, S., & Hedges, L. V. (2004). How large are teacher effects? *Educational Evaluation and Policy Analysis, 26*(3), 237-257.

Panasuk, R., Stone, W., & Todd, J. (2002). Lesson planning strategy for effective mathematics teaching. *Education, 22* (2), 714, 808-827.

Palardy, G. J., & Rumberger, R. W. (2008). Teacher effectiveness in first grade: The importance of background qualifications, attitudes, and instructional practices for student learning. *Educational Evaluation and Policy Analysis, 30*(2), 111-140.

Parker, D. (1994). *Every student succeeds: A conceptual framework for students at risk of school failure.* Sacramento, CA: California Department of Education.

Patrick, H., Ryan, A. M., & Kaplan, A. (2007). Early adolescents' perceptions of the classroom social environment, motivational beliefs, and engagement. *Journal of Educational Psychology, 99*(1), 83-98.

Peart, N. A., & Campbell, F. A. (1999). At-risk students' perceptions of teacher effectiveness. *Journal for a Just and Caring Education, 5*(3), 269-284.

Perrin, B., Banks, F., & Dargue, B. (2004). *Student vs. software pacing of instruction: An empirical comparison of effectiveness.* Paper presented at the Interservice/Industry Training, Simulation, and Education Conference, Orlando, FL, 2004.

Peters, S., & Reid, D. K. (2009). Resistance and discursive practice: Promoting advocacy in teacher undergraduate and graduate programmes. *Teaching and Teacher Education, 25*(4), 551-558.

Pogrow, S. (2005). HOTS revisited: A thinking development approach to reducing the learning gap after grade 3. *Phi Delta Kappan,* 87(1), 64.

Popham, W. J. (2008). Transformative assessment. Alexandria, VA: Association of Supervision and Curriculum Development.

Pressley, M., Rapael, L. Gallagher, J.D., & DiBella, J. (2004). Providence-St. Mel School: How a school that works for African Americans works. *Journal of Educational Psychology, 96*(2), 216-235.

Rivkin, S. G., Hanushek, E. A., & Kain, J. F. (2005). Teachers, schools, and academic achievement. *Econometrica, 73*(2), 417-458.

Rockoff, J. E. (2004). The impact of individual teachers on student achievement: Evidence from panel data. *The American Economic Review, 94*(2), 247-252.

Rockwell, R .E., Andre, L. C., & Hawley, M. K. (1996). *Parents and teachers as partners: Issues and challenges.* Fort Worth: Harcourt Brace College.

Rowan, B., Chiang, F., & Miller, R. J. (1997). Using research on employees' performance to study the effects of teachers on students' achievement. *Sociology of Education, 70*, 256-284.

Rowan, B., Correnti, R., & Miller, R. J. (2002). What large-scale, survey research tells us about teacher effects on student achievement: Insights from the *Prospects* study of elementary schools. *Teachers College Record, 104*(8), 1525-1567.

Rubie-Davies, C. M. (2006). Teacher expectations and student self-perceptions: Exploring relationships. *Psychology in the School, 43*(5), 537-552.

Ryan, A. M., & Patrick, H. (2001). The classroom social environment and changes in adolescents' motivation and engagement during middle school. *American Educational Research Journal, 38*(2), 437-460.

Sabers, D. S., Cushing, K. S., & Berliner, D.C. (1991). Differences among teachers in a task characterized by simultaneity, multidimensionality, and immediacy. *American Educational Research Journal, 28*(1), 63-88.

Sachs, J. (2001). Teacher professional identity: competing discourse, competing outcomes. *Journal of Education Policy, 16*(2), 149-161.

Safer, N., & Fleischman, S. (2005). How student progress monitoring improves instruction. *Educational Leadership, 62*(5), 81-83.

Schacter, J., & Thum, Y. M. (2004). Paying for high- and low-quality teaching. *Economics of Education Review, 23*, 411-430.

Schalock, H. D., Schalock, M. D., Cowart, B., & Myton, D. (1993). Extending teacher assessment beyond knowledge and skills: An emerging focus on teacher accomplishments. *Journal of Personnel Evaluation in Education, 7*, 105-133.

Schoen, L. T. (2008). Constructing high quality learning environments for twenty-first century learners: A sociocultural constructivist perspective. In D. M. McInerney and D. Liem (Eds), *Teaching and learning: International best practice* (pp. 25-50). Charlotte, NC: Information Age Publishing, Inc.

School Board News. (1997). Teacher quality is key to student achievement (electronic version). *American School Board Journal.* Retrieved November 21, 2000, from http://www.asbj.com/achievement/ci/ci3.html

Schroeder, C. M., Scott, T. P., Tolson, H., Huang, T., & Lee, Y. (2007). A Meta-analysis of national research: Effects of teaching strategies on student achievement in science in the United States. *Journal of Research in Science Teaching, 44,* 1436-1460.

Schulman, L. S. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review, 57*(1), 1-22.

Sharma, M. B., & Elbow, G. S. (2000). *Use Internet primary source to teach critical thinking skills in geography.* Westport, CT: Greenwood Press.

Sheldon, S. B., & Spstein, J. L. (2002). Improving student behavior and school discipline with family and community involvement. Education and Urban Society, 35(1), 4-26.

Shellard, E. & Protheroe, N. (2000). Effective teaching: How do we know it when we see it? *The Informed Educator Series.* Arlington, VA: Educational Research Service.

Shepard, L. A., & Dougherty, K. C. (1991). *Effects of high-stakes testing on instruction.* Paper presented at the annual meeting of the American Educational Research Association and National Council on Measurement in Education, Chicago.

Sinclair, B. B., & Fraser, B. J. (2002). Changing classroom environments in urban middle schools. *Learning Environment Research, 5*, 301-328.

Singham, M. (2001). The achievement gap. *Phi Delta Kappan, 84*, 586.

Slavin, R. E. (1990). *Cooperative learning: Theory, research, and practice*. Englewood Cliffs, NJ: Prentice-Hall.

Snipes, J., Doolittle, F., Herlihy, C. (2002). *Foundations for success: Case studies of how urban school systems improve student achievement.* New York: MDRC.

Spalding, E. & Wilson, A. (2002). Demystifying reflection: A study of pedagogical strategies that encourage reflective journal writing. *Teachers College Record, 104,* 1393-1421. Retrieved March 7, 2009 from the Single Journals database.

Stecher, B. M., & Mitchell, K. J. (1995). *Portfolio Driven Reform: Vermont Teachers' Understanding of Mathematical Problem Solving. CSE Technical Report 400.* Los Angeles: National Center for Research on Evaluation, Standards, and Student Testing.

Stecker, P. M., Fuchs, L. S., & Fuchs, D. (2005). Using curriculum-based measurement to improve student achievement: Review of research. *Psychology in the Schools, 42*(8), 795-819.

Stiggins, R. J. (1999). Assessment, student confidence, and school success. *Phi Delta Kappan, 81*(3), 191-199, p. 191.

Stiggins, R. (2002). Assessment crisis: The absence of assessment for learning. *Phi Delta Kappan, 83*(10), 758-765.

Stiggins, R., & DuFour, R. (2009). Maximizing the power of formative assessments. *Phi Delta Kappan, 90*(9), 640-644.

Strauss, R. P., & Sawyer, E. A. (1986). Some new evidence on teacher and student competencies. *Economics of Education Review, 5*, 41-48.

Stripling, B. K. (Ed.). (1999). *Learning and libraries in an information age: Principles and practice.* Englewood, CO: Libraries Unlimited, Inc.

Stronge, J. H. (2007). *Qualities of effective teachers (2ⁿᵈ Ed.).* Alexandria, VA: ASCD.

Stronge, J. H., Tuckers, P. D., & Ward, T. J. (2003). *Teacher effectiveness and student learning: What do good teachers do?* Paper presened at the American Educational Research Assocation Annual Meeting, Chicago, IL.

Stronge, J. H., Ward, T. J., Tucker, P. D., & Grant, L.W. (2011, in press). What makes good teachers good? A cross-case analysis of the connection between teacher effectiveness and student achievement. *Journal of Teacher Education.*

Stronge, J. H., Ward, T. J., Tucker, P. D., & Hindman, J. L. (2008). What is the relationship between teacher quality and student achievement? An exploratory study. *Journal of Personnel Evaluation in Education, 20*(3-4), 165-184.

Sui-Chu, E. H., & Willms, J. D. (1996). Effects of parental involvement on eighth-grade achievement. *Sociology of Education, 69*, 126-141.

Swap, S. A. (1993). *Developing home-school partnerships from concepts to practice.* New York: Teachers College Press.

Taylor, B., Pearson, P. D., Clark, K. F., & Walpole, S. (1999). *Beating the odds in teaching All Children to Read*. Ann Arbor, MI: Center for the Improvement of Early Reading Achievement.

Taylor, B. M., Pearson, P. D., Clark, K., & Walpole, S. (2000). Effective schools and accomplished teachers: Lessons about primary-grade reading instruction in low-income schools. *The Elementary School Journal, 101*(2), 121-142.

Taylor, B. M., Pearson, P. D., Peterson, D. S., & Rodriquez, M. C. (2003). Reading growth in high-poverty classrooms: The influence of teacher practices that encourage cognitive engagement in literary learning. *The Elementary School Journal, 104*(1), 101-123.

Thayer, Y. (2000). Virginia's Standards make all students stars. *Phi Delta Kappan, 57*(7), 70-72.

The role of teacher professionalism in education. (n.d.). Retrieved June 1, 2009, from http://students.ed.uiuc.edu/vallicel/Teacher_Professionalism.html.

Tobin, K. (1980). The effect of extended teacher wait-time on science achievement. *Journal of Research in Science Teaching, 17,* 469-475.

Tomlinson, C. A. (1999). *The differentiated classroom: Responding to the needs of all learners*. Alexandria, VA: Association for Supervision and Curriculum Development.

Tomlinson, C. A. (2001). *How to differentiate instruction in mixed-ability classrooms* (2nd ed.). Alexandria, VA: Association for Supervision and Curriculum Development.

Tomlinson, C.A. (2007). Learning to love assessment. *Educational Leadership, 65*(4), 8-13.

Tschannen-Moran, M. (2000). The ties that bind: The importance of trust in schools. *Essentially Yours, 4,* 1-5.

Tucker, P. D., & Stronge, J. H. (2005). *Linking teacher evaluation and student achievement.* Alexandria, VA: Association for Supervision and Curriculum Development.

Tursman, C. (1981). *Good teacher: what to look for.* Arlington, VA: National School Public Relations Association.

Tyler, C. (2006). *The academic engagement of low-income, African-American, middle-school students as it relates to reported classroom practices.* Unpublished doctoral dissertation, Howard University, Washington, DC.

Valli, L. (1997). Listening to other voices: A description of teacher reflection in the United States. *Peabody Journal of Education, 72*(1), 67-88.

Vogler, K. E. (2002). The impact of high-stakes, state-mandated student performance assessment on teachers' instructional practices. *Education, 123*(1), 39-56.

Walberg, H. J. (1984). Improving the productivity of America's schools. *Educational Leadership, 41*(8), 19-27.

Walker, M. H. (1998). 3 basics for better student output. *Education Digest, 63*(9), 15-18.

Walker, H. M., Ramsey, E., & Gresham, F. M. (2003/2004, winter). *Heading off disruptive behavior: How early intervention can reduce defiant behavior—and win back teaching time. American Educator*, pp. 6-15, 18-25, 45.

Walls, R. T., Nardi, A. H., von Minden, A. M., & Hoffman, N. (2002). The characteristics of effective and ineffective teachers. *Teacher education quarterly*, *29*(1), 39-48.

Walsh, J. A., & Sattes, B. D. (2005). *Quality questioning: Research-based practice to engage every learner.* Thousand Oaks, CA: Corwin Press.

Wang, X. (2000). A comparative study on effective instructional practices and ineffective instructional practices. *Theory and Practice of Education, 20*(9), 50-53.

Wang, M. C., Haertel, G. D., & Walberg, H. J. (1994). What helps students learn? *Educational Leadership, 51*(4), 74-79.

Warren, S. R. (2002). Stories from the classrooms: How expectations and efficacy of diverse teachers affect the academic performance of children in poor urban schools. *Educational Horizons, 80*(3), 109-116.

Weinsten, C., Curran, M., & Tomlinson-Clarke, S. (2003). Culturally responsive classroom management: Awareness into action. *Theory Into Practice, 42*(4), 269-276.

Weiss, I. R., & Miller, B. (2006, October). *Deepening teacher content knowledge for teaching: A review of the evidence.* Retrieved May 10, 2009, from http://hub.mspnet.org/media/data/WeissMiller.pdf?media_000000002247.pdf.

Wenglisky, H. (2000). *How teaching matters: Bringing the classroom back into discussion of teacher quality.* Princeton, NJ: Millikan Family Foundation and Educational Testing Service.

Wenglinsky, H. (2002). How schools matter: The link between teacher classroom practices and student academic performance. *Education Policy Analysis Archives, 10*(12). Retrieved November 20, 2008, from http://epaa.asu.edu/epaa/v10n12/.

Wenglinsky, H. (2004). Closing the racial achievement gap: The role of reforming instructional practices. *Education Policy Analysis Archives, 12*(64). Retrieved August 1, 2006 from http://epaa.asu.edu/epaa/v12n64/.

Wenglinsky, H. (2004). The link between instructional practice and the racial gap in middle schools. *Research in Middle Level Education Online, 28*(1), 1-13.

Wentzel, K. R. (2002). Are effective teachers like good parents? Teaching styles and student adjustment in early adolescence. *Child Development, 73*(1), 287-301.

Worley, D., Tistworth, S., Worley, D. W., & Cornett-DeVito, M. (2007). Instructional communication competence: Lessons learned from award-winning teachers. *Communication Studies, 58*(2), 207-222.

Yoon, K. S., Duncan, T., Lee, S. W., Scarloss, B., & Shapley, K. L. (2007, December). *Reviewing the evidence on how teacher professional development affects student achievement.* Washington, DC: Regional Educational Laboratory Southwest.

Zacharias, N. T. (2007). Teacher and student attitudes toward teacher feedback. *RELC Journal: A Journal of Language Teaching and Research, 38*(1), 38-52.

Zahorik, J., Halbach, A., Ehrle, K., & Molnar, A. (2003). Teaching practices for smaller classes. E*ducational Leadership, 61*(1), 75-77.

Georgia Department of Education
Teacher Keys Effectiveness System

Dr. John D. Barge, State School Superintendent
"Making Education Work for All Georgians"

Chapter 4

Teacher Keys Effectiveness System End Notes

TKES Handbook, Fact Sheets, and Research Synthesis

2013-14

Endnotes

TKES Handbook, Fact Sheets, and Research Synthesis

[1] Georgia Department of Education (n.d.) Great Teachers and Leaders. Retrieved from http://public.doe.k12.ga.us/DMGeTAPSument.aspx/RT3%20GREAT%20TEACHERS%20AND%20 LEADERS.pdf

[2] McEwan, 2002.

[3] Marzano, R. J., Pickering, D., & McTighe, J. (1993). *Assessing student outcomes: Performance assessment using the dimensions of learning model.* Alexandria, VA: ASCD.

[4] Marzano et al., 1993.

[5] Panasuk, R., Stone, W., & Todd, J. (2002). Lesson planning strategy for effective mathematics teaching. *Education, 2*(2), 714, 808-827.

[6] McEwan, E. K. (2002).

[7] Buttram, J. L., & Waters, J. T. (1997). Improving America's schools through standards-based education. *Bulletin, 81*(590), 1-5.

[8] Education USA Special Report. (n. d.). *Good teachers: What to look for.* Rockville, MD: National School Public Relations Association; Panasuk, Stone, & Todd (2002).

[9] Darling-Hammond, L. (2001). The challenge of staffing our schools. *Educational Leadership, 5*(8), 12-17; Educational Review Office. (1998). *The capable teacher.* Retrieved from http://www.ero.govt.nz/Publications/eers1998/98no2hl.html

[10] Johnson, B. L. (1997). An organizational analysis of multiple perspectives of effective teaching: Implications for teacher evaluation. *Journal of Personnel Evaluation in Education, 11,* 69-87.

[11] Shellard. E., & Protheroe, N. (2000). Effective teaching: How do we know it when we see it? *The Informed Educator Series.* Arlington, VA: Educational Research Service.

[12] Covino & Iwanicki, 1996.

[13] National Association of Secondary School Principals (NASSP). (1997). Students say: What makes a good teacher? *Schools in the Middle, 6*(5), 15-17; Peart & Campbell, 1999;

[14] Covino & Iwanicki, 1996; Emmer, E. T., Evertson, C. M., & Anderson, L. M. (1980). Effective classroom management at the beginning of the year. *The Elementary School Journal, 80*(5), 219-231.

[15] Shellard, E., & Protheroe, N. (2000).

[16] Cawelti, G. (1999). *Handbook of research on improving student achievement* (2nd ed.). Arlington, VA: Educational Research Service; Cotton, K. (2000). *The schooling practices that matter most.* Portland, OR: Northwest Regional Educational Laboratory and Alexandria, VA: ASCD; Covino & Iwanicki, 1996; Good, T. L., & Brophy, J. E. (1997). *Looking in classrooms* (7th ed.). New York: Addison-Wesley; Tobin, K. (1980). The effect of extended teacher wait-time on science achievement. *Journal of Research in Science Teaching, 17,* 469-475; Wang, M., Haertel, G. D., & Walberg, H. (1993). What helps students learn? *Educational Leadership, 51*(4), 74-79.

[17] Marzano, R. J., Norford, J. S., Paynter, D. E., Pickering, D. J., & Gaddy, B. B. (2001). *A handbook for classroom instruction that works.* Alexandria, VA: ASCD.

[18] Cotton, K. (2000).

[19] Stronge, J. H. (2007). *Qualities of effective teachers (2nd Ed).* Alexandria, VA: ASCD.

[20] Eisner, E. W. (1999). The uses and limits of performance assessment. *Phi Delta Kappan, 80*(9), 658-660.

[21] Gronlund, N. E. (2002). *Assessment of student achievement* (7th ed.). Boston: Allyn & Bacon.

[22] Stronge, J. H. (2007).

[23] Peart, N. A., & Campbell, F. A. (1999). At-risk students' perceptions of teacher effectiveness. *Journal for a Just and Caring Education, 5*(3), 269-284.

[24] McAllister, G., & Irvine, J. J. (2000).

[25] Cruickshank, D. R., & Haefele, D. (2001). Good teachers, plural. *Educational Leadership, 58*(5), 26-30.

[26] Weinsten, C., Curran, M., & Tomlinson-Clarke, S. (2003). Culturally responsive classroom management: Awareness into action. *Theory Into Practice, 42*(4), 269-276.

[27] Covino, E. A., & Iwanicki, E. (1996).

[28] Emmer, E. T., & Stough, L. M. (2001).

[29] Stronge, J. H., Ward, T. J., Tucker, P. D., & Hindman, J. L. (2008).

[30] Rockwell, R. E., Andre, L. C., & Hawley, M. K. (1996). *Parents and teachers as partners: Issues and challenges.* Fort Worth, TX: Harcourt Brace College.

[31] Danielson, C. (2001); Guskey, T. R. (2002).

[32] Collinson, V., Killeavy, M., & Stephenson, H. J. (1999).

[33] Rockwell, R. E., Andre, L. C., & Hawley, M. K. (1996). *Parents and teachers as partners: Issues and challenges.* Fort Worth, TX: Harcourt Brace College.

[34] Swap, S. A. (1993). *Developing home-school partnerships from concepts to practice.* New York: Teachers College Press.

[35] McAllister, G., & Irvine, J. J. (2000). Cross cultural competency and multicultural teacher education. *Review of Educational Research, 70*(1), 3-24.

[36] Cruickshank, D. R., & Haefele, D. (2001).

[37] Weinsten, C., Curran, M., & Tomlinson-Clarke, S. (2003).

[1] Georgia Department of Education (n.d.) Great Teachers and Leaders. Retrieved from http://public.doe.k12.ga.us/DMGeTAPSument.aspx/RT3%20GREAT%20TEACHERS%20AND%20 LEADERS.pdf

[1] Stronge, J. H. (2006). Teacher evaluation and school improvement. In J. H. Stronge. (Ed.). *Evaluating teaching: A guide to current thinking and best practice* (2nded.) (pp. 1-23). Thousand Oaks, CA: Corwin.

[2] Danielson, C. (2001). New trends in teacher evaluation.*Educational Leadership,* 12-15. p. 13

[3] Stronge, J. H., & Tucker, P. D. (2003). Handbook on teacher evaluation: Assessing and improving performance. Larchmont, NY: Eye on Education. p. 3

[4] Shinkfield, A. J. (1994). Principal and peer evaluation of teachers for professional development. Journal of Personnel Evaluation in Education, 8, 251-266.

[5] Wheeler, P. H., &Scriven, M. (2006).Building the foundation. In J. H. Stronge. (Ed.). *Evaluating teaching: A guide to current thinking and best practice* (2nded.) (pp. 27-53). Thousand Oaks, CA: Corwin.

[6]Joint Committee on Standards for Educational Evaluation. (2009). *The personnel evaluation standards: How to assess systems of evaluating educators* (2nd ed.). Thousand Oaks, CA: Corwin. pp. 6-7

[7]Danielson, C., & McGreal, T. L. (2000). *Teacher evaluation: To enhance professional practice.* Alexandria, VA: Association for Supervision and Curriculum Development.

[8]Stronge, J. H. (2006). p. 19

_____

[1]Cochran, K., DeRuiter, L., & King, R. (1993). Pedagogical content knowledge: An integrative model for teacher preparation. *Journal of Teacher Education, 4*, 18-29.; Hill, H. C., Rowan, B., & Ball, D. L. (2005).Effects of teachers' mathematical knowledge for teaching on student achievement. *American Educational Research Journal, 42,* 371-406.; Rowan, B., Chiang, F., & Miller, R. J. (1997).Using research on employees' performance to study the effects of teachers on students' achievement. *Sociology of Education, 70*, 256-284.; Schulman, L. S. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review, 57*(1), 1-22.

[2]Weiss, I. R., & Miller, B. (2006, October).*Deepening teacher content knowledge for teaching: A review of the evidence.* Retrieved May 10, 2009, from http://hub.mspnet.org/media/data/WeissMiller.pdf?media_000000002247.pdf.; Wenglisky, H. (2000). *How teaching matters: Bringing the classroom back into discussion of teacher quality.* Princeton, NJ: Millikan Family Foundation and Educational Testing Service.

[3] Harris, D. N., & Sass, T. R. (2007). *Teacher training, teacher quality and student achievement*. Washington, DC: National Center for Analysis of Longitudinal Data in Education Research. Retrieved April 4, 2009, from www.caldercenter.org/PDF /1001059_Teacher_Training.pdf.; Hill, H. C., Rowan, B., & Ball, D. L. (2005); Rowan, B., Chiang, F., & Miller, R. J. (1997); Moats, L. C., & Foorman, B. R. (2003). Measuring teachers' content knowledge of language and reading. *Annuals of Dyslexia, 53*, 23-45.

[4]Childs, A., & McNicholl, J. (2007).Investigating the relationship between subject content knowledge and pedagogical practice through the analysis of classroom discourse. *International Journal of Science Education, 29*(13), 1629-1653.

[5]Case, R. (1991).The anatomy of curricular integration. *Canadian Journal of Education, 16*(2), 215-224.

[6]Czerniak, C. M., Weber, W. B., Sandmann, A., & Ahern, J. (1999). A literature review of science and mathematics integration. *Science and Mathematics Integration, 99*(8), 421-430.

[7]Hill, H. C., Rowan, B., & Ball, D. L. (2005).

[8]Schulman, L. S. (1987).

[9]Cochran, K., DeRuiter, L., & King, R. (1993).

[10]Educational Review Office. (1998). *The capable teacher.* Retrieved January 19, 2002, from http://www.ero.govt.nz/Publications/eers1998/98no2hl.html.

[11]Educational Testing Service.(n.d.).*ETS Poll: Americans willing to pay for teacher quality, still demand standards and accountability.*

[12]Langer, J. (2001). Beating the odds: Teaching middle and high school students to read and write well. *American Educational Research Journal, 38* (4), 837-880.

[13]Peart, N. A., & Campbell, F. A. (1999).At-risk students' perceptions of teacher effectiveness. *Journal for a Just and Caring Education, 5*(3), 269-284.

[14]Covino, E. A., &Iwanicki, E. (1996).Experienced teachers: Their constructs on effective teaching. *Journal of Personnel Evaluation in Education, 11*, 325-363.

[15]McAllister, G., & Irvine, J. J. (2000). Cross cultural competency and multicultural teacher education. *Review of Educational Research, 70*(1), 3-24.

[16]Cruickshank, D. R., & Haefele, D. (2001). Good teachers, plural. *Educational Leadership, 58*(5), 26-30.

[17]Weinsten, C., Curran, M., & Tomlinson-Clarke, S. (2003). Culturally responsive classroom management: Awareness into action. *Theory Into Practice, 42*(4), 269-276.

[1]Merriam-Webster, Inc. (2006). *Webster's new explorer encyclopedic dictionary.* Springfield, MA: Author. p. 1387.

[2]Buttram, J. L., & Waters, J. T. (1997). Improving America's schools through standards-based education. *Bulletin, 81* (590), 1-5.

[3]Borko, H., & Livingston, C. (1989). Cognition and improvisation: Differences in mathematics instruction by expert and novice teachers. *American Educational Research Journal, 26*(4), 473-498.

[4]Leinhardt, G. (1993). On teaching. In R. Glaser (Ed.), *Advances in instructional psychology*, Vol. 4, pp.1-54. Hillsdale, NJ: Lawrence Erlbaum Associates.

[5]Berliner, D. C. (2004). Describing the behavior and documenting the accomplishments of expert teacher. *Bulletin of Science, Technology and Society, 24*, 200-212.

[6]Au, W. (2007). High-stakes testing and curricular control: A qualitative metasynthesis. *Educational Researcher, 36*, 258-267.

[7]David, J. L. (2008). Pacing guides. *Educational Leadership, 66*(2), 87-88. p. 88

[8]Anderson, L. M., Evertson, C. M., & Brophy, J. E. (1979). An experimental study of effective teaching in first-grade reading groups. *The Elementary School Journal, 79*, 193-222.

[9]Perrin, B., Banks, F., & Dargue, B. (2004).*Student vs. software pacing of instruction: An empirical comparison of effectiveness.* Paper presented at the Interservice/Industry Training, Simulation, and Education Conference, Orlando, FL, 2004.

[10]Hammerness, K., Darling-Hammond, L., Bransford, J., Berliner, D., Cochran-Smith, M., McDonald, M., et al. (2005). How teachers learn and develop. In L. Darling-Hammond & J. Bransford (Ed.), *Preparing teachers for a changing world: What teachers should learn and be able to do*, pp. 358-389.San Francisco: Jossey-Bass.

[11]Hammerness, K., et al. (2005)

[12]Parker, D. (1994).*Every student succeeds: A conceptual framework for students at risk of school failure.* Sacramento, CA: California Department of Education.

[13]Parker, D. (1994).

[14]Hill. (1994), pp. 38-39, cited in Sharma, M. B., & Elbow, G. S. (2000).*Use Internet primary source to teach critical thinking skills in geography.* Westport, CT: Greenwood Press.

[15]Harap, H. (1955). The use of free and inexpensive learning materials in the classroom. *The School Review, 63*(7), 378-383.

[16]Stripling, B. K. (Ed.). (1999). *Learning and libraries in an information age: Principles and practice.* Englewood, CO: Libraries Unlimited, Inc. p. 6

[17]Misulis, K. (1997). Content analysis: A useful tool for instructional planning. *Contemporary Education, 69*(1), 45-47. p. 45

[18]Good, T. L., & Brophy, J. E. (2002). *Looking in classrooms* (9th ed.). Boston: Allyn & Bacon.; Jay, J. K. (2002). Points on a continuum: An expert/novice study of pedagogical reason. *The Professional Educator, 24*(2), 63-74.; Livingston, C., & Borko, H. (1989). Expert-novice differences in teaching: A cognitive analysis and implications for teacher education. *Journal of Teacher Education, 40*(4), 36-42.; Sabers, D. S., Cushing, K. S., & Berliner, D.C. (1991).Differences among teachers in a task characterized by simultaneity, multidimensionality, and immediacy. *American Educational Research Journal, 28*(1), 63-88.

[19]Haynie, G. (2006, April). *Effective Biology teaching: A value-addedinstructionalimprovementanalysismodel.* Retrieved February 7, 2009, from http://www.wcpss.net/evaluation-research/reports/2006/0528biology.pdf.

[20]Allington, R. L., & Johnston, P. H. (2000).*What do we know about effective fourth-grade teachers and their classrooms?* Albany, NY: The National Research Center on English Leaning & Achievement, State University of New York.

[21]Borko, H., & Livingston, C. (1989).

[22]McEwan, E. K. (2002). *10 traits of highly effective teachers: How to hire, coach, and mentor successful teachers.* Thousand Oaks, CA: Corwin Press.

[23]Haynie, G. (2006, April).

[24] McEwan, E. K. (2002).

[25]Haynie, G. (2006).

[26]Marzano, R. J., Pickering, D. J., & Pollock, J. E. (2001).*Classroom instruction that works: Research-based strategies for increasing student achievement.* Alexandria, VA: Association for Supervision and Curriculum Development.

[27]Panasuk, R., Stone, W., & Todd, J. (2002). Lesson planning strategy for effective mathematics teaching. *Education, 22* (2), 714, 808-827.

[28]Buttram, J. L., & Waters, J. T. (1997). Improving America's schools through standards-based education. *Bulletin, 81* (590), 1-5.

[29]Allington, R. L., & Johnston, P. H. (2000).

[30]Fuchs, L. S., Fuchs, D., & Phillips, N. (1994). The relation between teachers' beliefs about the importance of good work habits, teacher planning, and student achievement. *The Elementary School Journal, 94*(3), 331-345.

[1]Leigh, A. (2010). Estimating teacher effectiveness from twp-year changes in students' test scores. *Economics of Education Review, 29*, 480-488.; Nye, B., Konstantopoulos, S., & Hedges, L. V. (2004). How large are teacher effects? *Educational Evaluation and Policy Analysis, 26*(3), 237-257.; Rivkin, S. G., Hanushek, E. A., & Kain, J. F. (2005).Teachers, schools, and academic achievement. *Econometrica, 73*(2), 417-458.; Rowan, B., Correnti, R., & Miller, R. J. (2002).What large-scale, survey research tells us about teacher effects on student achievement: Insights from the *Prospects* study of elementary schools. *Teachers College Record, 104*(8), 1525-1567.; Stronge, J. H., Ward, T. J., Tucker, P. D., & Grant, L.W. (2011, in press). What makes good teachers good? A cross-case analysis of the connection between teacher effectiveness and student achievement. *Journal of Teacher Education*. Stronge, J. H., Ward, T. J., Tucker, P. D., & Hindman, J. L. (2008). What is the relationship between teacher quality and student achievement? An exploratory study. *Journal of Personnel Evaluation in Education, 20*(3-4), 165-184.

[2]Harris, D. N., & Sass, T. R. (2007). *Teacher training, teacher quality and student achievement*. Washington, DC: National Center for Analysis of Longitudinal Data in Education Research. Retrieved April 4, 2009, from www.caldercenter.org/PDF /1001059_Teacher_Training.pdf.

[3] Rowan, B., Correnti, R., & Miller, R. J. (2002).;Palardy, G. J., &Rumberger, R. W. (2008). Teacher effectiveness in first grade: The importance of background qualifications, attitudes, and instructional practices for student learning. *Educational Evaluation and Policy Analysis, 30*(2), 111-140.

[4]Hanushek, E., Kain, J. F., &Rivkins, S. G. (2004). Why public schools lose teachers. Journal of Human Resources, 39(2), 326-354.; Rivkin, S. G., Hanushek, E. A., &Kain, J. F. (2005).

[5]Munoz, M. A., & Chang, F. C. (2007). The elusive relationship between teacher characteristics and student academic growth: A longitudinal multilevel model for change. *Journal of Personnel Evaluation in Education, 20*, 147-164.; Rockoff, J. E. (2004). The impact of individual teachers on student achievement: Evidence from panel data. *The American Economic Review, 94*(2), 247-252.

[6]Bembry, K. L., Jordan, H. R., Gomez, E., Anderson, M. C., &Mendro, R. L. (1998, April). *Policy implications of long-term teacher effects on student achievement.* Paper presented at the 1998 Annual Meeting of the American Educational Research Association, San Diego, CA.; Hattie, J. (2003). *Teachers make a difference: What is the research evidence?* Retrieved December 12, 2008, from http://www.leadspace.govt.nz/leadership/pdf/john _hattie.pdf.;Stronge, J. H., Ward, T. J., Tucker, P. D., &Hindman, J. L. (2008).

[7]Cohen, D. K., Raudenbush, S. W., & Ball, D. L. (2003). Resources, instruction, and research. *Educational Evaluation and Policy Analysis, 25*(2), 119-142.

[8]Hattie, J. (2003). *Teachers make a difference: What is the research evidence?* Retrieved December 12, 2008, from http://www.leadspace.govt.nz/leadership/pdf/john _hattie.pdf.

[9]Goldhaber, D. (2002). The mystery of good teaching. *Education Next, 2*(1), 50-55. Retrieved December 7, 2008, from http://www.hoover.org/publications/ednext /3368021.html.

[10] See, for example, Allington, R. L. (2002). What I've learned about effective reading instruction. *Phi Delta Kappan, 83*, 740-747.; Darling-Hammond, L. (2000). Teacher quality and student achievement: A review of state policy evidence. *Education Policy Analysis Archives, 8*(1). Retrieved January 22, 2004 from http://olam.ed.asu.edu/epaa/v8n1/.; Rowan, B. Coreenti, R., & Miller, R. J. (2002); Schacter, J., &Thum, Y. M. (2004). Paying for high- and low-quality teaching. *Economics of Education Review, 23*, 411-430.; Stronge, J. H. (2007); Stronge, J. H., et L. (2008).

[11] Hattie, J. (2003).; Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to student achievement.* New York: Routledge.

[12]Schroeder, C. M., Scott, T. P., Tolson, H., Huang, T., & Lee, Y. (2007); Wenglinsky, H. (2004).

[13]Stronge, J. H. (2007). *Qualities of effective teachers (2nd Ed.).*Alexandria, VA: ASCD.

[14]Tomlinson, C. A. (1999). *The differentiated classroom: Responding to the needs of all learners*. Alexandria, VA: Association for Supervision and Curriculum Development.

[15]Dolezal, S.E., Welsh, L.M., Pressley, M., & Vincent, M.M. (2003). How third-grade teachers motivate student academic achievement. *The Elementary SchoolJournal, 103,* 239-267.

[16]Wenglinsky, H. (2002). How schools matter: The link between teacher classroom practices and student academic performance. *Education Policy Analysis Archives, 10*(12).Retrieved November 20, 2008, from http://epaa.asu.edu/epaa/v10n12/.

[17]Cotton, K. (2000).*The schooling practices that matter most*. Portland, OR: Northwest Regional Educational Laboratory; and Alexandria, VA: Association for Supervision and Curriculum Development.

[18]Berliner, D. C. (1986).In pursuit of the expert pedagogue. *Educational Researcher, 15*(7), 5-13.; Berliner, D. C. (2004). Describing the behavior and documenting the accomplishments of expert teacher. *Bulletin of Science, Technology and Society, 24*, 200-212.

[19]Cawelti, G. (Ed.). (2004). *Handbook of research on improving student achievement* (3rd ed.). Arlington, VA: Educational Research Service.; Walsh, J. A., &Sattes, B. D. (2005). *Quality questioning: Research-based practice to engage every learner.* Thousand Oaks, CA: Corwin Press.

[20]Schroeder, C. M., Scott, T. P., Tolson, H., Huang, T., & Lee, Y. (2007). A Meta-analysis of national research: Effects of teaching strategies on student achievement in science in the United States. *Journal of Research in Science Teaching, 44,* 1436-1460.; *Wenglinsky, H. (2004).The link between instructional practice and the racial gap in middle schools. Research in Middle Level Education Online, 28(1), 1-13.*

[21]Carlson, E., Lee, H, & Schroll, K. (2004). Identifying attributes of high quality special education teachers. *Teacher Education and Special Education, 27,* 350-359.

[22]Walberg, H. J. (1984). Improving the productivity of America's schools. *Educational Leadership, 41*(8), 19-27.

[23] Walberg, 1984

[24]Guo, S., Tsai, C., Chang, F. M., & Huang, H. (2007). The study of questioning skills on teaching improvement. *The International Journal of Learning, 14*(8), 141-145.

[25]Walsh, J. A., &Sattes, B. D. (2005).

[26]Craig, J. & Cairo, L. (2005, December). *Assessing the relationship between questioning and understanding to improve learning and thinking (QUILT) and student achievement in mathematics: A pilot study.* Charleston, WV: Appalachia Educational Laboratory, Inc.

[27]Stronge et al. (2008).

[28]Wang, X. (2000).A comparative study on effective instructional practices and ineffective instructional practices. *Theory and Practice of Education, 20*(9), 50-53.

[29]Stronge, J. H. (2007).

[30]Bradford, D. (1999). Exemplary urban middle school teachers' use of 5 standards of effective teaching. *Teaching and Change, 7*(1), 53-78.; Lewis, A. (2001).*Add it up: Using research to improve education for low-income and minority students.* Washington, D.C.: Poverty & Race Research Action Council. Retrieved November 18, 2004 from http://www.prrac.org/pubs_aiu.pdf.

[31]Wenglinsky, H. (2004). Closing the racial achievement gap: The role of reforming instructional practices. *Education Policy Analysis Archives, 12*(64). Retrieved August 1, 2006 from http://epaa.asu.edu/epaa/v12n64/.

[32]Marzano, R. J., Marzano, R. J., & Pickering, D. J. (2003).*Classroom management that works: Research-based strategies for every teacher.* Alexandria, VA: Association for Supervision and Curriculum Development.

[33]Langer, J. (2001). Beating the odds: Teaching middle and high school students to read and write well. *American Educational Research Journal, 38* (4), 837-880.

[34]Day, S.L. (2002). Real kids, real risks: Effective instruction of students at risk of failure. *NASSP Bulletin, 86*, Retrieved May 1, 2005 from http://www.principals.org /news/bultn_realkids0902.html.

[35]Taylor, B., Pearson, P. D., Clark, K. F., & Walpole, S. (1999). *Beating the odds in teaching All Children to Read*. Ann Arbor, MI: Center for the Improvement of Early Reading Achievement.

[36]Pogrow, S. (2005). HOTS revisited: A thinking development approach to reducing the learning gap after grade 3. *Phi Delta Kappan,* 87(1), 64.

[37]Taylor, B. M., et al. (2003).

[38]Singham, M. (2001).The achievement gap.*Phi Delta Kappan, 84*, 586.

[39]Pressley, M., Rapael, L. Gallagher, J.D., &DiBella, J. (2004). Providence-St. Mel School: How a school that works for African Americans works. *Journal of Educational Psychology, 96*(2), 216-235.; Taylor, B.M., et al. (2003).

[40]Tursman, C. (1981). *Good teacher: what to look for.* Arlington, VA: National School Public Relations Association.

[41]Darling-Hammond, L. (2000); Educational Review Office. (1998). *The capable teacher.* Retrieved January 19, 2002, from http://www.ero.govt.nz/Publications/eers1998/98no2hl.html.

[42]Johnson, B. L. (1997). An organizational analysis of multiple perspectives of effective teaching: Implications for teacher evaluation. *Journal of Personnel Evaluation in Education, 11,* 69-87.

[43]Shellard, E. &Protheroe, N. (2000). Effective teaching: How do we know it when we see it? *The Informed Educator Series.* Arlington, VA: Educational Research Service.

[44]Covino, E. A., &Iwanicki, E. (1996).Experienced teachers: Their constructs on effective teaching. *Journal of Personnel Evaluation in Education, 11*, 325-363.

[45]Shellard, E., &Protheroe, N. (2000).

[46]Cawelti, G. (1999); Cotton, K. (2000); Covino E. A., &Iwanicki, E. (1996); Good, T. L., &Brophy, J. E. (2002).*Looking in classrooms* (9th ed.). Boston: Allyn& Bacon.; Tobin, K. (1980). The effect of extended teacher wait-time on science achievement. *Journal of Research in Science Teaching, 17,* 469-475.

[47]McDonald, F. J., & Elias, P. (1976). Executive summary report: Beginning teacher evaluation study, Phase II (PR-76-18). Princeton, NJ: Educational Testing Service.

[48]Stronge, J. H. (2007).

[49]Schalock, H. D., Schalock, M. D., Cowart, B., &Myton, D. (1993).Extending teacher assessment beyond knowledge and skills: An emerging focus on teacher accomplishments. *Journal of Personnel Evaluation in Education, 7*, 105-133.

[50]Adapted from Hattie, J. (2003); (2009).

[1] Weiss cited in Hoff, D. J. (2003, September 3). Large-scale study finds poor math, science instruction. *Education Week, 23* (1), p. 8.

Carolan, J., & Guinn, A. (2007). Differentiation: Lessons from master teachers. *Educational Leadership, 64*(5), 44-47. p. 44.

[3] Tomlinson, C. A. (2001). *How to differentiate instruction in mixed-ability classrooms* (2nd ed.). Alexandria, VA: Association for Supervision and Curriculum Development.

[4]Cawelti, G. (Ed.). (2004). *Handbook of research on improving student achievement* (3rd ed.). Arlington, VA: Educational Research Service.;Tomlinson, C. A. (1999). *The differentiated classroom: Responding to the needs of all learners.* Alexandria, VA: Association for Supervision and Curriculum Development.

[5]Brighton, C. M., Hertberg, H. L, Moon, T. R., Tomlinson, C. A., & Callahan, C. M. (2005).*The feasibility of high-end learning in a diverse middle school.* Storrs, CT: The National Research Center on the Gifted and Talented, University of Connecticut.

[6]Covino, E. A., &Iwanicki, E. (1996).Experienced teachers: Their constructs on effective teaching. *Journal of Personnel Evaluation in Education, 11*, 325-363.

[7]Kulik, J. A., &Kulik, C. L. C. (1992).Meta-analysis findings on grouping programs.*Gifted Child Quarterly, 36*, 73-77.

[8]Stronge, J. H. (2007). *Qualities of effective teachers (2nd Ed.).*Alexandria, VA: ASCD.

[9]Dunn, R., Griggs, S., Olson, J., Beasley, M., & Gorman, B. (1995).A meta-analytic validation of the Dunn and Dunn model of learning-style preference.*Journal of Educational Research, 88*(6), 353-362.

[10]Dunn, R., et al. (1995).

[11] Dunn, R., et al. (2009).

[12]Dolezal, S.E., Welsh, L.M., Pressley, M., & Vincent, M.M. (2003). How third-gradeteachers motivate student academic achievement. *The Elementary SchoolJournal, 103,* 239-267.

[13] Tomlinson, C. A. (2001).

[14]Tieso, C. L. (2004). The effects of grouping and curricular practices on intermediate students' math achievement.*Reoper Review, 26*(4), 236.;Tieso, C. L. (2005). The effects of grouping practices and curricular adjustments on achievement.*Journal of the Education of Gifted, 29*(1), 60-89.

[15]Beck, C. (2001).Matching teaching strategies to learning style preferences.*TheTeacher Educator, 37* (1), 1-15.

[16]Adapted from Borich, G. D. (2011).*Effective teaching methods: Research-based practice* (7th ed.). Boston: Allyn&Bacon.; Beecher, M., & Sweeny, S. M. (2008). Closing the achievement gap with curriculum enrichment and differentiation: One school's story.*Journal of Advanced Academics, 19*, 502-530.

[17]Latz, A. O., Neumeister, K. L. S., Adams, C. M., & Pierce, R. L. (2009) Peer coaching to improve classroom differentiation: Perspectives from Project CLUE. *Roeper Review, 31*, 27-39. p. 27.

[18]Carolan, J., & Guinn, A. (2007). Differentiation: Lessons from master teachers. *Educational Leadership, 64*(5), 44-47.

[1]Stiggins, R. J. (1999). Assessment, student confidence, and school success.*Phi Delta Kappan, 81*(3), 191-199, p. 191.

[2]Gronlund, N. E. (2006). *Assessment of student achievement* (8th ed.). Boston: Pearson. p. 3.

[3] Tomlinson, C. A. (1999).

[4]Gronlund, N. E. (2006).

[5]Black, P. J. &Wiliam, D. (1998) Assessment and classroom learning.*Assessment in Education: Principles, Policy & Practice, 5*(1), 7–73.

[6]Black, P. J., &Wiliam, D. (1998).

[7]Wenglinsky, H. (2002). How schools matter: The link between teacher classroom practices and student academic performance. *Education Policy Analysis Archives, 10*(12).Retrieved November 20, 2008, from http://epaa.asu.edu/epaa/v10n12/.

[8]Stronge, J. H., Ward, T. J., Tucker, P. D., &Hindman, J. L. (2008). What is the relationship between teacher quality and student achievement? An exploratory study.*Journal of Personnel Evaluation in Education, 20*(3-4), 165-184.

[9] Cotton, K. (2000).*The schooling practices that matter most*. Portland, OR: Northwest Regional Educational Laboratory; and Alexandria, VA: Association for Supervision and Curriculum Development.

[10]Marzano, R. J., Pickering, D. J., & Pollock, J. E. (2001).*Classroom instruction that works: Research-based strategies for increasing student achievement.* Alexandria, VA: Association for Supervision and Curriculum Development.

[11]Stronge, J. H. (2007). *Qualities of effective teachers (2nd Ed.).*Alexandria, VA: ASCD.

[12] Eisner, E. W. (1999). The uses and limits of performance assessment.*Phi Delta Kappan, 80*(9), 658-660.

[13]Gronlund, N. E. (2006).

[14]Stronge, J. H. (2007).

[15] Black, P. J., &Wiliam, D. (1998); Stiggins, R., &DuFour, R. (2009). Maximizing the power of formative assessments.*Phi Delta Kappan, 90*(9), 640-644.

[16]Guskey, T. R. (2002). Does it make a difference? Evaluating professional development.*Educational Leadership, 59*(6), 45-51.

[17] Tomlinson, C.A. (2007). Learning to love assessment.*Educational Leadership, 65*(4), 8-13.

[18]Borko, H., & Elliott, R. (1999).Hands-on pedagogy versus hands-off accountability.*Phi Delta Kappan, 80*(5), 394-400.; Shepard, L. A., & Dougherty, K. C. (1991).*Effects of high-stakes testing on instruction.* Paper presented at the annual meeting of the American Educational Research Association and National Council on Measurement in Education, Chicago.;Thayer, Y. (2000). Virginia's Standards make all students stars. *Phi Delta Kappan, 57*(7), 70-72.; Vogler, K. E.

(2002).The impact of high-stakes, state-mandated student performance assessment on teachers' instructional practices.*Education, 123*(1), 39-56.

[19]Hamilton, L., &Stecher, B. (2004).Responding effectively to test-based accountability.*Phi Delta Kappan, 85*(8), 578-583.; Jones, B. D., &Egley, R. J. (2004).Voice from the frontlines: Teachers' perceptions of high-stakes testing. *Educational Policy Analysis Archives, 12*(39). Retrieved November 17, 2007, from http://epaa.asu.edu/epaa/va12n39.; Jones, G., Jones, B. D., Hardin, B., Chapman, L., Yardrough, T, & Davis, M. (1999). The impact of high-stakes testing on teachers and students in North Carolina.*Phi Delta Kappan, 81*(3), 199-203.; Stecher, B. M., & Mitchell, K. J. (1995).*Portfolio Driven Reform: Vermont Teachers' Understanding of Mathematical Problem Solving. CSE Technical Report 400.* Los Angeles: National Center for Research on Evaluation, Standards, and Student Testing.

---

[1] Kerr, K. A, Marsh, J. A., Ikemoto, G. S., Darilek, H., & Barney, H. (2006). Strategies to promote data use for instructional improvement: Actions, outcomes, and lessons from three urban districts. *American Journal of Education, 112*, 496-520.

[2]Safer, N., & Fleischman, S. (2005). How student progress monitoring improves instruction. *Educational Leadership, 62*(5), 81-83.

[3]Cauley, K. M., & McMillan, J. H. (2009) Formative assessment techniques to support student motivation and achievement. *Clearing House, 83*(1), 1-6.; Popham, W. J. (2008). Transformative assessment. Alexandria, VA: Association of Supervision and Curriculum Development.

[4]Natriello, G. (1987). The impact of evaluation processes on students. *Educational Psychologist, 22*(2), 155-175.

[5]Crooks, T. J. (1988). The impact of classroom evaluation practices on students. *Review of Educational Research, 58*(4), 438-481.

[6]Black, P. J. & Wiliam, D. (1998) Assessment and classroom learning. *Assessment in Education: Principles, Policy & Practice, 5*(1), 7–73.

[7] Kerr, K. A, et al. (2006).

[8]Fuchs, L. S., Deno, S. L., & Mirkin, P. K. (1984).The effects of frequent curriculum-based measurement and evaluation on pedagogy, student achievement, and student awareness of learning. *American Educational Research Journal, 21*(2), 449-460.

[9] Tomlinson, C. A. (1999). *The differentiated classroom: Responding to the needs of all learners*. Alexandria, VA: Association for Supervision and Curriculum Development.

[10]Fuchs, L. S., & Fuchs, D. (2003).*What is scientifically-based research on progress monitoring?* Washington, DC: National Center on Student Progress Monitoring.

[11]Stecker, P. M., Fuchs, L. S., & Fuchs, D. (2005). Using curriculum-based measurement to improve student achievement: Review of research. *Psychology in the Schools, 42*(8), 795-819.

[12]LePage, P., Darling-Hammond, L., Akar, H., Guitierrez, C., Jenkins-Gunn, E., & Rosebrock, K. (2005).Classroom management. In L. Darling-Hammond and J. Bransford (Eds.), *Preparing teachers for a changing world: What teachers should learn and be able to do* (pp. 327-357). San Francisco, CA: Jossey-Bass.

[13]Stronge, J. H. (2007). *Qualities of effective teachers (2ⁿᵈ Ed.).*Alexandria, VA: ASCD.

[14]Cauley, K. M., & McMillan, J. H. (2009).

[15]Chappius, S., & Stiggins, R. J. (2002). Classroom assessment for learning. *Educational Leadership, 60*(1), 40-43.

[16] Zacharias, N. T. (2007). Teacher and student attitudes toward teacher feedback. *RELC Journal: A Journal of Language Teaching and Research, 38*(1), 38-52.

[17] Hattie, J. (2003). *Teachers make a difference: What is the research evidence?* Retrieved December 12, 2008, from http://www.leadspace.govt.nz/leadership/pdf/john _hattie.pdf.

[18]Wenglinsky, H. (2002). How schools matter: The link between teacher classroom practices and student academic performance. *Education Policy Analysis Archives, 10*(12).Retrieved November 20, 2008, from http://epaa.asu.edu/epaa/v10n12/.

[19] Walker, M. H. (1998). 3 basics for better student output. *Education Digest, 63*(9), 15-18.

[20] Danielson, C. (2002). *Enhancing student achievement: A framework for school improvement.* Alexandria, VA: Association for Supervision and Curriculum Development.

[21]Tomlinson, C. A. (1999); Chappius, S., & Stiggins, R. J. (2002).

[22]Fuchs, L. S. & Fuchs, D. (2003).

[23]Fuchs, L. S. & Fuchs, D. (2003).

[1] Fraser, B. J., & Fisher, D. L. (1982). Predicting students' outcomes from their perceptions of classroom psycho-social environment. *American Educational Research Journal, 19*, 498–518.; Ludtke, O., Robitzsch, A., Trautwein, U., & Kunter, M. (2009). Assessing the impact of learning environments: How to use student ratings of classroom or school characteristics in multilevel modeling. *Contemporary Educational Psychology, 34*,120-131.

[2] Hamre, B. K. & Pianta, R. C. (2005). Can instruction and emotional support in the first-grade classroom make a difference for children at risk of school failure? *Child Development, 76*(5), 949-967.; Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to student achievement.* New York: Routledge.; Pressley, M., Rapael, L. Gallagher, J.D., & DiBella, J. (2004). Providence-St. Mel School: How a school that works for African Americans works. *Journal of Educational Psychology, 96*(2), 216-235..

[3] Cameron, C.E., Connor, C.M., Morrison, F.J., Jewkes, A.M. (2008). Effects of classroom organization on letter-word reading in first grade. *Journal of School Psychology, 46,* 173-192.; Zahorik, J., Halbach, A., Ehrle, K., & Molnar, A. (2003). Teaching practices for smaller classes. E*ducational Leadership, 61*(1), 75-77.

[4] Stronge, J. H. (2007). *Qualities of effective teachers (2nd Ed.).* Alexandria, VA: ASCD.

[5] Emmer, E. T., Evertson, C. M., & Worsham, M. E. (2003). *Classroom management for secondary teachers.* Boston: Allyn and Bacon.

[6] Marzano, R. J., Pickering, D. J., & Pollock, J. E. (2001). *Classroom instruction that works: Research-based strategies for increasing student achievement.* Alexandria, VA: Association for Supervision and Curriculum Development.

[7] Wang, M. C., Haertel, G. D., & Walberg, H. J. (1994). What helps students learn? *Educational Leadership, 51*(4), 74-79.

[8] Good, T. L., & Brophy, J. E. (2002). *Looking in classrooms* (9th ed.). Boston: Allyn & Bacon.; Cruickshank, D. R., & Haefele, D. (2001). Good teachers, plural. *Educational Leadership, 58*(5), 26-30.

[9] Corbett, D., Wilson, B., & Williams, B. (2002). *Effort and excellence in urban classrooms: Expecting and getting success with all students.* New York: Teacher College Press; Johnson, B. L. (1997). An organizational analysis of multiple perspectives of effective teaching: Implications for teacher evaluation. *Journal of Personnel Evaluation in Education, 11,* 69-87.

[10] Carter, P. J. (2003). *A review of highly effective teachers in Hamilton County: Analysis of current trends and implications for improvement.* Chattanooga, TN: Public Education Foundation. Retrieved November 7, 2008, from http://pef. ddngroupb.com/.; Walls, R. T., Nardi, A. H., von Minden, A. M., & Hoffman, N. (2002). The characteristics of effective and ineffective teachers. *Teacher education quarterly*, *29*(1), 39-48.

[11] Education USA Special Report. (n. d.). *Good Teachers: What to Look For.* A Publication of The National School Public Relations Association.

[12] Johnson, B. L. (1997).

[13] Haberman, M. (1995). *STAR teachers of children in poverty.* West Lafayette, IN: Kappa Delta Pi.

[14] Cruickshank, D. R., & Haefele, D. (2001).

[15] Shellard, E. & Protheroe, N. (2000). Effective teaching: How do we know it when we see it? *The Informed Educator Series.* Arlington, VA: Educational Research Service.

[16] Cameron, C. E., Connor, C. M., Morrison, F. J., Jewkes, A. M. (2008); Stronge, J. H. (2007); Zahorik, J., Halbach, A., Ehrle, K., & Molnar, A. (2003).

[17] Merriam-Webster, Inc. (2006). *Webster's new explorer encyclopedic dictionary.* Springfield, MA: Author.. p. 1828.

[18] Emmer, E. T., & Stough, L. M. (2001). Classroom management: A critical part of educational psychology, with implications for teacher education. *Educational Psychologist, 36*(2), 103-112.

[19] Emmer, E. T., & Stough, L. M. (2001). p. 105.

[20] Hattie, J. (2003).

[21] Barney, D. (2005). Elementary physical education student teachers' interactions with students. *Physical Educator, 62*(3), 130-135.; Hamre & Pianta. (2005); Pressley, Raphael, Gallagher, & DiBella. (2004)

[22] Allington, R. L., & Johnston, P. H. (2000). *What do we know about effective fourth-grade teachers and their classrooms?* Albany, NY: The National Research Center on English Leaning & Achievement, State University of New York.

[23] Cornell, D. G., & Mayer, M. J. (2010). Why do school order and safety matter? *Educational Research, 39*(1), 7-15. p. 11

[24] Coetzee, M., & Jansen, C. (2007). *Emotional intelligence in classroom: The secret of happy teachers.* Cape Town, South Africa: Juta & Co.

[25] Emmer, E. T., & Stough, L. M. (2001).

[26] Wang, M. C., Haertel, G. D., & Walberg, H. J. (1994). p. 76.

[27] Anderson, G. J. (1970). Effects of classroom social climate on individual learning. *American Educational Research Journal, 7,* 135-152. p. 135

[28] Moos, R. H. (1973). Conceptualizations of human environments. *American Psychologist, 28,* 652–665.

[29] Sinclair, B. B., & Fraser, B. J. (2002). Changing classroom environments in urban middle schools. *Learning Environment Research, 5,* 301-328.

[30] Cohen, E. G. (1994). Restructuring the classroom: Conditions for productive small groups. *Review of Educational Research, 64*(1), 1-35.; Jensen, M., Johnson, D. W., & Johnson, R. T. (2002). Impact of positive interdependence during electronic quizzes on discourse and achievement. *Journal of Educational Research, 95*(3), 161-166.; LePage, P., Darling-Hammond, L., Akar, H., Guitierrez, C., Jenkins-Gunn, E., & Rosebrock, K. (2005). Classroom management. In L. Darling-

Hammond and J. Bransford (Eds.), *Preparing teachers for a changing world: What teachers should learn and be able to do* (pp. 327-357). San Francisco, CA: Jossey-Bass.; Slavin, R. E. (1990). *Cooperative learning: Theory, research, and practice*. Englewood Cliffs, NJ: Prentice-Hall.

[31] Tschannen-Moran, M. (2000). The ties that bind: The importance of trust in schools. *Essentially Yours, 4,* 1-5. p. 4

[32] Haertel, G. D., & Walberg, H. J., & Haertel, E. H. (1981).

[33] Byer, J. L. (1999). *The effects of students' perceptions of social climate in middle school social studies classes on academic self-concept.* Unpublished doctoral dissertation, University of Southern Mississippi.

[34] Byer, J. L. (2002). The consistency correlation between students' perceptions of classroom involvement and academic self-concept in secondary social studies classes. *Journal of Social Studies Research, 26*(1), 3-11.

[35] Patrick, H., Ryan, A. M., & Kaplan, A. (2007). Early adolescents' perceptions of the classroom social environment, motivational beliefs, and engagement. *Journal of Educational Psychology, 99*(1), 83-98.; Ryan, A. M., & Patrick, H. (2001). The classroom social environment and changes in adolescents' motivation and engagement during middle school. *American Educational Research Journal, 38*(2), 437-460.

[36] Stronge, J. H. (2007).

[37] Hamre, B.K. & Pianta, R.C. (2005).

[38] Hamre, B. K., & Pianta, R. C. (2005).

[39] Barney, D. (2005).

[40] Pressley, M., Rapael, L. Gallagher, J. D., & DiBella, J. (2004).

[41] Cornelius-White, J. (2007). Leaner-centered teacher-student relationships are effective: A meta-analysis. *Review of Educational Research, 77*(1), 113-143.

[42] Adapted from Coetzee, M. & Jansen, C. (2007).

[43] Allington, R. L., & Johnston, P. H. (2000).

[44] Emmer, E. T. & Stough, L. M. (2001). p. 105

[45] Wang, M. C., Haertel, G. D., & Walberg, H. J. (1994). p. 76

[46] Taylor, B. M., Pearson, P. D., Clark, K., & Walpole, S. (2000). Effective schools and accomplished teachers: Lessons about primary-grade reading instruction in low-income schools. *The Elementary School Journal, 101*(2), 121-142.

[47] Emmer, E. T., & Stough, L. M. (2001).

[48] Marzano, R. J., Marzano, J. S., & Pickering, D. J. (2003).

[49] Stronge, J. H. (2007).

[50] Stronge, J. H., Tuckers, P. D., & Ward, T. J. (2003). *Teacher effectiveness and student learning: What do good teachers do?* Paper presented at the American Educational Research Association Annual Meeting, Chicago, IL.

[51] Emmer, E. T., Evertson, C. M., & Worsham, M. E. (2003). *Classroom management for secondary teachers.* Boston: Allyn and Bacon.

[52] Cameron, C. E., Connor, C. M., Morrison, F. J., Jewkes, A. M. (2008).

[53] Kunter, M., Tsai Y., Klusmann, U., Brunner, M., Krauss, S., & Baumert, J. (2008). Students' and mathematics teachers' perceptions of teacher enthusiasm and instruction. *Learning and Instruction, 18*, 468-482.

[54] Stronge, J. H., Ward, T. J., Tucker, P. D., & Hindman, J. L. (2008). What is the relationship between teacher quality and student achievement? An exploratory study. *Journal of Personnel Evaluation in Education, 20*(3-4), 165-184.

[55] Luiselli, J. K., Putnam, R. F., & Sunderland, M. (2002). Longitudinal evaluation of behavior support intervention in a public middle school. *Journal of Positive Behavior Interventions, 4*, 182-188.

[56] Walker, H. M., Ramsey, E., & Gresham, F. M. (2003/2004, winter). *Heading off disruptive behavior: How early intervention can reduce defiant behavior—and win back teaching time. American Educator*, pp. 6-15, 18-25, 45.

[57] Goldstein, S. (1995). *Understanding and managing children's classroom behavior.* New York: John Wiley & Sons, Inc.

---

[1] Evans, I. M., Harvey, S. T., Buckley, L., & Yan, E. (2009).Differentiating classroom climate concepts: Academic, management, and emotional environments.*New Zealand Journal of Social Sciences Online, 4*, 131-146. Retrieved January 13, 2010, from http://royalsociety.org.nz/Site/publish/Journals/kotuitui /2009/ 011.aspx.

[2] Evans, I. M., et al. (2009).

[3] Schoen, L. T. (2008). Constructing high quality learning environments for twenty-first century learners: A sociocultural constructivist perspective. In D. M. McInerney and D. Liem (Eds), *Teaching and learning: International best practice* (pp. 25-50). Charlotte, NC: Information Age Publishing, Inc.

[4] Fraser, B. (1989). Twenty years of classroom climate work: Progress and prospects. *Journal of Curriculum Studies*, *21*(4), 307-327.; Fraser, B. J., & Fisher, D. L. (1982).Predicting students' outcomes from their perceptions of classroom psycho-social environment.*American Educational Research Journal, 19*, 498–518.; Goh, S. C., Young, D. J., & Fraser, B. J. (1995). Psychosocial climate and student outcomes in elementary mathematics classrooms: A multilevel analysis. *The Journal of*

Experimental Education, 64(1), 29-40.; McRobbie, C. J., & Fraser, B. J. (1993).Associations between student outcomes and psychosocial science environment.*The Journal of Educational Research, 87*(2), 78-85.

[5]Miller-Cribbs, C. S., Davis, L., & Johnson, S. (2002). An exploratory analysis of factors that foster school engagement and completion among African-American students. *Children & Schools, 24*(3), 159-174.

[6]Barth, J. M., Dunlap, S. T., Dane, H., Lochman, J. E., & Wells, K. C. (2004). Classroom environment influences on aggression, peer relations, and academic focus. *Journal of School Psychology, 42*(2), 115-134.

[7]Evans, I. M., et al. (2009).

[8]Emmer, E. T., & Stough, L. M. (2001). Classroom management: A critical part of educational psychology, with implications for teacher education. *Educational Psychologist, 36*(2), 103-112.

[9]Cruickshank, D. R., & Haefele, D. (2001). Good teachers, plural. *Educational Leadership, 58*(5), 26-30.; Good, T. L., & Brophy, J. E. (2002).*Looking in classrooms* (9th ed.). Boston: Allyn & Bacon.; Marzano, R. J., Marzano, R. J., & Pickering, D. J. (2003). *Classroom management that works: Research-based strategies for every teacher.* Alexandria, VA: Association for Supervision and Curriculum Development.

[10]Corbett, D., Wilson, B., & Williams, B. (2002).*Effort and excellence in urban classrooms: Expecting and getting success with all students.* New York: Teacher College Press.; Johnson, B. L. (1997). An organizational analysis of multiple perspectives of effective teaching: Implications for teacher evaluation. *Journal of Personnel Evaluation in Education, 11,* 69-87.; Wang, M. C., Haertel, G. D., & Walberg, H. J. (1994). What helps students learn? *Educational Leadership, 51*(4), 74-79.

[11] Schoen, L. T. (2008). pp. 38-39

[12]Emmer, E. T., & Stough, L. M. (2001); Wang, M. C., et al. (1994).

[13]Kuh, G. (2003). What we're learning about student engagement from NSSE. *Change, 35*(2), 24-32.

[14] Good, T., & Brophy, J. E. (2002).

[15]Wentzel, K. R. (2002). Are effective teachers like good parents? Teaching styles and student adjustment in early adolescence. *Child Development, 73*(1), 287-301.

[16]Rubie-Davies, C. M. (2006). Teacher expectations and student self-perceptions: Exploring relationships. *Psychology in the School, 43*(5), 537-552.

[17]Fuchs, L. S., Fuchs, D., & Phillips, N. (1994). The relation between teachers' beliefs about the importance of good work habits, teacher planning, and student achievement. *The Elementary School Journal, 94*(3), 331-345.

[18]Hauser-Cram, P., Sirin, S. R., & Stipek, D. (2003).When teachers' and parents' values differ: Teachers' ratings of academic competence in children from low-income families.*Journal of Educational Psychology, 95,* 813-820.

[19]Tyler, C. (2006). *The academic engagement of low-income, African-American, middle-school students as it relates to reported classroom practices.*Unpublished doctoral dissertation, Howard University, Washington, DC.

[20]Borman, G., Strongfield, S., & Rachuba, L. (2000). *Advancing minority high achievement: National trends and promising programs and practices.* The College Examination Entrance Board.; Ferguson, R. F. (1998). Teachers' perceptions and expectations and the Black-White test score gap. In C. Jencks and M. Phillips (Eds.), *The Black-White test score gap.* Washington, DC: The Brookings Institution Press.

[21]Borman, G., et al. (2000).

[22]McKnown, C. & Weinstein, R.S. (2008).Teacher expectations, classroom context,and the achievement gap.*Journal of School Psychology, 46,* 235-261.

[23]Ferguson, R. F. (1998).

[24]Warren, S. R. (2002). Stories from the classrooms: How expectations and efficacy of diverse teachers affect the academic performance of children in poor urban schools. *Educational Horizons, 80*(3), 109-116.

[25]Cotton, K. (2001). *Expectations and student outcomes.* Northwest Regional Educational Laboratory, School Improvement Research Series. Retrieved November 1, 2009, fromhttp://www.nwrel.org/scpd/sirs/4/cu7.html.

[26]Babad, E., Bernieri, F., & Rsosenthal, R. (1991).Students as judges of teachers' verbal and nonverbal behavior.*American Educational Research Journal, 28,*211-234.; Gottfredson, D.C., Marciniak, E.M., Birdseye, A. T., & Gottfredson, G. D. (1995).Increasing teacher expectations for student achievement.*Journal of Educational Research, 88*(3), 155-163..

[27]McKnown, C., & Weinstein, R.S. (2008).

[28]Cotton, K. (2001).

[29]Hauser-Cram, P., et al. (2003).

[1]*The role of teacher professionalism in education*. (n.d.). Retrieved June 1, 2009, from http://students.ed.uiuc.edu/vallicel/Teacher_Professionalism.html.

[2]Fullan, M. G. (1993). Why teachers must become change agents. *Educational Leadership, 50*(6), 12-17.

[3]Adapted from Fullan, M. G. (1993).

[4]Carr, D. (2009). *Professionalism and ethics in teaching.*New York: Routledge.

[5]Vartuli, S. (2005).Beliefs: The heart of teaching. *Young Children, 60,* 76-86.

[6] Carr, D. (2009).

[7] Cassidy, W. & Bates, A. (2005). "Drop-outs" and "push-outs": Finding hope at a school that actualizes the ethic of care. *American Journal of Education, 112,* 66-101.; Chaskin, R. J., & Rauner, D. M. (1995). Youth and caring: An introduction. *Phi Delta Kappan, 76*(9), 667-674.; Noddings, N. (1992).*The challenge to care in schools.*New York: Teachers College Press.

[8] Noblit, G. W., Rogers, D. L., & McCadden, B. M. (1995). In the meantime: The possibilities of caring. *Phi Delta Kappan, 76*(9), 680-685.

[9] Peart, N. A., & Campbell, F. A. (1999).At-risk students' perceptions of teacher effectiveness. *Journal for a Just and Caring Education, 5*(3), 269-284.

[10] Walls, R. T., Nardi, A. H., von Minden, A. M., & Hoffman, N. (2002).The characteristics of effective and ineffective teachers.*Teacher education quarterly*, *29*(1), 39-48.

[11] Lumpkin, A. (2007). Caring teachers: The key to student learning. *Kappa Delta Pi Record, 43*(4), 158-160.

[12] Cassidy, W. & Bates, A. (2005).

[13] Carter, P. J. (2003). *A review of highly effective teachers in Hamilton County: Analysis of current trends and implications for improvement.* Chattanooga, TN: Public Education Foundation. Retrieved November 7, 2008, from http://pef. ddngroupb.com/.

[14] Collinson, V., Killeavy, M., & Stephenson, H. J. (1999). Exemplary teachers: Practicing an ethic of care in England, Ireland, and the United States. *Journal for a Just and Caring Education, 5* (4), 349-366.

[15] Aronson, R. (2001). *At-risk students defy the odds: Overcoming barriers to educational success.* Lanham, MD: Scarecrow Press.; Corbett, D. & Wilson, B. (2004). What urban students say about good teaching.*Educational Leadership, 60*(1), 18-22.; Engel, D. E. (1994). School leavers in American society: Interviews with school dropouts/stopouts. In R. C. Morris (Ed.).*Using what we know about at-riskYouth,* pp. 3-22. Lancaster, PA: Technomic Publishing.; Ferguson, R. F. (2002*). What doesn't meet the eye: Understanding and addressing racial disparities in high-achieving suburban schools.* Cambridge, MA: Harvard University Press.

[16] Lumpkin, A. (2007); Walls, R. T. et al. (2002).

[17] Goddard, R. G., Hoy, W. K., & Hoy, A. W. (2004). Collective efficacy: Theoretical development, empirical evidence, and future directions. *Educational Researcher, 33*(3), 3-13.; Hoy, W., Tarter, J., & Hoy. A. W. (2006). Academic optimism of schools: A force for student achievement. *American Educational Research Journal, 43*(3), 425-446.

[18] Kunter, M., Tsai Y., Klusmann, U., Brunner, M., Krauss, S., & Baumert, J. (2008). Students' and mathematics teachers' perceptions of teacher enthusiasm and instruction.*Learning and Instruction, 18,* 468-482.; Patrick, H., Ryan, A. M., & Kaplan, A. (2007).Early adolescents' perceptions of the classroom social environment, motivational beliefs, and engagement.*Journal of Educational Psychology, 99*(1), 83-98.

[19] Stronge, J. H., Ward, T. J., Tucker, P. D., & Hindman, J. L. (2008). What is the relationship between teacher quality and student achievement? An exploratory study.*Journal of Personnel Evaluation in Education, 20*(3-4), 165-184.

[20] Noblit, G. W., et al. (1995).

[21] Comedena, M. E., Hunt, S. K., & Simonds, C. J. (2007). The effects of teacher clarity, non-verbal immediacy, and caring on student motivation, affective and cognitive learning.*Communication Research Reports, 24*(3), 241-248.; Wentzel, K. R. (1997). Student motivation in middle school: The role of perceived pedagogical caring. *Journal of Educational Psychology, 89*(3), 411-419.

[22] Lumpkin, A. (2007). p.160

[23] Kunter, M., et al., 2008, p.470.

[24] Long, J. F., & Hoy, A. W. (2006).

[25] Patrick, B. C., et al. (2000).

[26] Kunter et al., (2008).

[27] Bettencourt, E. M., Gillett, M. H., Gall, M. D., & Hull, R. E (1983).Effects of teacher enthusiasm training on student on-task behavior and achievement.*American Educational Research Journal, 20*(3), 435-450.; Mastin, V. (1963).Teacher enthusiasm.*Journal of Educational Research, 56,* 385-386.

[28] Hoy, W., et al. (2006).

[29] Bandura, A. (1997*). Self-efficacy: The exercise of control.* New York: W. H. Freeman.; Schwarzer, R., &Hallum, S. (2008). Perceived teacher self-efficacy as a predictor of job stress and burnout: Mediation analyses. *Applied Psychology: An International Review, 57,* 152-171.; Tschannen-Moran, M., & McMaster, P. (2009). Sources of self-efficacy: Four professional development formats and their relationship to self-efficacy and implementation of new teaching strategy. *The Elementary School Journal, 110*(2), 228-245.

[30] Goddard, R. G. et al. (2004); Shahid, J., & Thompson, D. (2001); Tschannen-Moran, M., & McMaster, P. (2009).

[31] Fullan, M. G. (1993). Why teachers must become change agents. *Educational Leadership, 50*(6), 12-17.

[32]Yoon, K. S., Duncan, T., Lee, S. W., Scarloss, B., & Shapley, K. L. (2007, December). *Reviewing the evidence on how teacher professional development affects student achievement.* Washington, DC: Regional Educational Laboratory Southwest.

[33]Cercone, K. (2008). Characteristics of adult learners with implications for online learning design. *AACE Journal, 16* (2), 137-159.

[34]Hammerness, K., Darling-Hammond, L., Bransford, J., Berliner, D., Cochran-Smith, M., McDonald, M., et al. (2005). How teachers learn and develop. In L. Darling-Hammond & J. Bransford (Ed.), *Preparing teachers for a changing world: What teachers should learn and be able to do*, pp. 358-389.San Francisco: Jossey-Bass.p.385

[35] Adapted from Hammerness., et al. (2005).

[36]Stronge, J. H. (2007). *Qualities of effective teachers (2nd Ed.).*Alexandria, VA: ASCD.

[37]*Valli, L. (1997). Listening to other voices: A description of teacher reflection in the United States.Peabody Journal of Education, 72(1), 67-88.*

[38]Jay, J. K. (2002). Points on a continuum: An expert/novice study of pedagogical reason. *The Professional Educator, 24*(2), 63-74.; Spalding, E. & Wilson, A. (2002).Demystifying reflection: A study of pedagogical strategies that encourage reflective journal writing.*Teachers College Record, 104,* 1393-1421. Retrieved March 7, 2009 from the Single Journals database; Stronge, J. H. (2007).

[39]Little, J. W. (1993).Teachers' professional development in a climate of educational reform. *Educational Evaluation and Policy Analysis, 15*(2), 129-151.

[40]Stronge, J. H. (2007).

[41]Danielson, C. (2001). New trends in teacher evaluation.*Educational Leadership, 5*(5), 12-15.; Guskey, T. R. (2002). Does it make a difference? Evaluating professional development.*Educational Leadership, 59*(6), 45-51.

[42]*ISTE research reports: Overview: Research on IT [informational technology] in education*. (n.d.). Retrieved on September 22, 2002, from http://www.iste.org /research/reports /tlcu/overview.html.

[43]Camphire, G. (2001). Are our teachers good enough? *SEDLetter, 13*(2). Retrieved November 12, 2001, from http://www.sedl.org/pubs/sedletter/v13n2/1.htm.;School Board News. (1997). Teacher quality is key to student achievement (electronic version). *American School Board Journal.*Retrieved November 21, 2000, from http://www.asbj.com/achievement/ci/ci3.htm.

[44]Collinson, V., Killeavy, M., & Stephenson, H. J. (1999). Exemplary teachers: Practicing an ethic of care in England, Ireland, and the United States. *Journal for a Just and Caring Education, 5* (4), 349-366.

---

[1]Fullan, M. G. (1993). Why teachers must become change agents. *Educational Leadership, 50*(6), 12-17.

[2]Rowan, B., Chiang, F., & Miller, R. J. (1997).Using research on employees' performance to study the effects of teachers on students' achievement.*Sociology of Education, 70*, 256-284.; Strauss, R. P., & Sawyer, E. A. (1986).Some new evidence on teacher and student competencies.*Economics of Education Review, 5*, 41-48.

[3]Cornett-DeVito, M., & Worley, D. W. (2005). A front row seat: A phenomenological investigation of students with learning disabilities. *Communication Education, 54*, 312-333.

[4]Worley, D., Tistworth, S., Worley, D. W., & Cornett-DeVito, M. (2007). Instructional communication competence: Lessons learned from award-winning teachers. *Communication Studies, 58*(2), 207-222.

[5]Sachs, J. (2001). Teacher professional identity: competing discourse, competing outcomes. *Journal of Education Policy, 16*(2), 149-161.

[6]Fullan, M. G. (1993).

[7]Catt, S., Miller, D., & Schallenkamp, K. (2007).Your are the key: Communicate for learning effectiveness. *Education, 127*(3), 369-377.

[8] Sachs, J. (2001).

[9]Fullan, M. G. (1993).

[10]Peters, S., & Reid, D. K. (2009). Resistance and discursive practice: Promoting advocacy in teacher undergraduate and graduate programmes. *Teaching and Teacher Education, 25*(4), 551-558.

[11]National Association of Secondary School Principals (NASSP). (1997). Students say: What makes a good teacher? *Schools in the Middle, 6* (5), 15-17.; Peart, N. A., & Campbell, F. A. (1999).At-risk students' perceptions of teacher effectiveness. *Journal for a Just and Caring Education, 5*(3), 269-284.

[12]Covino, E. A., & Iwanicki, E. (1996).Experienced teachers: Their constructs on effective teaching.*Journal of Personnel Evaluation in Education, 11*, 325-363.; Emmer, E. T., Evertson, C. M., & Anderson, L. M. (1980).Effective classroom management at the beginning of the year.*The Elementary School Journal, 80*(5), 219-231.

[13]Rockwell, R. E., Andre, L. C., & Hawley, M. K. (1996).*Parents and teachers as partners: Issues and challenges.* Fort Worth: Harcourt Brace College.

[14]Swap, S. A. (1993). *Developing home-school partnerships from concepts to practice.*New York: Teachers College Press.

[15]Collinson, V., Killeavy, M., & Stephenson, H. J. (1999). Exemplary teachers: Practicing an ethic of care in England, Ireland, and the United States. *Journal for a Just and Caring Education, 5* (4), 349-366.

[16]Epstein, J. L., & Sheldon, S. B. (2002). Present and accounted for: Improving student attendance though family and community involvement. *The Journal of Educational Research, 95*(5), 308-318.; Fan, X., & Chen, M. (2001). Parental involvement and students' academic achievement: A meta-analysis. *Educational Psychology Review, 13*(1), 1-22.; Hill, N. E., & Tyson, D. F. (2009). Parental involvement in middle school: A meta-analysis assessment of the strategies that promote achievement. *Developmental Psychology, 45*(3), 740-763.; Hong, S., & Ho, H. (2005). Direct and indirect longitudinal effects of parental involvement on student achievement: Second-order latent growth modeling across ethnic groups. *Journal of Educational Psychology, 97*(1), 32-42.; Jeynes, W. H. (2005).A meta-analysis of the relation of parental involvement to urban elementary school student academic achievement.*Urban Education, 40*(3), 237-269.; Jeynes, W. H. (2007). The relationship between parental involvement and urban secondary school student academic achievement: A meta-analysis. *Urban Education, 42*(1), 82-110.; LePage, P., Darling-Hammond, L., Akar, H., Guitierrez, C., Jenkins-Gunn, E., &Rosebrock, K. (2005).Classroom management. In L. Darling-Hammond and J. Bransford (Eds.), *Preparing teachers for a changing world: What teachers should learn and be able to do* (pp. 327-357). San Francisco, CA: Jossey-Bass.; Sheldon, S. B., & Spstein, J. L. (2002). Improving student behavior and school discipline with family and community involvement. Education and Urban Society, 35(1), 4-26.; Sui-Chu, E. H., & Willms, J. D. (1996).Effects of parental involvement on eighth-grade achievement.*Sociology of Education, 69*, 126-141.

[17]Epstein, J. L. (1995). School/family/community partnerships: Caring for the children we share. *Phi Delta Kappan, 76*, 701-712.

[18]Anderson, K. J., & Minke, K. M. (2007). Parent involvement in education: Toward an understanding of parents' decision making. *Journal of Educational Research, 100*(5), 311-323.

[19]Epstein, J. L. (1995); Epstein, J. L. (2001).

[20]LePage, P., et al. (2005).

[354] Stronge, J. H. (2006). Teacher evaluation and school improvement: Improving the educational landscape. In J. H. Stronge. (Ed.). *Evaluating teaching: A guide to current thinking and best practice* (2nd ed.) (pp.1-23). Thousand Oaks, CA: Corwin.

[355] Peterson, K. D., Stevens, D., & Ponzio, A. (1998). Variable data sources in teacher evaluations. *Journal of Research and Development in Education, 31*(3), 123-132. p. 124.

[356] Dyers, K. M. (2001). The power of 360° degree feedback. *Educational Leadership, 58*(5), 35-39; Peterson, K. D. (2000). Teacher evaluation: A comprehensive guide to new directions and practices (7th ed.). Thousand Oaks, CA: Corwin; Peterson, K. D. (2006). Using multiple data sources in teacher evaluation systems. In J. H. Stronge. (Ed.). *Evaluating teaching: A guide to current thinking and best practice* (2nd ed.) (pp. 212-232). Thousand Oaks, CA: Corwin; Peterson, K. D., Stevens, D., & Ponzio, A. (1998). Variable data sources in teacher evaluations. *Journal of Research and Development in Education, 31*(3), 123-132; Stronge, J. H., & Tucker, P. D. (2003). *Handbook on teacher evaluation: Assessing and improving performance.* Larchmont, NY: Eye on Education.

[357] Zepeda, S. J. (2006). Classroom-based assessment of teaching and learning. In J. H. Stronge. (Ed.). *Evaluating teaching: A guide to current thinking and best practice* (2nd ed.) (pp. 101-124). Thousand Oaks, CA: Corwin.

[1]Stronge, J. H. (2010). *Evaluating what good teachers do: Eight research-based standards for assessing teacher excellence.* Larchmont, NY: Eye on Education.

[i]Stronge, J. H., & Tucker, P. D. (2003).*Handbook on teacher evaluation: Assessing and improving performance.* Larchmont, NY: Eye on Education.

[1]Tucker, P. D., Stronge, J. H., &Gareis, C. R. (2002).*Handbook on teacher portfolios for evaluation and professional development.* Larchmont, NY: Eye on Education. p. 3; Wolf, K. (2006). Portfolios in teacher evaluation.In J. H. Stronge. (Ed.). *Evaluating teaching: A guide to current thinking and best practice* (2[nd]ed.) (pp.168-185). Thousand Oaks, CA: Corwin.

[2]Tucker, P. D., Stronge, J. H., &Gareis, C. R. (2002).

[3]Airason, P. W. &Gullickson, A. (1997).*Teacher self-evaluation tool kit.* Thousand Oaks, CA: Corwin.

[1] Airason, P. W. & Gullickson, A. (2006). Teacher self-evaluation. In J. H. Stronge. (Ed.). *Evaluating teaching: A guide to current thinking and best practice* (2nd ed.) (pp. 187-211). Thousand Oaks, CA: Corwin.

[2] Tucker, P. D., Stronge, J. H., & Gareis, C. R. (2002). *Handbook on teacher portfolios for evaluation and professional development.* Larchmont, NY: Eye on Education.

[3] Kremer-Hayon, L. (1993). *Teacher self-evaluation: Teachers in their own mirror.* Morwell, MA: Kluwer Academic Publishers.

[4] Gullickson, A., Airasian, P., & Assaff, E. (1994). Self-assessment "tool kit" designed to help teachers analyze practice. *CREATE, 4*(3), pp, 1, 6.

[5] Airasian, P. W. & Gullickson, A. (2006).

[6] Airasian, P. W. & Gullickson, A. (2006).

[7] Airasian, P. W. & Gullickson, A. (1997). *Teacher self-evaluation tool kit.* Thousand Oaks, CA: Corwin.

[2] Cited in Peterson, K. D., Wahlquist, C., & Bone, K. (2000). Student surveys for school teacher evaluation. *Journal of Personnel Evaluation in Education, 14*(2), 135-153. (1992). [2] Follman, J. Secondary school students' ratings of teacher effectiveness. *High School Journal, 75*, 168-178; Stronge, J. H., & Ostrander, L. P. (2006). Client surveys in teacher education. In J. H. Stronge. (Ed.). *Evaluating teaching: A guide to current thinking and best practice* (2nd ed.) (pp.125-151). Thousand Oaks, CA: Corwin.

[3] Follman, J. (1992).

[4] Stronge, J. H. & Ostrander, L. P. (2006).

[5] Driscoll, A., Peterson, K., Browning, M., & Stevens, D. (1990). Teacher evaluation in early childhood education: What information can young children provide? *Child Study Journal, 20*, 67-69; Ebmeier, H., Jenkins, R., & Crawdford, G. (1991). The predictive validity of student evaluations in the identification of meritorious teachers. *Journal of Personnel Evaluation in Education, 4*, 341-347; Wilkerson, D. J., Manatt, R. P., Rogers, M. A., & Maughan, R. (2000). Validation of student, principal, and self-ratings in 360 degree feedback for teacher evaluation. *Journal of Personnel Evaluation in Education, 14*(2), 179-192.

[6] Stronge, J. H. (2006). Teacher evaluation and school improvement: Improving the educational landscape. In J. H. Stronge. (Ed.). *Evaluating teaching: A guide to current thinking and best practice* (2nd ed.) (pp.1-23). Thousand Oaks, CA: Corwin.

[1] Safer, N. & Fleischman, S. (2005). How student progress monitoring improves instruction. *Educational Leadership, 62*(5), 81-83.

[2] Langer, G.M. & Colton, A.B. (2005). Looking at student work. *Educational Leadership, 62*(5), 22-26.

[3] Good, T. L., & Brophy, J. E. (2008). *Looking in classroom* (10th ed.). Boston: Allyn & Bacon; Martinez, P. (2001). *Great expectations: Setting targets for students.* London: Learning and Skills Development Agency.

[4] Bloom, B. S. (1984). The 2 Sigma problem: The search for methods of group instruction as effective as one-to-one tutoring. *Educational Researcher, 13*(6), 4-16; Fuchs, L. S., & Fuchs, D. (2003). *What is scientifically-based research on progress monitoring?* Washington, DC: National Center on Student Progress Monitoring.

[5] Stronge, J. H., & Grant, L. W. (2009). *Student achievement goal setting: Using data to improve teaching and learning.* Larchmont, NY: Eye on Education.

[1] Davis, D. R., Ellett, C. D., & Annunziata, J. (2002). Teacher evaluation, leadership and learning organizations. *Journal of Personnel Evaluation in Education, 16*(4), 287-301. p. 288.

[2] Davis, D. R., et al. (2002). p. 288

[3] Gordon, S. P. (2006). Teacher evaluation and professional development. In J. H. Stronge. (Ed.). *Evaluating teaching: A guide to current thinking and best practice* (2nd ed.) (pp. 268-290). Thousand Oaks, CA: Corwin.

[4] Gordon, S. P. (2002). *Professional development for school improvement: Empowering learning communities.* Boston: Allyn & Bacon; Gordon, S. P. (2006).

[5] Gordon, S. P. (2006).

[6] DiPaola, M. F., & Hoy, W. K. (2008). *Principals improving instruction: Supervision, evaluation, and professional development.* Boston: Pearson Education, Inc.

[7] DiPaola, M. F. & Hoy, W. K. (2008).

[8] Gordon, S. P. (2006).

[1] MassPartners.(2000). *Unabridged study of systems for evaluating Massachusetts teachers.* Marlborough, MA: Massachusetts Partners for Public Schools.

[2] DiPaola, M. F., & Hoy, W. K. (2008).*Principals improving instruction: Supervision, evaluation, and professional development.* Boston: Pearson Education, Inc.

[3] Cited in Helm, V. M., & Maurice, H. S. (2006).Conducting a successful evaluation conference.In J. H. Stronge. (Ed.). *Evaluating teaching: A guide to current thinking and best practice* (2nded.) (pp. 235-252). Thousand Oaks, CA: Corwin.

[4] DiPaola, M. F. & Hoy, W. K. (2008).

[5] Adapted from Helm, V. M. & Maurice, H. S. (2006). pp. 240-241

[6] Helm, V. M. & Maurice, H. S. (2006). pp. 244-245

[394] Cochran, K., DeRuiter, L., & King, R. (1993); Hill, H. C., Rowan, B., & Ball, D. L. (2005); Rowan, B., Chiang, F. S., & Miller, R. J. (1997); Shulman, L. S. (1987).

[395] Weiss, I. R., & Miller, B. (2006, October); Wenglisky, H. (2000).

[396] Harris, D. N., & Sass, T. R. (2007); Hill, H. C., Rowan, B., & Ball, D. L. (2005); Rowan, B., Chiang, F., & Miller, R. J. (1997); Moats, L. C., & Foorman, B. R. (2003).

[397] Childs, A., & McNicholl, J. (2007).

[398] Case, R. (1991).

[399] Czerniak, C. M., Weber, W. B., Sandmann, A., & Ahern, J. (1999).

[400] Hill, H. C., Rowan, B., & Ball, D. L. (2005).

[401] Schulman, L. S. (1987).

[402] Cochran, K., DeRuiter, L., & King, R. (1993).

[403] Educational Review Office. (1998).

[404] Educational Testing Service. (n.d.).

[405] Langer, J. (2001).

[406] Peart, N. A., & Campbell, F. A. (1999).

[407] Covino, E. A., & Iwanicki, E. (1996).

[408] McAllister, G., & Irvine, J. J. (2000).

[409] Cruickshank, D. R., & Haefele, D. (2001).

[410] Weinsten, C., Curran, M., & Tomlinson-Clarke, S. (2003).

[411] Merriam-Webster, Inc. (2006). p. 1387.

[412] Buttram, J. L., & Waters, J. T. (1997).

[413] Borko, H., & Livingston, C. (1989).

[414] Leinhardt, G. (1993).

[415] Berliner, D. C. (2004).

[416] Au, W. (2007).

[417] David, J. L. (2008). p. 88

[418] Anderson, L. M., Evertson, C. M., & Brophy, J. E. (1979).

[419] Perrin, B., Banks, F., & Dargue, B. (2004).

[420] Hammerness, K., Darling-Hammond, L., Bransford, J., Berliner, D., Cochran-Smith, M., et al. (2005)

[421] Hammerness, K., et al. (2005)

[422] Parker, D. (1994).

[423] Parker, D. (1994).

[424] Hill. (1994), pp. 38-39, cited in Sharma, M. B. & Elbow, G. S. (2000).

[425] Harap, H. (1955).

[426] Stripling, B. K. (1999). p. 6

[427] Misulis, K. (1997). p. 45

[428] Jay, K. (2002); Good, T. L., & Brophy, J. E. (2002); Livingston, C., & Borko, H., (1989); Sabers, D. S., Cushing, K. S., & Berliner, D. C. (1991).

[429] Haynie, G. (2006).

[430] Allington, R. L., & Johnston, P. H. (2000).

[431] Borko, H., & Livingston, C. (1989).

[432] McEwan, E. K. (2002).

[433] Haynie, G. (2006, April).

[434] McEwan, E. K. (2002).

[435] Haynie, G. (2006).

[436] Marzano, R. J., Pickering, D. & McTighe, J. (1993).

[437] Panasuk, R., Stone, W., & Todd, J. (2002).

[438] Buttram, J. L., & Waters, J. T. (1997).

[439] Allington, R. L., & Johnston, P. H. (2000).

[440] Fuchs, L. S., Fuchs, D., & Phillips, N. (1994).

[441] Leigh, A. (2010); Nye, B., Konstantopoulos, S., & Hedges, L. V. (2004); Rivkin, S. G., Hanushek, E. A., & Kain, J. F. (2005).; Rowan, B., Correnti, R., & Miller, R. J. (2002); Stronge, J. H., Ward, T. J., Tucker, P. S., & Grant, L. W. (2011); Stronge, J. H., Ward, T. J., Tucker, P. D., & Hindman, J. L. (2008).

[442] Harris, D. N., & Sass, T. R. (2007).

[443] Rowan, B., Correnti, R., & Miller, R. J. (2002).; Palardy, G. J., & Rumberger, R. W. (2008).

[444] Hanushek, E. A., Kain, J. F., & Rivkin, S. G. (1998, August).; Rivkin, S. G., Hanushek, E. A., & Kain, J. F. (2005).

[445] Munoz, M. A., & Chang, F. C. (2007).; Rockoff, J. E. (2004).

[446] Bembry, K. L., Jordan, H. R., Gomez, E., Anderson, M. C., & Mendro, R. L. (1998, April).; Hattie, J. (2003).; Stronge, J. H., Ward, T. J., Tucker, P. D., & Hindman, J. L. (2008).

[447] Cohen, D. K., Raudenbush, S. W., & Ball, D. L. (2003).

[448] Tomlinson, C. A. (1999).

[449] Dolezal, S. E., Welsh, L. M., Pressley, M., & Vincent, M. M. (2003).

[450] Wenglinsky, H. (2002).

[451] Cotton, K. (2000).

[452] Berlliner, D. C. (1986); (2004).

[453] Cawelti, G. (Ed.). (2004).; Walsh, J. A., & Sattes, B. D. (2005).

[454] Schroeder, C. M., Scott, T. P., Tolson, H., Huang, T., & Lee, Y. (2007).; Wenglinsky, H. (2004).

[455] Carlson, Lee, & Schroll, 2004

[456] Walberg, 1984

[457] Walberg, 1984

[458] Schroeder, C. M., Scott, T. P., Tolson, H., Huang, T., & Lee, Y. (2007); Wenglinsky, H. (2004).

[459] Stronge, J. H. (2007).

[460] Guo, S., Tsai, C., Chang, F. M., & Huang, H. (2007).

[461] Walsh, J. A., & Sattes, B. D. (2005).

[462] Craig, J., & Cairo, L. (2005).

[463] Stronge et al. (2008).

[464] Wang, X. (2000).

[465] Stronge, J. H. (2007).

[466] Bradford, D. (1999); Lewis, A. (2001).

[467] Wenglinsky, H. (2004).

[468] Marzano, R. J., Marzano, J. S., & Pickering, D. J. (2003).

[469] Hattie, J. (2003).

[470] Goldhaber, D. (2002).

[471] See, for example, Allington, R. L. (2002); Darling-Hammond, L. (2000); Rowan, B. Coreenti, R., & Miller, R. J. (2002); Schacter, J., & Thum, Y. M. (2004); Stronge, J. H. (2007); Stronge, J. H., Ward, T. J., Tucker, P. D., & Hindman, J. L. (2008).

[472] Hattie, J. (2003). (2009).

[473] Adapted from Hattie, J. (2003).(2009).

[474] Langer, J. A. (2001).

[475] Day, S. L. (2002).

[476] Taylor, et al. (1999).

[477] Pogrow, S. (2005).

[478] Taylor, B. M., Pearson, P. D., Peterson, D. S., & Rodriquez, M. C. (2003).

[479] Singham, M. (2001).

[480] Pressley, et al. (2004); Taylor, et al. (2003).

[481] Tursman, C. (1981).

[482] Darling-Hammond, L. (2001); Educational Review Office. (1998).

[483] Johnson, B. L. (1997).

[484] Shellard, E. & Protheroe, N. (2000).

[485] Covino, E. A., & Iwanicki, E. (1996).

[486] Shellard, E., & Protheroe, N. (2000).

[487] Cawelti, G. (1999); Cotton, K. (2000); Covino E. A., & Iwanicki, E. (1996); Good, T. L., &

Brophy, J. E. (2002); Tobin, K. (1980); Wang, M. C., Haertel, G. D., Walberg, H. J. (1993).

[488] McDonald, F. J., & Elias, P. (1976).

[489] Stronge, J. H. (2007).

[490] Schalock, H. D., Schalock, M. D., Cowart, B., & Myton, D. (1993).

[491] Weiss cited in Hoff, D. J. (2003).

[492] Carolan, J., & Guinn, A. (2007). p. 44.

[493] Tomlinson, C. A. (2003).

[494] Cawelti, G. (Ed.). (2004).; Tomlinson, C. A. (1999).

[495] Brighton, C. M., Hertberg, H. L, Moon, T. R., Tomlinson, C. A., & Callahan, C. M. (2005).

[496] Covino, E. A., & Iwanick, E. (1996).

[497] Kulik, J. A., & Kulik, C. L. C. (1992).

[498] Stronge, J. H. (2007).

[499] Dunn, R., Griggs, S., Olsen, J., Beasley, M. & Gorman, B. (1995).

[500] Dunn, R., Griggs, S., Olsen, J., Beasley, M. & Gorman, B. (1995).

[501] Dunn et al. (2009).

[502] Dolezal, S. E., Welsh, L. M., Pressley, M., & Vincent, M. M. (2003).

[503] Tomlinson, C. A. (2001).

[504] Tieso, C. L. (2004); (2005).

[505] Beck, C. (2001).

[506] Adapted from Borich, G. D. (2011) and Beecher, M., & Sweeny, S. M. (2008).

[507] Latz, A. O., Neumeister, K. L. S., Adams, C. M., & Pierce, R. L. (2009). p. 27.

[508] Carolan, J., & Guinn, A. (2007).

[509] Stiggins, R. J. (1999).

[510] Gronlund, N. E. (2006).

[511] Tomlinson, C. A. (1999).

[512] Gronlund, N. E. (2006).

[513] Black, P. J., & Wiliam, D. (1998).

[514] Black, P. J., & Wiliam, D. (1998).

[515] Wenglinsky, H. (2002).

[516] Stronge, J., Ward, T. J., Tucker, P. D., & Hindman, J. L. (2008).

[517] Cotton, k. (2000).

[518] Marzano, et al. (2001).

[519] Stronge, J. H. (2007).

[520] Eisner, E. W. (1999).

[521] Gronlund, N. E. (2006).

[522] Stronge, J. H. (2007).

[523] Black, P. J., & Wiliam, D. (1998); Stiggins, R., & DuFour, R. (2009).

[524] Guskey, T. R. (2007).

[525] Tomlinson, C. A. (2007).

[526] Borko, H., & Elliott, R. (1999); Shepard, L. A., & Dougherty, K. C. (1991); Thayer, Y. (2000); Vogler, K. E. (2002).

[527] Hamilton, L., & Stecher, B. (2004); Jones, B. D., & Egley, R. J. (2004); Jones, G., Jones, B. D., Hardin, B., Chapman, L., Yardrough, T, & Davis, M. (1999); Stecher, B. M., & Mitchell, K. J. (1995).

[528] Kerr, K. A, Marsh, J. A., Ikemoto, G. S., Darilek, H., & Barney, H. (2006).

[529] Safer, N., & Fleischman, S. (2005).

[530] Cauley, K. M., & McMillan, J. H. (2009); Popham, W. J. (2008).

[531] Natriello, G. (1987).

[532] Crooks, T. J. (1988).

[533] Black, P. J. & Wiliam, D. (1998).

[534] Kerr, K. A, Marsh, J. A., Ikemoto, G. S., Darilek, H., & Barney, H. (2006).

[535] Fuchs, L. S., Deno, S. L., & Mirkin, P. K. (1984).

[536] Tomlinson, C. A. (1999).

[537] Fuchs, L. S. & Fuchs, D. (2003).

[538] Stecker, P. M., Fuchs, L. S., & Fuchs, D. (2005).

[539] LePage et al. (2005).

[540] Stronge, J. H. (2007).

[541] Cauley, K. M., & McMillan, J. H. (2009).

[542] Chappius, S. & Stiggins, R. J. (2002).

[543] Zacharias, N.T. (2007).

[544] Hattie, J. (2003).

[545] Wenglinsky, H. (2002).

[546] Walker,M. H. (1998).

[547] Danielson, C. (2002).

[548] Tomlinson, C. A. (1999); Chappius, S., & Stiggins, R. J. (2002).

[549] Fuchs, L. S. & Fuchs, D. (2003).

[550] Fuchs, L. S. & Fuchs, D. (2003).

[551] Fraser, B. J., & Fisher, D. L. (1982); Ludtke, O., Robitzsch, A., Trautwein, U., & Kunter, M. (2009).

[552] Hamre, B. K., & Pianta, R. C. (2005); Hattie, J. (2009); Pressley, M., Rapael, L., Gallagher, J. D., & DiBella, J. (2004).

[553] Camron, C. E., Connor, C. M., Morrison, F. J., & Jewkes, A. M. (2008); Zahorik, J., Halbach, A., Ehrle, K., & Molnar, A. (2003).

[554] Stronge, J. H. (2007).

[555] Emmer, E. T., Evertson, C. M., & Worsham, M. E. (2003).

[556] Marzano, R. J., Marzano, R. J., & Pickering, D. J. (2003).

[557] Wang, M. C., Haertel, G. D., & Walberg, H. J. (1994).

[558] Good, T. L., & Brophy, J. E. (2002).; Cruickshank, D. R., & Haefele, D. (2001).

[559] Corbett, D., Wilson, B., & Williams, B. (2002).; Johnson, B. L. (1997).

[560] Carter, P. J. (2003).; Walls, R. T., Nardi, A. H., von Minden, A. M., & Hoffman, N. (2002).

[561] Education USA Special Report. (n.d.).

[562] Johnson, B. L. (1997).

[563] Haberman, M. (1995).

[564] Cruickshank, D. R., & Haefele, D. (2001).

[565] Shellard, E., & Protheroe, N. (2000).

[566] Cameron, C. E., Connor, C. M., Morrison, F. J., Jewkes, A. M. (2008); Stronge, J. H. (2007); Zahorik, J., Halbach, A., Ehrle, K., & Molnar, A. (2003).

[567] Merriam-Webster, Inc. (2006). p. 1828.

[568] Emmer, E. T., & Stough, L. M. (2001).

[569] Emmer, E. T., & Stough, L. M. (2001). p. 105.

[570] Hattie, J. (2003).

[571] Barney, D. (2005); Hamre & Pianta. (2005); Pressley, Raphael, Gallagher, & DiBella. (2004)

[572] Allington, R. L., & Johnston, P. H. (2000).

[573] Emmer, E. T., & Stough, L. M. (2001).

[574] Wang, M. C., Haertel, G. D., & Walberg, H. J. (1994). p. 76.

[575] Cornell, D. G., & Mayer, M. J. (2010). p. 11

[576] Coetzee, M., & Jansen, C. (2007).

[577] Anderson, G. J. (1970). p. 135

[578] Moos, R. H. (1973).

[579] Sinclair, B. B., & Fraser, B. J. (2002).

[580] Cohen, E. G. (1994); Jensen, M., Johnson, D. W., & Johnson, R. T. (2002); LePage, et al. (2005); Slavin, R. E. (1990).

[581] Tschannen-Moran, M. (2000). p. 4

[582] Haertel, G. D., & Walberg, H. J., & Haertel, E. H. (1981).

[583] Byer, J. L. (1999).

[584] Byer, J. L. (2002).

[585] Patrick, H., Ryan, A. M., & Kaplan, A. (2007); Ryan, A. M., & Patrick, H. (2001).

[586] Adapted from Coetzee, M. & Jansen, C. (2007).

[587] Stronge, J. H. (2007).

[588] Hamre, B.K. & Pianta, R.C. (2005).

[589] Hamre, B. K., & Pianta, R. C. (2005).

[590] Barney, D. (2005).

[591] Pressley, M., Rapael, L. Gallagher, J. D., & DiBella, J. (2004).

[592] Cornelius-White, J. (2007).

[593] Allington, R. L., & Johnston, P. H. (2000).

[594] Emmer, E. T. & Stough, L. M. (2001). p. 105

[595] Wang, M. C., Haertel, G. D., & Walberg, H. J. (1994). p. 76

[596] Taylor, B., Pearson, P. D., Clark, K. F., & Walpole, S. (1999).

[597] Emmer, E. T., & Stough, L. M. (2001).

[598] Marzano, R. J., Marzano, J. S., & Pickering, D. J. (2003).

[599] Stronge, J. H. (2007).

[600] Stronge, J. H., Tuckers, P. D., & Ward, T. J. (2003).

[601] Emmer, E. T., Evertson, C. M., &Worsham, M. E. (2003).

[602] Cameron, C. E., Connor, C. M., Morrison, F. J., Jewkes, A. M. (2008).

[603] Kunter, M., Baumert, J., & Koller, O. (2007).

[604] Stronge, J. H., Ward, T. J., Tucker, P. D., & Hindman, J. L. (2008).

[605] Luiselli, J. K., Putnam, R. F., & Sunderland, M. (2002).

[606] Walker, H. M., Ramsey, E., & Gresham, F. M. (2003/2004, winter).

[607] Goldstein, S. (1995).

[608] Evans, I. M., Harvey, S. T., Buckley, L., & Yan, E. (2009).

[609] Evans, I. M., Harvey, S. T., Buckley, L., & Yan, E. (2009).

[610] Schoen, L. T. (2008).

[611] Fraser, B. (1989); Fraser, B. J. & Fisher, D. L. (1982); Goh, S. C., Young, D. J., & Fraser, B. J. (1995); McRobbie, C. J. & Fraser, B. J. (1993).

[612] Miller-Cribbs, C. S., Davis, L., & Johnson, S. (2002).

[613] Barth, J. M., Dunlap, S. T., Dane, H., Lochman, J. E., & Wells, K. C. (2004).

[614] Evans, I. M., Harvey, S. T., Buckley, L., & Yan, E. (2009).

[615] Emmer, E. T., & Stough, L. M. (2001).

[616] Cruickshank, D. R., & Haefele, D. (2001); Good, T. L., & Brophy, J. E. (1997); Marzano, R. J., Marzano, R. J., & Pickering, D. J. (2003).

[617] Corbett, D., Wilson, B., & Williams, B. (2002); Johnson, B. L. (1997); Wang, M. C., Haertel, G. D., & Walberg, H. J. (1994).

[618] Schoen, L. T. (2008). pp. 38-39

[619] Emmer, E. T., & Stough, L. M. (2001); Wang, M. C., Haertel, G. D., & Walberg, H. J. (1994).

[620] Kuh, G. (2003).

[621] Good, T., & Brophy, J. E. (2002).

[622] Wentzel, K. R. (2002).

[623] Rubie-Davies, C. M. (2006).

[624] Fuchs, L. S., Fuchs, D., & Phillips, N. (1994).

[625] Hauser-Cram, P., Sirin, S. R., & Stipek, D. (2003).

[626] Tyler, C. (2006).

[627] Borman, G., Strongfield, S., & Rachuba, L. (2000); Ferguson, R. F. (1998).

[628] Borman, G., Strongfield, S., & Rachuba, L. (2000).

[629] McKnown, C., & Weinstein, R.S. (2008).

[630] Ferguson, R. F. (1998).

[631] Warren, S. R. (2002).

[632] Cotton, K. (2001).

[633] Babad, E., Bernieri, F., & Rsosenthal, R. (1991); Gottfredson, D.C., Marciniak, E.M., Birdseye, A. T., & Gottfredson, G. D. (1995).

[634] McKnown, C., & Weinstein, R.S. (2008).

[635] Cotton, K. (2001).

[636] Hauser-Cram, P., Sirin, S. R., & Stipek, D. (2003).

[637] *The role of teacher professionalism in education*. (n.d.).

[638] Fullan, M. G. (1993).

[639] Adapted from Fullan, M. G. (1993).

[640] Carr, D. (2009).

[641] Vartuli, S. (2005).

[642] Carr, D. (2009).

[643] Cassidy W., & Bates, A. (2005); Chaskin, R. J., & Rauner, D. M. (1995); Nodding, 1992

[644] Noblit, G. W., Rogers, D. L., & McCadden, B. M. (1995).

[645] Peart, N. A., & Campbell, F. A. (1999).

[646] Walls, R. T., Nardi, A. H., von Minden, A. M., & Hoffman, N. (2002).

[647] Lumpkin, A. (2007).

[648] Cassidy & Bates, (2005).

[649] Carter, P. J. (2003).

[650] Collison, Killeavy, & Stephenson, 1998.

[651] Aronson, R. (2001); Corbett, D. & Wilson, B. (2004); Engel, D. E. (1994); Ferguson, R. F. (2002*).*

[652] Lumpkin, A. (2007); Walls, R. T., Nardi, A. H., von Minden, A. M., & Hoffman, N. (2002).

[653] Goddard, R. G., Hoy, W. K., & Hoy, A. W. (2004); Hoy, W., Tarter, J., & Hoy. A. W. (2006).

[654] Kunter, M., et al., (2008); Patrick, B. C., Hisley, J., Kempler, T., & College, G. (2000).

[655] Stronge, J. H., et al. (2008).

[656] Noblit, G. W., Rogers, D. L., & McCadden, B. M. (1995).

[657] Comedena, M.E., Hunt, S.K., & Simonds, C.J. (2007); Wentzel, K. R. (1997).

[658] Lumpkin, A. (2007). p.160

[659] Kunter, M., et al., 2008, p. 470).

[660] Long, J. F., & Hoy, A. W. (2006).

[661] Patrick, B. C., et al. (2000).

[662] Kunter et al., (2008).

[663] Bettencourt, Gillett, Gall, & Hull, (1983); Mastin, (1963).

[664] Hoy, W., Tarter, J., & Hoy. A. W. (2006).

[665] Bandura, A. (1997); Schwarzer, R., & Hallum, S. (2008); Tschannen-Moran, M., & McMaster, P. (2009).

[666] Goddard, R. G., Hoy, W. K., & Hoy, A. W. (2004); Shahid, J., & Thompson, D. (2001); Tschannen-Moran, M., & McMaster, P. (2009).

[667] Fullan, M. G. (1993).

[668] Yoon, K. S., Duncan, T., Lee, S. W., Scarloss, B., & Shapley, K. L. (2007, December).

[669] Cercone, K. (2008).

[670] Hammerness, et al. (2005). p.385

[671] Adapted from Hammerness., et al. (2005).

[672] Stronge, J. H. (2007).

[673] Valli, L. (1997).

[674] Jay, J. K. (2003); Spalding, E. & Wilson, A. (2002); Stronge, J. H. (2007).

[675] Little, J. W. (1993).

[676] Stronge, J. H. (2007).

[677] Danielson, C. (2001); Guskey, T. R. (2002).

[678] *ISTE research reports.* (n.d.).

[679] School Board News. (1997); Camphire, G. (2001).

[680] Collinson, V., Killeavy, M., & Stephenson, H. J. (1999).

[681] Fullan, M. G. (1993).

[682] Rowan, B., Chiang, F. S., & Miller, R. J. (1997); Strauss, R. P., & Sawyer, E. A. (1986).

[683] Cornett-DeVito, M., & Worley, D. W. (2005).

[684] Worley, D., Tistworth, S., Worley, D. W., & Cornett-DeVito, M. (2007).

[685] Sachs, J. (2001).

[686] Fullan, M. G. (1993).

[687] Catt, S., Miller, D., & Schallenkamp, K. (2007).

[688] Sachs, J. (2001).

[689] Fullan, M. G. (1993).

[690] Peters, S., & Reid, D. K. (2009).

[691] National Association of Secondary School Principals (NASSP). (1997); Peart, N. A. & Campbell, F. A. (1999).

[692] Covino, E. A., & Iwanick, E. (1996); Emmer, E. T., Evertson, C. M., & Anderson, L. M. (1980).

[693] Rockwell, R. E., Andre, L. C., & Hawley, M. K. (1996).

[694] Swap, S. A. (1993).

[695] Collinson, V., Killeavy, M., & Stephenson, H. J. (1999).

[696] Epstein, J. L., & Sheldon, S. B. (2002); Fan, X., & Chen, M. (2001); Hill, N. E., & Tyson, D. F. (2009); Hong, S., & Ho, H. (2005); Jeynes, W. H. (2005); Jeynes, W. H. (2007); LePage, P., et al. (2005); Sheldon, S. B., & Epstein, J. L. (2002); Sui-Chu, E. H., & Willms, J. D. (1996).

[697] E).pstein, J. L. (1995).

[698] Anderson, K. J., & Minke, K. M. (2007).

[699] Epstein, J. L. (1995); Epstein, J. L. (2001).

[700] LePage, P., et al. (2005).