

Quality Teachers Commission:

Final Report and Recommendations on the Educator Identifier System and the Teacher-Student Data Link

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Introduction

Specified in Senate Bill 07-140, the Quality Teachers Commission (QTC) was created for two main purposes: (1) to provide recommendations to the Colorado Department of Education (CDE) on building an educator identifier system and (2) to analyze the teacher gap as well as to provide recommendations to the Colorado General Assembly on how best to address it. The teacher gap is defined as *the documented phenomenon that a poor or minority student is more likely to be taught by a less qualified or less experienced teacher than the student's more affluent or white peers*. In other words, the QTC was tasked with helping the state ensure that students most at-risk have access to the “most effective” educators.

The QTC was originally appointed for a two-year period beginning in 2008, as specified in SB 07-140. Appointed by the Governor, it was a 13-member group that represented many stakeholders across the state. The Commission first focused on studying the feasibility of an educator identifier in Colorado. After a year of studying the issues, the Commission members jointly agreed to recommend that the state move forward in implementing an educator identifier system in a report to the General Assembly (July 2009). To study the teacher gap adequately, a data system needed to be built that could match educators and students. At the time, Colorado had a student identifier system, but an educator identifier system had not been created.

In 2009, the Commission worked closely with legislators to draft House Bill 09-1065 to authorize the state in building an educator identifier system. With the passage of HB 09-1065, the QTC was extended for another two years to assist CDE in an advisory capacity as it built the educator identifier system and to further study the teacher gap. Some new appointments to the commission were made, and the newly configured QTC began meeting in January 2010.

C.R.S. 22-68-104. Quality Teachers Commission: Creation, Membership, Duties

- (1) There is hereby created in the department the quality teachers commission. The commission shall have the following purposes:
- (a) To examine the teacher gap in Colorado to determine why it exists, why it is widening, and how it directly affects student achievement;
 - (b) To gather from school districts data concerning policies and practices that have been found to be effective in reducing the teacher gap in each school district and, on the basis of the data, to make specific recommendations for reducing the teacher gap statewide;
 - (c) To study the feasibility of establishing an identifier protocol for teachers and a structure for integrating the identifier into the state's existing and emerging educational databases, in particular the longitudinal growth model being developed as a result of House Bill 07-1048, to improve data quality and increase the knowledge base regarding teaching and its relationship with student learning; and
 - (d) To study the feasibility of establishing an identifier protocol for principals that would be integrated with a teacher identifier protocol and the state's existing and emerging educational databases, in particular the longitudinal growth model being developed as a result of House Bill 07-1048.

This final report summarizes the Quality Teachers Commission’s work during its second term (2010-2012) and provides recommendations to the Colorado General Assembly and the Colorado State Board of Education.

Summary of Recommendations from the QTC

Response to C.R.S. 07-140: (b) MAKING POLICY RECOMMENDATIONS TO THE GENERAL ASSEMBLY FOR REDUCING THE TEACHER GAP IN THE SHORT-TERM AND ELIMINATING THE TEACHER GAP IN THE LONG-TERM

Based upon its examination of the teacher gap, both in Colorado and nationally, the QTC arrived at a number of recommendations for the legislature and Colorado State Board of Education. Furthermore, the Commission has recommendations for state-level activities that might best be addressed by the Colorado Department of Education, Colorado Department of Higher Education, local school districts, educator preparation programs and educators as a whole. Below is a summary of those recommendations. More details on documents developed by the QTC and that drove the formation of these recommendations are included in the appendices.

Policy and Legislative Recommendations (General Assembly and State Board of Education)

- General Assembly: Adjust the definition of *teacher gap* as referenced in CRS 22-68-103(8)
 - Change the name *teacher gap* to *educator gap*.
 - Expand its definition to include “struggling” students and “ineffective or partially effective teachers” as follows:

Educator gap means the documented phenomenon that a poor or minority or struggling student is more likely to be taught by a less-qualified or less-experienced or ineffective or partially effective teacher than the student’s more affluent or white peers.
 - Add the concept of *principal gap*. Include analysis of the principal gap, such as the number of principal turnovers in a school, consecutive turnovers and School Performance Framework (SPF) growth ratings.
- General Assembly: Pass legislative language that clarifies protections for the use of the linked educator-student data.
 - Allow school districts, CDE and the State Board of Education to collect evaluation ratings and link student assessment scores to individual teachers in

order to fulfill their duties as required by law (including reporting that information, in the aggregate, at the state, district or school level).

- o Allow the use of data collected by CDE to be used for research, providing that the data is obtained according to the protocols established by CDE and is used in a manner that protects the identity of individual educators and adheres to FERPA requirements.
 - o Ensure the identity of individual educators or pupils, including individual educator performance data, is confidential and not published or publicly disclosed so as to identify individual educators.
 - o Allow the State Board to promulgate rules on the access to and use of data determined by the educator identifier system.
- Colorado State Board of Education: Formally adopt a three-tiered model for access to linked educator-student data. The main components of the model should include three types of access:
 - o Universal or public data, such as that found through the Colorado Growth Model, on SchoolView.org, in teacher impact reports and TELL survey results which provides data on educators' perceptions of teaching and learning conditions.
 - o Limited or student-/educator-level data, such as that stored in CDE's data collection warehouse called CEDAR, teacher portals and SchoolView (password-required)
 - o Restricted or "for research purposes only," such as that requiring user-login credentials, approval from CDE's Institutional Review Board (IRB).

Recommendations for State-Level Activities (CDE, Local School Districts, Colorado Department of Higher Education)

- CDE and Districts: Make reducing the educator gap a higher priority. To that end, CDE and districts must have up-to-date data and should study potential policies around the purposeful assignment of school level staff. Resources and additional supports should be targeted to ensure that:
 - o Low-income and minority students are taught and served by effective or highly effective teachers and leaders.
 - o Students identified as "below proficient" are taught and served by effective or highly effective teachers and leaders.

- o Students who may be assigned a teacher/leader who has been rated ineffective or partially effective receive the supports they need to stay on track with their learning.
 - o No student is assigned to an ineffective or partially effective teacher two or more years in a row.
- CDE: Continue developing resources (e.g., teacher equity data on SchoolView) that support the field in addressing the educator gap. (The QTC acknowledges that additional funding would be required to carry out these recommendations.)
 - o CDE has made advancements in the way it has helped the field to interact with the educator gap data (e.g., teacher equity data on SchoolView, Human Capital Self-Assessment Tool). However, additional supports are still needed, such as a tool that offers district-to-district comparisons and ways to provide training to schools and districts on how to take advantage of the available data resources.
 - o Develop such resources and additional supports in light of the unique staffing challenges faced by rural and/or small school districts (e.g., limited pool of applicants, significant travel to attend some professional development opportunities).
 - o Share examples of successful practices from the field.
- CDE: Incorporate the effectiveness ratings and educator gap analyses into district monitoring efforts and improvement planning requirements (e.g., data analysis within Unified Improvement Plan). Continue support for statewide administration of the TELL Colorado Survey and encourage use of the data for improvement planning purposes.
- CDE: Incorporate educator gap metrics into evaluations of the efficacy of department initiatives.
- CDE and School Districts: Ensure supports and professional development opportunities are available to ineffective or partially effective teachers and principals. (The Commission recognizes this work is incorporated within the work of CDE's Educator Effectiveness Unit and the implementation of SB 10-191.)
- CDE and School Districts: Enhance induction programs and mentor opportunities to best support new teachers, principals, administrators and special service providers in their roles.
- CDE, School Districts and Researchers: Encourage and support research that deepens the state's understanding of educator effectiveness and the equitable distribution of those educators.

- CDE and the Colorado Department of Higher Education: Develop mechanisms to collect data based on the educator identifier to provide information about the effectiveness of educator preparation programs as required by SB 10-36.
- CDE and the Colorado Department of Higher Education: Continue to measure and hold educator preparation programs accountable for producing highly effective educators, particularly in the state’s high-poverty and/or high-minority schools and districts, and in rural and outlying areas.
- CDE and the Colorado Department of Higher Education: Make effectiveness data (e.g., educator ratings) available to educator preparation programs (including alternative educator preparation programs) after their candidates are employed in Colorado schools. Encourage preparation programs to share best practices with one another.
- The Colorado Department of Higher Education: Continue to work with higher education programs to ensure consistent reporting of data using the same definitions and measures and to develop mechanisms for reporting clean and meaningful data.

History of the Teacher Gap in Colorado

Response to C.R.S. 22-68-104 (1) (a) (from SB 07-140): TO EXAMINE THE TEACHER GAP IN COLORADO TO DETERMINE WHY IT EXISTS, WHY IT IS WIDENING, AND HOW IT DIRECTLY AFFECTS STUDENT ACHIEVEMENT

In 2006, the Alliance for Quality Teaching – a Colorado-based non-profit that focused on quality teacher issues by engaging in research and policy advocacy – launched a landmark study about the state of teaching in Colorado, *Shining the Light: the State of Teaching in Colorado*. Within this study the organization established that a teacher quality gap existed in the state. The study

Summary of Findings from the Alliance for Quality Teaching

Students of color in Colorado have a one in ten greater chance of having an inexperienced teacher than do white students. The existence of this gap is particularly troublesome because these teacher characteristics are fundamental indicators of teacher quality and are positively correlated with student achievement. And, according to *Shining the Light*, this discrepancy by race and poverty has grown larger since 2000, with some gaps more than twice as large. Knowing that the context within which teachers work is also important, the 2006 study identified the great diversity of size, growth, and ethnic enrollment across Colorado districts.

revealed that the greater the proportion of minority students or students eligible for the Free and Reduced Lunch Program (FRL) within a school or district, the lower the experience, education level and salary of the teachers and the greater the attrition rate. The report was the basis for drafting SB 07-140.

Similarly, the Elementary and Secondary Education Act (ESEA) requires that the state and districts “...ensure that poor and minority children are not taught at higher rates than other children by inexperienced,

unqualified, or out-of-field teachers” (Title I, Part A, section 1111(b)(8)(C). Using this definition and expanding it to include student growth considerations, CDE has identified 30 districts that need to focus on the Equitable Distribution of Teachers and expected to leverage grant funds to address the issues. The number of identified districts has remained relatively constant since 2010.

Promising Practices in Addressing the Teacher Gap

Response to C.R.S. 22-68-104 (1) (b) (from SB 07-140): TO GATHER FROM SCHOOL DISTRICTS DATA CONCERNING POLICIES AND PRACTICES THAT HAVE BEEN FOUND TO BE EFFECTIVE IN REDUCING THE TEACHER GAP IN EACH SCHOOL DISTRICT AND, ON THE BASIS OF THE DATA, TO MAKE SPECIFIC RECOMMENDATIONS FOR REDUCING THE TEACHER GAP STATEWIDE

Response to C.R.S. 22-68-104 (5) (a) (from SB 07-140): CONTINUING TO GATHER AND STUDY INFORMATION ON THE TEACHER GAP, INCLUDING SUCCESSES AND SETBACKS IN ADDRESSING AND REDUCING THE TEACHER GAP

Without the educator identifier already in place, analyzing the state’s teacher gap was challenging. Building on its own research, the QTC aligned its work with CDE’s Office of Federal Programs which was charged with doing a similar analysis to meet federal Title I requirements (Equitable Distribution of Teachers). The QTC also partnered with The New Teacher Project (TNTP) to scan promising practices in Colorado and in other states. To date, the research on the teacher gap and measuring educator effectiveness is limited. The current body of research tends to provide more information on what does not work, rather than what does work. A summary of the findings are provided below. A more detailed listing of the findings from the QTC, CDE and The New Teacher Project are included in the appendix.

Purposeful Assignment of Staff

The Commission is interested in expanding policies to ensure students are never assigned an “ineffective” or “partially ineffective” teacher for more than one year. Evidence suggests the impact of a less effective teacher on students’ learning, especially over multiple years, leaves gaps that students often cannot make up – even with a later assignment of a highly effective teacher (Rivers and Sanders, 2007). While direct examples of district or state policy responding to this phenomenon were not found, there are a number of related practices that show promise.

The teacher gap has focused on the assignment of novice teachers. Research suggests novice teachers are not necessarily “ineffective teachers,” but rather, not as effective as they will be with a few years of experience. In fact, it appears performance in the first two years of practice is a better indicator of effectiveness, rather than certification (National Bureau of Economic

Research, 2006). New teachers need guidance and instruction to meet their full potential. So as not to overly-concentrate “new” educators to the profession in high-poverty and high-minority schools, schools and districts should consider the composition of the educators in a building. Ideally, there is a mix of novice and experienced staff in schools.

In placing student teachers in schools, both districts and teacher preparation programs should consider teachers’ talents and strengths and help align them to specific school needs. Placement in high-poverty, high-minority schools should be intentional with proper supports in place (e.g., strong lead teachers), rather than a placement of last resort.

There are examples of teacher preparation programs nationally, and specifically in Colorado designed to cultivate teachers to be better able to meet the challenges of students in high-needs schools and districts, such as the Colorado Boettcher Teacher Residency or Teach for America. Both programs are present in several high-needs districts and schools within the state.

Reassigning staff from other buildings should be done with caution, as well. Research suggests teachers will not continue teaching at schools when they do not choose to be there (Hanucheck, 2007). Rather, building on existing strengths may hold more promise. Team teaching has been found to positively affect student learning and individual teacher’s instruction, practice and classroom management. It also provides for easier collaboration to analyze student learning. Furthermore, the ability to work with other effective teachers (or even observe other effective teachers) raises expectations for teachers, at the same time providing mentoring-type opportunities for learning best (or better) practices.

Special considerations need to be taken into account for small and rural districts when proposing policies regarding the purposeful assignment of teachers. This is especially true of districts that have one school per level (e.g., one elementary, one middle and one high school) – and even more so when there is only one teacher per grade level or multiple grade levels. Leaders in small Colorado districts also report that recruiting and retaining teachers can be limited (CDE & AQT, 2008).

Examples of Alternative Educator Preparation Programs Aimed at High Needs Schools

The Colorado Boettcher Teacher Residency (CBTR), now in its tenth year of operation, is an alternative licensure program that recruits and trains individuals using a model similar to a medical residency model. Candidates are provided with an intensive and supportive teacher training process which combines master’s level coursework with hands-on learning in a K-12 classroom. The program combines theory with a year-long apprenticeship under the guidance of an experienced and skilled mentor teacher who provides feedback and coaching. Residents are specially trained and endorsed to work with culturally and linguistically diverse students.

A 2011-2012 program evaluation conducted by independent evaluators at the Evaluation Center at the University of Colorado-Denver, found that the students of Boettcher teachers outperformed students of comparison teachers in all subject areas and had significantly greater growth than the students of comparison teachers on State TCAP assessments in reading and writing. The report also found that significantly higher proficiency levels were associated with Boettcher teachers in TCAP reading, writing, and math.

Teach for America (TFA) provides a much needed role in recruiting broadly for candidates who choose to do service as teachers for at least two years in high-needs schools. Many TFA corps members continue to teach; some migrate to more intensive teacher preparation programs to grow in the teaching profession; and others stay in the education arena, specifically in policy and administration roles.

Overall, the purposeful assignment of staff is an emerging practice with successful examples in Colorado and other states. It deserves much more examination and support.

Incentives

Incentives for effective educators to remain in or to move to high-poverty and high-minority schools can be successful under the right conditions. Examples of such incentives may be loan forgiveness, a yearly bonus or increase in salary with the caveat that one stays for three to five years; a smaller class size; an opportunity to work with highly effective school leadership; and an opportunity to work with other effective educators.

It should be noted that incentives alone are usually not enough to entice effective teachers to a school. Emerging research suggests financial resources also need to be of significant amount before making a major difference – more than \$5,000. Incentives also do not appear to increase the efficacy of the least effective teachers (Center for Educator Compensation Reform, 2012).

Colorado has numerous examples of incentive programs. Several districts have been awarded the Teacher Incentive Fund (TIF) grants. CDE has distributed state level grants (e.g., ESEA Title IIA formula funds, competitive Recruitment and Retention grants using reallocated Title I funds, state level Alternative Compensation Funds). Some districts have invested local resources to develop model systems. However, it is too early to determine if this is an effective practice to address staffing issues and may deserve further examination.

Attrition and Working Conditions

In 2008, the Alliance for Quality Teaching established that attrition is expensive. It costs Colorado districts approximately \$10,000 to hire and train each new teacher. Likewise, working conditions (e.g., access to resources, strength of leadership, community involvement) are highly related to attrition (Center for Educator Compensation Reform, 2012).

Colorado has invested in a biennial working conditions survey available to all principals and licensed personnel employed in schools – the TELL Colorado Survey. With a high enough participation rate, schools and districts are able to access their own data for improvement planning purposes. Of special note, Colorado teachers indicated in 2011 that building leadership was by far the biggest factor influencing their decisions to continue teaching. Meanwhile, salary was much lower down the list of priorities.

With additional supports to schools and districts on how to most effectively use their data, Colorado demonstrates some promising practice on how to avoid attrition by addressing working conditions.

Building Strong Leadership

Because Colorado teachers have indicated strong building leadership is the biggest influencer on their future employment plans, the Commission has recognized this is an important consideration in addressing Colorado's teacher gap issue.

The School Leadership Academy Board, initiated by the General Assembly in 2010, was a move in the right direction for the state. The Board's purposes included:

- Propose a statewide system to identify, recruit, train and induct qualified public school leaders.
- Recommend changes to Colorado's standards for school principals and induction program standards for principals.
- Create a principals' leadership academy.

Unfortunately, due to a lack of funding, the Board's recommendations have not been fully moved into practice. However, their standards have been woven into the educator quality standards for SB 10-191. The structure for a principal academy was drafted by the Board, if future funds become available.

The Commission, in partnership with The New Teacher Project, explored ways to document a principal gap in the state. A literature search did not reveal any other states or districts taking this approach. After examining state level data in different ways, the Commission agreed that a focus on principal turnover rates is the best indicator of a potential principal gap. However, caution needs to be exercised since turnover is sometimes an appropriate turnaround strategy (e.g., Tiered Intervention Grants require hiring a new principal in some models). The Commission also encourages the state, school districts and researchers to continue examining leadership issues since they have such a vital bearing on the effectiveness of school success.

Another area of consideration is building systems that encourage teachers to assume leadership responsibilities, such as through a career ladder. Often, teachers that want to stay in the classroom pursue principalships to challenge themselves and secure higher salaries. A more supportive system may keep veteran teachers in the classroom by incentivizing the pursuit of a teacher leader endorsement, providing mentoring opportunities with a stipend or assigning additional administrative duties, including a higher salary. Districts may be able to leverage SB 10-191 which encourages building career ladders.

Supports for Educators

When considering an existing building staff, relevant and timely supports are paramount, including:

- Offering Induction programs that address the needs and perceptions of new educators. In the 2011 TELL Colorado Survey, new teachers tended to report a greater need for assistance in classroom management and instructional methods. New teachers that participated in induction and had regular communication with principals were much more likely to stay in the building (82% with those supports reported plans to stay versus 51% without those supports reported plans to leave the assignment).
- Assigning mentors to new educators during the first three years of teaching or leading a school. One in five new teachers reported they have not been assigned a mentor teacher (2011 TELL Colorado Survey). About four in 10 Colorado teachers said mentoring helped improve instruction or classroom management. Likewise, new principals report similar needs for support. Approximately half of all building leaders are assigned a mentor.
- Providing high-quality professional development for all educators that is aligned with the school's improvement plan. Differentiated professional development should be available to staff depending upon needs identified in their own performance plan. Ideally the professional development is not only based upon the individual educator's identified needs, but is also jointly agreed upon by the educator and the evaluator. High quality professional development is ongoing and job-embedded, leading to a greater likelihood that educators will implement research-based practices in classrooms. CDE has been leveraging ESEA funds to only be used for high-quality professional development. Although, teachers still report a greater need for more individualized professional development (2011 TELL Colorado Survey).
- Ensuring high-quality curricula aligned with formative assessments to optimize instruction. A vast majority of Colorado educators report that state and local assessments are not used to improve student learning (2011 TELL Colorado Survey).
- Conducting fair and meaningful evaluations. With the passage of SB 10-191, Colorado jumped into the national spotlight by attaching student performance to educators' evaluations. The initiative is predicated on building a system that wraps supports around educators to shore up areas of their unique needs.
- Offering statewide principal preparation programs for teacher leaders. Programs should fully address such topics as evaluating teachers for effectiveness (including due process for dismissal of an ineffective teacher), school budgets, community engagement, communicating with various school stakeholders, recruitment, retention and compensation issues, and data-driven dialogue and improvement planning.

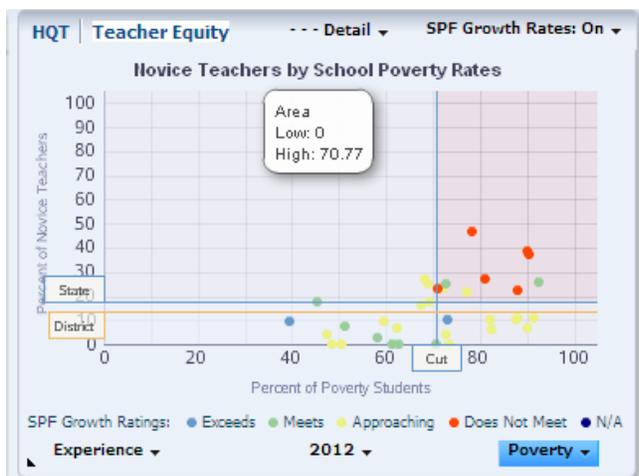
- High-quality leadership is a must to maintain and/or increase an educator’s effectiveness. As mentioned previously, Colorado teachers rank this as the number one influencer on their plans to remain teaching in a building.

Colorado and other states have examples of all of these promising practices.

State Accountability and Reporting

The state has an important role to play in keeping the issue of the teacher gap in the forefront by encouraging, supporting and requiring local activities aimed at closing identified gaps. CDE has leveraged two notable activities worth continuing and enhancing: (1) leveraging federal accountability requirements, and (2) building accountability into the state’s own performance goals in reducing the teacher gap.

Sample of Colorado’s Equitable Distribution of Teachers Display in SchoolView



The Elementary and Secondary Education Act (ESEA) requires state and districts “...ensure that poor and minority children are not taught at higher rates than other children by inexperienced, unqualified, or out-of-field teachers” (Title I, Part A, section 1111(b)(8)(C)). For several years, CDE generated teacher gap reports and required districts to conduct a local analysis. Furthermore, districts were expected to leverage ESEA formula funds (i.e., Title IA, Title IIA) to address any identified issues. The qualification of teachers does not inform the analysis since approximately 99.5% of core content teachers have met the ESEA definition of “highly qualified”

statewide since 2010. Concerns arose, however, that the EDT analysis was misleading people to interpret that inexperienced teachers were ineffective teachers.

With a more mature state accountability system, the state was able to include student achievement in the analysis by using student growth ratings from the School Performance Frameworks beginning in 2010. The state used this adapted definition to identify approximately 30 districts that (1) assigned a higher percentage of novice teachers to schools with a higher percentage of poor and/or minority student population and (2) schools that received a growth rating of “does not meet” or “approaching.” This number has remained stable in subsequent years.

Because of the complexity of the EDT analysis, CDE imported the required data components into SchoolView. Most importantly, the state developed a display to help districts better visualize the distribution of teachers (see figure above). Districts reported a greater

understanding of EDT as a result of the SchoolView displays and with continued training. A more detailed description of how to interpret the display is available later in this report.

In 2012, CDE required districts to include the EDT analysis in their Unified Improvement Plan. With a documented teacher gap, districts must identify actions and dedicate resources to address the issue. This aligns with the reporting requirements of Titles IA and IIA, so districts will have a more meaningful analysis and action plan.

The other state accountability practice of note has been CDE's willingness to build the teacher gap into its own performance measures. The department views the reduction of the teacher gap as one of its main responsibilities. As statewide teacher and principal ratings become available, metrics will be developed. In the meantime, the current method of identifying districts that relies on growth gaps is the only available metric.

Colorado holds several promising state level accountability initiatives that may impact the teacher gap.

Feasibility of an Educator Identifier System

Response to C.R.S. 22-68-104 (c) (from SB 07-140): TO STUDY THE FEASIBILITY OF ESTABLISHING AN IDENTIFIER PROTOCOL FOR TEACHERS AND A STRUCTURE FOR INTEGRATING THE IDENTIFIER INTO THE STATE'S EXISTING AND EMERGING EDUCATIONAL DATABASES, IN PARTICULAR THE LONGITUDINAL GROWTH MODEL BEING DEVELOPED AS A RESULT OF HOUSE BILL 07-1048, TO IMPROVE DATA QUALITY AND INCREASE THE KNOWLEDGE BASE REGARDING TEACHING AND ITS RELATIONSHIP WITH STUDENT LEARNING

Response to C.R.S. 22-68-104 (d) (from SB 07-140): TO STUDY THE FEASIBILITY OF ESTABLISHING AN IDENTIFIER PROTOCOL FOR PRINCIPALS THAT WOULD BE INTEGRATED WITH A TEACHER IDENTIFIER PROTOCOL AND THE STATE'S EXISTING AND EMERGING EDUCATIONAL DATABASES, IN PARTICULAR THE LONGITUDINAL GROWTH MODEL BEING DEVELOPED AS A RESULT OF HOUSE BILL 07-1048.

Response to C.R.S. 22-68.5-102 (1)(a) (from HB 09-1065): THERE IS HEREBY CREATED THE EDUCATOR IDENTIFIER SYSTEM AND PILOT PROGRAM IN THE DEPARTMENT TO ASSIGN UNIQUE IDENTIFIERS TO EDUCATORS EMPLOYED IN A SCHOOL DISTRICT OR LOCAL EDUCATION AGENCY. THE SYSTEM SHALL UTILIZE AVAILABLE CURRENT AND HISTORICAL DATA OBTAINED FROM WITHIN THE PAST FIVE YEARS AND SHALL BE DEVELOPED IN COLLABORATION WITH THE COMMISSION. THE DEPARTMENT SHALL DEVELOP THE SYSTEM BEFORE OR DURING THE 2009-2010 ACADEMIC YEAR.

The Quality Teachers Commission tackled and accomplished studying the feasibility of an identifier system in 2008 and unanimously agreed the state should proceed in implementing the system. In 2009, the Commission worked closely with legislators to authorize CDE to begin piloting and building the educator identifier system.

As the QTC and CDE worked together, it was decided the system be parsed into three phases: (1) Assign Educators Identifiers, (2) Merge the Data into Existing Collections and (3) Link Student and Educator Data. CDE has completed phases one and two. Phase three has proven to be more complex and required additional infrastructure building to ensure its success. It should be in operation by the 2013-14 school year.

The QTC and CDE have partnered to conduct focus groups and presentations in the field (e.g., districts, associations) at every step. Feedback was gathered to shape decision-making. Events have also been used to build awareness and understanding.

Phase 1: Assign Educator Identifiers.

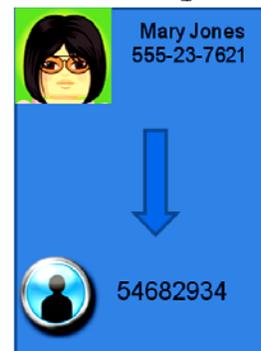
The QTC and CDE agreed on the basic elements of the identifier system to include a unique numeric ID (8-digits) to be assigned to every employed educator (e.g., teachers, principals, paraprofessionals, counselors).

Particular care was given to ensure educators' identity be protected. Social security numbers are only collected in the Record Integration Tracking System (RITS) to enable accurate matching on the ID assignment. RITS is a secure online system originally built to house student IDs (SASIDs).

Expanding the existing system to also house educator IDs provided the state with considerable cost savings, rather than having to invest in creating a new system.

Considerable conversation was devoted to "when" the ID would be assigned – during background checks versus upon employment. Given logistics and the current data systems' inability to communicate with each other (e.g., coordinating with CBI), CDE and the QTC agreed that "upon employment" was the best at this point. The QTC recommended CDE consider transitioning to assignment of ID at the time of background checks when logistics allowed for it. This would create a more integrated system with the Department of Higher Education to track all potential educator candidates as they enter the classroom to begin their practicum work. By assigning IDs upon employment, CDE and DHE work together to match educators with assigned IDs back to their preparation programs.

Phase I: Assign IDs



To save districts additional work, CDE generated the first batch of identifiers based on past HR data in spring 2010. This accounted for a high proportion of school staff. Districts then worked in RITS to assign any new staff with their IDs. All employed educators had an assigned ID by June 2010.

Phase 2: Merge the Data into Existing Data Collections

Fields were added to the Annual HR Collection and the Special Education December Count to include educators' IDs. To ensure Educator IDs were assigned properly, SSNs were initially collected in the HR collection. However, this safety check was dropped in future collections -- so SSNs are only collected when new Educator IDs and licenses are being issued. The two HR collections opened in November 2010. Data from these collections became available in spring 2011.

The QTC devoted intensive investigation and discussion on the use and potential misuse of data. The basic premise is that with greater access to sensitive data comes greater scrutiny and protections.

Phase II: Data Collections



Phase 3: Link Educator and Student Data

Upon extensive investigation, CDE and the QTC agreed the final phase of linking educator and student level data is highly complicated. Not many states have a robust data system that houses and links student and educator level data. With the assistance of CELT (Connecting Education, Leadership and Technology) – a nationally recognized information technology architect and learning systems integrator for P-20 education – Colorado has built an infrastructure to support this data linking process.

The overarching purpose of the Teacher/Student Data Link Project is to provide data to CDE, districts, educator preparation programs, and researchers that will allow them to make informed decisions that ultimately improves teacher quality and supports continuous improvement of teacher and student learning. This should translate to practices that:

- Improve instruction for all students

Phase III: Link with Students



- Inform and increase educator effectiveness at the classroom, school, district and state levels and for educator preparation programs
- Support the continuous improvement of teaching and learning

The student-educator data link enables the state to connect students with the educators responsible for their learning. Without this link, the state has separate, disconnected student performance data and human resource data. While much can be learned about students as a group and educators as a group from these data sources, questions cannot be answered about how these two groups relate. In a profession based on the interaction of students and educators, the ability to connect the data is important to understand that interaction. The student-educator link will give Coloradans that powerful connection and the ability to answer much deeper and richer questions to inform continuous improvement. Different users of the data, however, will have different requirements.

User	Purpose of TSDL
CDE	<ul style="list-style-type: none"> • Research • Provide reports of linked data to districts and educators • Monitoring of districts (e.g., SB10-191)
CDE, Department of Higher Education and Educator Preparation Programs	<ul style="list-style-type: none"> • Evaluation of Educator Preparation Programs • Research
School Districts	<ul style="list-style-type: none"> • Implementation of SB10-191 (e.g., linking student growth to accountable educator(s)) • Research • Provide reports of linked data to educators
Researchers	<ul style="list-style-type: none"> • Research

It is important to note that the student-educator data link is *not* intended for the state to sanction individual educators. This data tool enables the state to:

- Provide linked information back to users
- Conduct research on trends
- Offer technical assistance to schools, districts and educator preparation programs based on identified trends

The Teacher-Student Data Link (phase 3 of the educator identifier system) consists of four interconnected projects: (1) Educator of Record Definition, (2) Standard Course Codes, (3) Teacher-Student Data Collection and (4) Roster Verification.

Educator of Record. To date, CDE has established a statewide definition of Educator of Record. In fact, Colorado added a definition around contributing professionals to differentiate educators that hold instructional accountability for students’ learning. The QTC unanimously supported the definitions. They will provide districts with the guidance needed when reporting data to CDE and were crafted to be flexible enough to accommodate districts local definition, as well.

Educator of Record	An individual or individuals who have been assigned primary responsibility for a student’s learning in a subject/course with aligned performance measures.
Contributing Professional	An individual or individuals who have been assigned responsibility to provide additional services that support and increase a student’s learning in a subject/course with aligned performance measures.

Standard Course Codes. While some districts have standardized the way they collect information about course offerings, the state had never offered this type of guidance. This is a way to provide districts with a more uniform system for organizing courses, as well as streamline data collections with other entities. For example, postsecondary institutions need information about students and their coursework to determine students’ eligibility for enrollment, financial assistance, and eventual placement. The National Collegiate Athletic Association (NCAA) uses secondary course information to determine a student’s eligibility for postsecondary athletic programs. It also means that linked data using Standard Course Codes will provide a more uniform statewide data system to link student and teacher level data.

To date, this project has been implemented and districts are mapping their local courses to the state standard codes. CDE recently received notification from the NCAA that districts using the state codes can receive NCAA approval. The state can submit these courses on behalf of the districts, thus eliminating one more step for the districts.

Teacher-Student Data Collection and Roster Verification. By Fall 2013, CDE will have two options for districts to provide CDE with teacher/student linked data. Districts may either upload the Teacher-Student Data Link (TSDL) data into the TSDL system, or can upload their roster data into the Roster Verification system.

With the first approach, CDE assumes the data has been verified with teachers for accuracy. The second option allows teachers the opportunity to actively participate in verifying that they are responsible for the learning of students assigned to them.

Regardless of the option that a district chooses, all districts will need to map their courses to the state standard courses to be able to link teacher and student level data. Essentially districts will

report the courses that teachers are teaching and the courses that students are taking. These options are currently being piloted with select districts.

Creation of Policies for Tiered Levels of Access to Linked Data

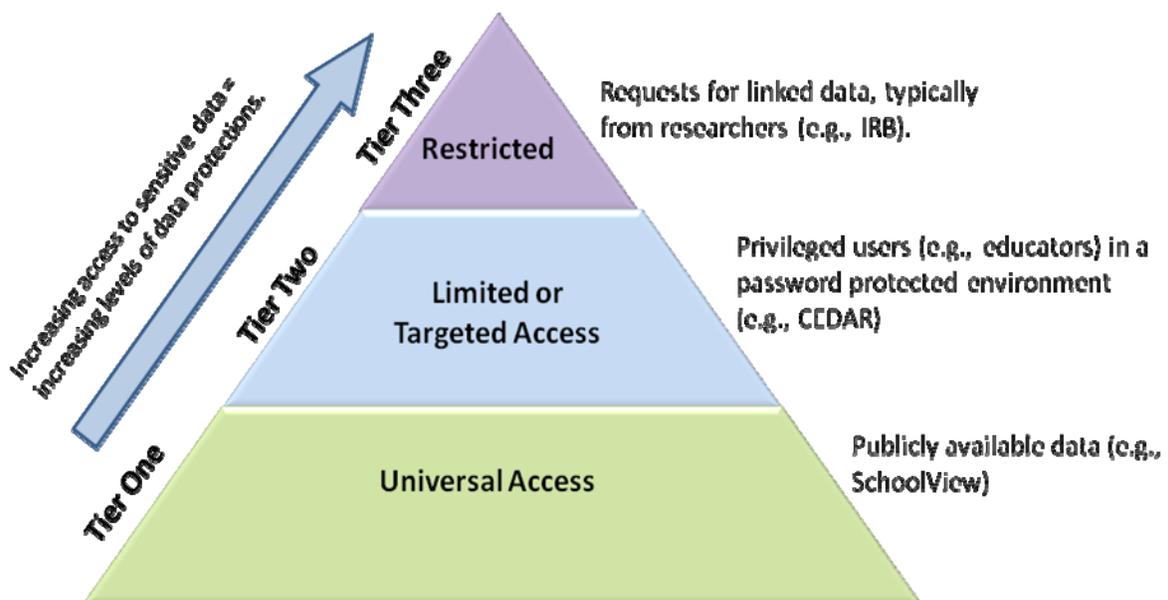
Response to C.R.S. 22-68.5-102 (4) (c) (from HB 09-1065): DATA OBTAINED FROM THE SYSTEM SHALL BE AVAILABLE AT MULTIPLE LEVELS, INCLUDING STATE, SCHOOL DISTRICT, NONGOVERNMENTAL ENTITY, AND INDIVIDUAL, THROUGH VARYING DEGREES OF ACCESS, AS DESIGNED BY THE COMMISSION PURSUANT TO SECTION 22-68-104, AND IN THE SUBSEQUENT REPORT ADOPTED BY THE STATE BOARD.

As Colorado builds a more robust data system to inform school and district improvement and as it works to implement strategies to improve educator effectiveness, access to data must be clearly defined. In particular, House Bill 09-1065 expects the QTC to provide the State Board of Education this report including an outline of recommended protocols and procedures for granting access to educator identifier data to a variety of audiences.

QTC Recommendation for Tiered Levels of Access to Linked Data

Building upon CDE’s current processes for granting access to data, the QTC recommends a tiered level of access model to serve as a structure for guiding access to data linked through the

Tiered Levels of Access to Linked Data



educator identifier. This structure will ensure that data is properly identified, accessed, and used. The model should include at least three levels: public or universal access, limited or targeted access and restricted access. As the access to sensitive data increases, then the level of scrutiny from CDE should increase to ensure that the data are protected and used appropriately.

Types of Access

Tier One: Universal Access. *The audience is the general public. There are no restrictions on accessing this public data.* Colorado has been committed to being transparent and providing as much data as possible about its schools at a universal level. In sharing student level data, at least 16 students must be in the reporting group. Otherwise, the numbers are small enough that someone could deduce a student's identity. Public entities and researchers are prevented from violating Family Educational Rights and Privacy Act (FERPA) restrictions – federal law that protects student identity.

Example of Public Data (Tier One)

With the Teacher-Student Data Link, the public may have access to more reports on SchoolView. Parents may look up information about the Highly Qualified or licensing status of teachers in their children's schools at any time and without any special permission. Reports could be made available that show the distribution of "effective" educators across schools.

The data provided by the Data Services Office at CDE contains counts and percentages of data not readily available to the public, yet available upon request. These data are available to anyone, but the request must still adhere to the reporting rules around a minimum count of 16 students or staff in each subgroup. The Data Services Office can approve and fulfill requests for data that are not at the individual student or staff individual level. Examples include:

- Counts of students, by district, identified as both Special Education and Limited English Proficient (LEP) by district
- Counts of Teachers, by district, race/ethnicity, gender and highest education level
- Teacher/Student Ratios per subject area by school
- Teacher/Student Ratios per grade by school
- Percentage of teachers at each overall performance rating (highly effective, effective, etc.) by district

The QTC strongly recommends staff data have similar protections as are in place for students and build upon current CDE policies. Currently, staff data can be provided publicly once personally identifying information is removed, including names, social security numbers and educator identifiers. If a subgroup contains less than 16 staff members, then it is CDE's policy to report only percentages.

Currently the public may access a significant amount of information about schools on SchoolView. For example, anyone may access the teacher/student ratio for 7th grade math classes at a particular school. Similarly, the public can view the attributes of teachers in a school, such as the percentage of teachers by race, gender, highly qualified status, subject area of degree, and highest level of education completed. With this information, researchers, media, parents, and other public entities can analyze the students/teacher ratio for minority students; special education students; as well as students eligible for free or reduced-price lunch.

Tier Two: Limited or Targeted Access. *These users tend to be district and school staff and educator preparation programs. This access must be password protected.* While individual student-level data are private and cannot be accessed by the general public, there are situations where the data needs to be accessed for educational purposes and the entity has a special relationship with the students and/or educators. Educators must be able to review and must have access to individual students' growth and achievement data to improve instruction and make systems adjustments. District and school staff already have access to individual student data at the local level for analysis and reporting purposes. Similarly, educator preparation programs have data about their candidates and graduates. The Colorado Department of Education and Department of Higher Education must receive data about students and educators; the state departments also provide data back to schools, districts and educator preparation programs. In these data exchanges, extreme care must be taken to protect this sensitive data with a login and passwords.

Examples of Limited or Targeted Access (Tier Two)

Principals may use the student/teacher data by comparing the data student's academic growth for students in subgroups based on demographic data, free and reduced lunch status, special education status, or grade level, etc with each of their educators' performance ratings, experience levels or educational background to better determine what professional development may be needed as well as each educator's strengths within their school.

A teacher preparation program at an institution of higher education wants to evaluate the effectiveness of their program. The preparation program requests data from the state department on candidates' employment in districts, educator effectiveness ratings and their students' TCAP proficiencies.

CDE has a couple of data systems that would fall into this tier, including the Automated Data Exchange (ADE) and Colorado Education Data and Reporting system (CEDAR). ADE is the main district reporting mechanism for student and educator level data. CDE is transitioning the ADE system into the Data Pipeline to enable a more streamlined and "real time" reporting mechanism. These are both "input" systems where the user sends data to CDE and needs to be able to generate reports (with sometimes sensitive data down to the individual level) to check the accuracy of their submissions. CEDAR is a system available to districts to create

customizable reports to measure and present the progress of students over time. This is an "output" design where users can access data (with sometimes sensitive data down to the individual level).

CDE has implemented an Identity Management system that maintains user login credentials to protect sensitive information requiring protection under FERPA. All users are required to sign an Acceptable Use Policy. It should be noted that districts determine which personnel have access to these systems. CDE does not regulate access beyond the initial district entry.

In 2010, legislation (SB 10-36) was passed which required CDE and DHE to collect data, using the educator identifier, about the impact of educator preparation programs. The intent is to give feedback to preparation programs for program improvement. Based on the work of the QTC, teacher preparation programs are setting up structures to collect data that can be used by all preparation programs and moving toward an outcome-based evaluation system.

The QTC recommends school and district staff and educator preparation programs continue to have access to linked data, as appropriate, through password-protected systems. Investments should be made to encourage the continual linking of data systems to create a seamless system for its users. Furthermore, the state should explore an educator portal, so that individual educators can access achievement and growth data on their current students (as an Educator of Record or as a Contributing Professional). If educators are to be held accountable for student growth, then they need tools to adequately monitor individual student and classroom level progress. This tool would need to be “real time” and interactive with different options for graphing data. Currently, some districts have been able to offer these tools to their educators, but these tools are not available statewide. The state is uniquely positioned to address this economy of scale issue and ensure equity in access to data for all educators.

The QTC also recommends CDE and DHE continue to work together to ensure the seamless exchange of data to inform educator preparation programs at institutions of higher education. This will enable educator preparation programs to examine trends in the effectiveness of their candidates.

Tier Three: Restricted Access. The general users are researchers. Access is restricted and only gained through a rigorous approval process. This third level of access includes situations where sensitive data is needed for research purposes and entails more rigorous accountability. This category will tend to be researchers that need data down to the individual student and educator level. To follow FERPA requirements, the state will strip out individually identifiable data as described in other sections. The research and data request must be approved through the

Example of Restricted Access (Tier Three)

A researcher wants to examine the implementation of a new professional development approach for reading and its impact on teacher efficacy and student growth. The researcher files a data request with the IRB to access educator evaluating ratings and their students' reading proficiency and growth scores on TCAP. The approved file includes the linked data, but all educator and student level information that identifies the individual has been removed. Upon completion of the analysis, the researcher removes the dataset from her computer.

Institutional Review Board (IRB). Access to the data may also be time-limited (e.g., data is returned after analysis).

The Institutional Review Board for CDE reviews all requests that are made to conduct research. The potential researchers include those who are not currently employed by the State of Colorado. Potential researchers include any person who wishes to use statewide data of any type including data for specific districts or schools obtained from CDE.

Doctoral and Master's degree candidates, university faculty, independent researchers, and private and public agencies must all submit proposals before conducting research. If the research involves only the collection of aggregate student information that is already available online in the public domain, the committee need not be involved.

For more information on the IRB's approval process see, http://www.cde.state.co.us/cdeassess/documents/res_eval/IRBProtocolfinal.pdf

Researchers can further analyze the data once approval has been granted. Analysis can be performed to compare teachers overall effectiveness rates by their teaching subject areas, student demographics, education level (e.g., Bachelor's, Master's), teacher preparation program, teacher licensure status, student growth data and even more depending on their research. Reports could be written for comparisons and any correlations among the state to help better understand the dynamics within Colorado schools. This will assist with determining where and which teacher equity gaps exists in Colorado and some potential solutions to resolve these issues.

About the Quality Teachers Commission

During its four years of service, the Quality Teachers Commission has played a critical role in starting education reform-related conversations and moving dialogue forward into action on educator quality issues. This is clearly evidenced through the Commission's research and feasibility study of the educator identifier, its assistance in drafting bill language for House Bill 09-1065 (and the bill's subsequent passage) and providing an in-depth examination of the state's educator gap. The Commission's work has also served to inform the work of other bodies of stakeholders addressing vital reform efforts, including the P-3 Task Force, the School Leadership Academy Board and the State Council for Educator Effectiveness. The Commission has been a dedicated public body that represents a wide range of key stakeholders in the state. Their work should have a long lasting impact on building a more robust education data system and on ensuring an education system that is more thoughtful about how to use its best resource – Colorado educators.

Quality Teacher Commission Membership (2010-Present)

Name	Title and Role
Rosann Ward	QTC Chair; President, Public Education and Business Coalition; Representative from an education policy or advocacy group
Bill Hodges	QTC Vice-Chair; Assistant Superintendent of Human Resources, Douglas Co. School District; Representative from a statewide organization that represents school executives
Nella Anderson	Professor of Teacher Education, Western State College; Representative from an existing council whose members are deans of education
Holly Bressler	Executive Principal at Winograd K-8 School in Greeley; School principal representative
Michele Conroy	Second Grade Teacher at Sandrock Elementary, Moffat Co. School District; Representative from a statewide organization that represents teachers
Carol Coppola	Sixth Grade Teacher at Hamilton Middle School in Denver Public Schools; Teacher who completed teacher preparation in Colorado
Carolyn Kranse	Parent of a student enrolled in a public school
Ian Macgillivray	Assistant Deputy Director for Academic Affairs, Colorado Department of Higher Education; Representative from the Colorado Department of Higher Education who reviews educator preparation programs for CCHE
Njal Schold	Special Education Teacher at Durango High School, Durango School District 9-R; Teacher representative
Angelika Schroeder	State Board, Second Congressional District; Representative from the State Board

CDE Staff for the Quality Teachers Commission:

- Lisa Medler, Executive Director of Improvement Planning
- Jami Goetz, Executive Director of the Licensing and Professional Services Unit

Quality Teacher Commission Membership (2008-2010):

Name	Title and Role
Scott Groginsky	QTC Chair; President of the Gilpin County RE-1 School Board
Nella Anderson	Director of Teacher Education at Western State College in Gunnison
Julie Carnahan	Chief Academic Officer for the Colorado Department of Higher Education
Maria del Carmen Salazar	Assistant Professor of Curriculum and Instruction at University of Denver
Matt Gianneschi	Senior Policy Analyst for Governor Bill Ritter
Bill Hodges	Assistant Superintendent for Human Resources with Douglas County Schools
Nate Howard	Principal of Smiley Middle School in Denver
Evie Hudak	Member of the Colorado State Board of Education from Congressional District 2
Lisa Kramer	Parent in Littleton
Karen Mock	Deputy Commissioner of Colorado Department of Education
Jacqueline Paone	Executive Director of the Alliance for Quality Teaching
Deidre Roque	Teacher in Pueblo
Kim Ursetta	President of the Denver Classroom Teachers Association

CDE Staff for the Quality Teachers Commission:

- Lisa Medler, Executive Director of Improvement Planning
- Jami Goetz, Executive Director of the Licensing and Professional Services Unit

Appendices

Appendix A: QTC Email communication requesting legislative action on protections on educator data

From: Rosann Ward [rward@pebc.org]

Sent: Friday, April 20, 2012 4:57 PM

To: Sen. Michael Johnston; Sen. Nancy Spence; Rep. Carole Murray

Cc: 'Angelika Schroeder'; 'Ian Macgillivray'; 'mconroy@springsips.com'; 'njschold@msn.com'; 'Nella Beatrice Anderson'; 'HOLLY BRESSLER'; 'jcwac@comcast.net'; 'kmjservices@juno.com'; bhgh@mac.com; Medler, Lisa; Goetz, Jami

Subject: Request from Quality Teacher Commission

April 20, 2012

Dear Senators Johnston and Spence, and Representative Murray:

While we understand that the Legislative Session is winding down, the members of the Quality Teacher Commission have been made aware of some concerns that seem to require immediate legislative action during the 2012 legislative session. At this point, concerns about the potential misuse of data gathered using the teacher-student data link have been expressed by the education field. The Legislature was quite wise in incorporating a pilot program into the rollout of the Teacher Identifier Bill (HB 09-1065). During the course of the pilot process, many of the pilot districts have expressed reservations in releasing data that links student and educator level data without more explicit protections to prevent the misuse of individually identifiable data. The Commission believes that reaching out to you is crucial in moving this important work forward.

In adopting an educator identifier system, Colorado set out to link student and educator data to investigate trends in effective educator practices. It was originally intended to be a research tool to inform district practices and state level policy, such as to study the teacher equity gap (the phenomenon where poor and minority students are more likely to be assigned to less qualified and less experience teachers). With the passage of SB 10-191, however, the teacher-student data link took on a new role -- requiring districts to link educators with their students for accountability purposes. After considering the potential consequences of how SB 10-191 will be implemented, the Educator Effectiveness Council recommended that the state should develop and adopt statutory provisions to provide appropriate and timely protections regarding the use and reporting of educator evaluation data (see Recommendation 50 in the Council's full report,

included below). The Commission and the Council are in alignment on the need for protections on the use and reporting of these linked data.

With this changing landscape, the Commission urges the General Assembly to consider adopting legislative language that clarifies the appropriate uses of this data. We recommend the following concepts be incorporated:

- Allow school districts, CDE and the State Board to collect evaluation ratings and link student assessment scores to individual teachers in order to fulfill their duties as required by law (including reporting that information, in the aggregate, at the state, district or school level).
- Allow the use of data collected by CDE to be used for bona fide research, providing that the data is obtained according to the protocols established by CDE and is used in a manner that protects the identity of individual educators and adheres to FERPA requirements.
- Ensure that the identity of individual educators or pupils, including individual educator performance data, is confidential and not published or publicly disclosed so as to identify individual educators.

The Commission has identified that these concepts can be incorporated in an amendment to section 22-9-109, which should be updated to address the type of evaluation data that will now be available and to make explicit the allowable and prohibited uses of that data. The Commission would like to propose the following amendment language:

Suggested statutory revision to section 22-9-109:

Notwithstanding the provisions of section 24-72-204 (3), C.R.S., the evaluation report and all public records as defined in section 24-72-202 (6), C.R.S., used in preparing the evaluation report, shall be confidential and shall be available only to the licensed person being evaluated, to the duly elected and appointed public officials who supervise his work, and to a hearing officer conducting a hearing pursuant to the provisions of section 22-63-302 or the court of appeals reviewing a decision of the board of education pursuant to the provisions of section 22-63-302, except that the evaluation report of the chief executive officer of any school district, as it related to the performance of the chief executive officer in fulfilling the adopted school district objectives, fiscal management of the district, district planning responsibilities, and supervision and evaluation of district personnel, shall be open for inspection by any person at reasonable times. NOTHING IN THIS SUBSECTION SHALL BE CONSTRUED TO PREVENT A SCHOOL DISTRICT, BOARD OF COOPERATIVE SERVICES, THE STATE BOARD OF EDUCATION OR THE DEPARTMENT OF EDUCATION FROM COLLECTING INFORMATION CONCERNING AN INDIVIDUAL EDUCATOR'S PERFORMANCE EVALUATION RATINGS AND STUDENT ASSESSMENT RESULTS LINKED TO THE INDIVIDUAL EDUCATOR AND USING THIS INFORMATION TO FULFILL ITS DUTIES AS REQUIRED BY LAW,

INCLUDING THE RERPORTING OF THIS INFORMATION IN THE AGGREGATE AT THE STATE, DISTRICT, OR SCHOOL LEVEL; HOWEVER, the identity of individual educators or pupils, including but not limited to, INDIVIDUAL EDUCATOR PERFORMANCE data, such as EVALUATION RATINGS AND STUDENT ASSESSMENTS RESULTS LINKED TO THE INDIVIDUAL EDUCATOR, SHALL otherwise be confidential and shall not be published or PUBLICLY DISCLOSED so as to identify INDIVIDUAL EDUCATORS. NOTHING IN THIS SUBSECTION SHALL BE CONSTRUED TO PREVENT THE USE OF DATA COLLECTED BY THE DEPARTMENT OF EDUCATION FOR BONA FIDE RESEARCH, WHEN THE DATA IS OBTAINED PURSUANT TO THE DEPARTMENT'S protocols for release of data for research purposes AND USED IN A MANNER THAT PROTECTS THE identity OF INDIVIDUAL EDUCATORS AND ADHERES TO THE APPLICABLE PROVISIONS OF THE FEDERAL "FAMILY EDUCATION RIGHTS AND PRIVACY ACT OF 1974" (FERPA), 20 U.S.C. SEC. 1232G.

Presently, the Quality Teacher Commission is completing its work and will have its final report with recommendations to the Legislature by July of this year. The data protections presented in this letter will be included in that report. However, it is critical for the continued implementation of the Teacher Identifier work over the course of the next year that the concerns be addressed during the 2012 legislative session. This is also a lynchpin in the educator effectiveness conversation across the state. Colorado is leading the nation in the development and implementation of a comprehensive educator effectiveness system. It is paramount that we are thoughtful about this rollout, and learn from the pilot program the lessons which will allow full implementation to be successful.

Thank you for allowing us the opportunity to share our concerns with you. Please do not hesitate to contact us at your convenience to support whatever actions you may wish to take with regard to this matter.

Sincerely,

Rosann Ward

Chair, Quality Teacher Commission

Recommendation from State Council for Educator Effectiveness Report and Recommendations (April 2011):

Evaluation data privacy: The Council identified the desired uses of educator evaluation data at both the individual educator and aggregate (state) level. At the individual level, evaluation data should be used to improve instruction; enhance educator effectiveness; identify areas for professional development; make employment decisions; and conduct research and analysis. At the state level, evaluation data should be used to examine and report state, district, and school-level trends in educator effectiveness; track progress towards state-level educator effectiveness goals; conduct research and analysis; and evaluate the effectiveness of educator preparation

programs and professional development offerings. These desired uses must be balanced with the need to protect the privacy of individual educators. To meet the desired uses of educator evaluation data, the Council recommends that while school-, district-, and state-level aggregations of student growth data may be made public, as they currently are under the Colorado Growth Model, the state and districts not make public individual educator evaluation ratings or student growth data tied to individual educators for purposes of evaluation. Colorado currently has a statute that prevents the state from disclosing information about individual educators (CRS 22-2-111(3)(a)), but the statute does not address district or local disclosure. The development and adoption of parallel statutory or regulatory language at the district level is required for full protection of educator evaluation data. These protections should be in place prior to the start of the pilot implementation process.

Rosann B. Ward

President

Public Education & Business Coalition

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Appendix B

The Student-Educator Data Link

Making Powerful Connections

The Colorado Department of Education is engaged in an ambitious, multi-year project to link student data with data from the educators who serve them. This document outlines the purpose, rationale, uses, benefits, and timelines of this critical work.

Purpose of the Student-Educator Data Link

The purpose of linking educator and student data is to:

- Improve instruction for all students
- Inform and increase educator effectiveness at the classroom, school, district and state levels and for educator preparation programs
- Support the continuous improvement of teaching and learning

Rationale

The student-educator data link enables the state to connect students with the educators responsible for their learning. Without this link, the state has separate, disconnected student performance data and human resource data. While we can learn a lot about students as a group and educators as a group from these data sources, we cannot answer any questions about how these two groups relate. In a profession based on the interaction of students and educators, the ability to connect the data is important to understand that interaction. The student-educator link gives us that powerful connection and allows us to ask and answer much deeper and richer questions to inform continuous improvement.

It is important to note that the student-educator data link is not intended for the state to sanction individual educators. This is a data tool that enables the state to:

- Provide linked information back to users
- Conduct research on trends
- Offer technical assistance to schools, districts and educator preparation programs based on identified trends

Examples of the questions we can ask with Separate Data Sources	Examples of the Questions we can ask with Student-Educator Data Link
Student Data	
<ul style="list-style-type: none"> • How are students performing over time? 	 <ul style="list-style-type: none"> • How are the students in teacher X's class performing?
<ul style="list-style-type: none"> • How are different subgroups of students performing over time? 	 <ul style="list-style-type: none"> • How are the students who received support from the schools' reading interventionists doing?
Educator Data:	
<ul style="list-style-type: none"> • What is the experience of our educators? 	 <ul style="list-style-type: none"> • How are the students of novice teachers in the school performing? How does this compare to the students of experienced teachers?
<ul style="list-style-type: none"> • What are their evaluation ratings? 	 <ul style="list-style-type: none"> • How does student performance correlate with educator effectiveness?
<ul style="list-style-type: none"> • What educator preparation program did they graduate from? 	 <ul style="list-style-type: none"> • What educator preparation programs are producing the most effective graduates based on student performance?

Users

Connecting student and educator data results in information that can be used by a range of audiences, including:

- Students and parents
- Teachers
- School and district leaders
- The Colorado Department of Education
- The Colorado Department of Higher Education
- Educator Preparation Programs (including alternative preparation programs)
- Researchers
- Policymakers

"Users, Benefits, and Enabling Questions" provides a sample of the types of questions that the student-educator data link will enable users to answer. At all times, student and educator privacy is protected.

Connecting Past, Present, and Future

The student-educator data link will enable users to see what happened in the past, assess the present, and make predictions about the future. For example, teachers will be able to see how they contributed to student growth in

prior years, how they are currently helping students grow, and what their projected performance might look like. The aim is for the system to provide dynamic information that allows users to learn from the past and understand the present so that they can take appropriate actions to impact the future.

Benefits

As outlined in “Users, Benefits, and Enabling Questions,” the student-educator data link has many uses all of which bring benefits to the users. In addition, the data from this linkage allows users to learn from each other by enabling comparisons and conversations across like districts, schools, subject areas, educator groups, student groups, educator preparation programs and more. While some districts may have the ability to connect their student and educator data, they do not have the ability to compare their data with others. The statewide student-educator data link allows for this important benchmarking and learning to occur. For those districts that do not have the ability to connect their student and educator data, the statewide system that enables this connection provides this data infrastructure to them.

Long-term Vision (3-5 years)

When thinking about sharing linked data back with users (especially educators), the Colorado Department of Education is looking further down the road. One of the long-term visions is to create a performance dashboard for educator preparation programs, the state, districts, schools, educators, and students designed to support and inform continuous improvement. Like the dashboard of a car, these dashboards will include important measures for noting past performance (how far you’ve gone) and real-time metrics for monitoring current performance (what’s working, what’s not working, where you need more fuel). And, like those dashboards equipped with Global Positioning Systems, the performance dashboards enabled through the student-educator data link will help users plot how to get from here to there with regard to performance. In other words, the dashboards will make important connections between current needs and improvement plans. CDE will be working with educators across the state to design and build these performance dashboards.

Users, Benefits, and Enabling Questions

Connecting student and educator data results in powerful connections that benefit all levels of the education system.

Students

- Tailored instruction informed by student data and aligned to students' needs
- Purposeful assignment of teachers to meet students' needs
- Targeted services and interventions
- *Are students' needs being identified and is this information being used to inform instruction?*
- *Are students assigned to the teachers who can best meet their needs?*
- *Are students receiving the services for which they are qualified?*
- *Are subgroups of students gaining equal access to instructional services?*
- *Are students receiving effective interventions?*

Teachers

- Timely, relevant data that informs instruction
- Data on impact and effectiveness
- Reflection on current practice
- Targeted professional development
- *Are all of my students learning? Who is/is not learning? Where do they need help?*
- *How am I impacting my students' learning? Where can I increase my effectiveness?*
- *What's working? What's not working?*
- *In what areas of practice do I need specific professional development?*
- *What professional development is most effective in meeting my needs and increasing student learning?*

Schools and Districts

- Informed staffing assignments
- Evaluation ratings informed by student results
- Professional development based in data and tailored to educator needs
- Induction and leadership development
- *Are teachers matched to students' needs? What percentage of students were assigned an ineffective teacher two or more years in a row?*
- *What is the effectiveness of the educators in the school/district? How is effectiveness changing over time?*
- *Where do the educators in the school/district need assistance? Which professional development programs have the greatest impact on student learning?*
- *How effective is the school/district's program in enabling new teachers and leaders to operate with*

<ul style="list-style-type: none"> • Identification of programs that prepare effective educators for the school/district • Equitable distribution of effective educators • Data-enriched school/district improvement plans • Retention • Learning across schools within the district 	<ul style="list-style-type: none"> <i>competence rapidly?</i> • <i>What educator preparation programs produce graduates whose students have the strongest academic growth in the school/district?</i> • <i>Are high poverty and high minority schools as likely as schools serving affluent, white students to have effective, experienced, and qualified teachers? How are effective staff distributed within a school?</i> • <i>How can the data on teacher effectiveness inform school and district improvement efforts?</i> • <i>Are schools retaining the most effective educators? What are the trends?</i> • <i>Are teachers in certain schools achieving better results with similar students? What can be learned, shared across the district?</i>
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<p>State</p>	
<ul style="list-style-type: none"> • Strategic recruitment • Educator evaluation and effectiveness • Retention • Promising practices • Common needs and connections • Equitable distribution of effective educators • Learning across the state 	<ul style="list-style-type: none"> • <i>What educator preparation programs produce the most effective graduates? What makes them effective?</i> • <i>Which programs produce the most effective graduates in which subject areas and for which types of students or for which academic settings?</i> • <i>Are educators increasing their effectiveness over time? Are effectiveness ratings comparable and reliable across districts throughout the state? What are the common characteristics that "effective" teachers possess?</i> • <i>Are districts retaining the most effective educators?</i> • <i>What programs are increasing educator effectiveness and student learning?</i> • <i>What districts share common needs? How can the state connect them to resources and shared learning opportunities?</i> • <i>Is the state increasing the equitable distribution of effective educators? This includes looking within schools, within districts and between districts.</i> • <i>What regions/districts have greatest need for support to improve recruitment and retention efforts?</i> • <i>Are teachers in comparable districts getting better results from similar students? What can be learned, shared across the state?</i>

Educator Preparation Programs

- Effectiveness of program graduates
 - *How effective are program graduates?*
 - *What are the characteristics of the graduates who are most effective?*
 - *How effective are graduates with specific student populations?*
 - *Are there differences in graduate effectiveness based on subject or grade level?*
 - *How do graduates' effectiveness change over time?*

Note:

Data gathered from the student-educator data link will not be published on an individual educator level or in any individually identifiable manner.

Appendix C

Components of Teacher-Student Data Link

Component	Description
Use and purpose of TSDL	The teacher-student data link has both near- and long-term uses and works to leverage emerging teaching practices and technologies . A robust TSDL can have many purposes; for example, educators can use it to identify best practices and support accountability growth models based on longitudinal data that link student outcomes to multiple teachers, programs, and schools over time.
Data Governance Structure	Data governance activities establish the structure (policies, standards, architecture, decision-making protocol, issue-resolution process) for collecting, managing, and releasing data for improved quality, accessibility, and use. This component, therefore, ensures the accuracy and availability of data and is key to the TSDL.
Unique Student ID	When students enroll in the school or school district, their demographic data is collected and entered into a student information system, and the required documentation is checked to make sure it has been submitted appropriately. Previous school records are acquired, and the accuracy of any data entry is validated. Other activities define the procedure and ability to assign, manage, and maintain a unique student identifier at the state and/or local education agency level.
Unique Educator ID	The activities grouped under this component include the collection and maintenance of specific data related to certification, assignments, and professional development. Covered are the processes and ability to assign, manage, and maintain a unique educator identifier at the state and/or local education agency level, and to validate educator licensing (which includes aligning to course assignments, recertification, and collection of professional development points). Activities may include the tracking of additional competencies and certifications (including alternate methods, recertification, suspensions, reciprocity, and transfers between states) that the educator holds.

Component	Description
Courses and schedules	This component involves developing schedules (K-12) for students, teachers, and classrooms, and links teachers to students through the course-section codes. It also includes the continuous updating of student and teacher schedules throughout the school year as changes occur. An effective practice recommended for states and school districts is to implement a statewide common course catalog with a set of approved courses for schools.
Roster Verification	The primary linkage between students and teachers is in the course-section assignments. The class roster is the list of students who are scheduled to be in a course section with a specific teacher and is based on the student's schedules.
Daily Attendance/ Membership	At the most basic level, the activities of this component track student attendance at the classroom level and teacher attendance at the school level. That process, when performed period-by-period, can also be used to confirm whether the teacher assigned to the course section is the one who taught the students during that period or day, as well as whether or not the student was present for the class. This information is vital to the TSDL – it can point out instances when another teacher has delivered course content and whether or not the student was present during the delivery of instruction.
Policies and Definitions for TSDL	To incorporate a valid, reliable teacher-student data link within state and local education agency systems, clear policies and definitions are needed. Policies governing such issues as how to include virtual courses and internships may be formalized in administrative practices, board regulations, state code, or other documentation depending on state or local requirements. Definitions of important concepts (for example teacher of record) should be clear and well-communicated throughout the education community. In developing key policies and definitions, input from various stakeholders such as government and legislative leadership, administrator organizations, and educator groups is vital to ensure understanding and commitment.

Appendix D

Guidance to School Districts on How to Analyze the Teacher Gap

Based upon a memo by CDE to the field and edited by QTC members

Examining Teacher Experience and Performance When Addressing the Equity Gap

NCLB defines the teacher equity gap as the greater tendency of poor and minority students to have less qualified and less experienced teachers than their more affluent or white counterparts. The Colorado Department of Education (CDE) annually monitors teacher equity gaps and provides data to districts examining the distributions of highly qualified teachers and novice teachers in each district. Data can be examined for each district on SchoolView.org (click on Data Center, then click on the staff tab, select a district, click on the “detail” link of the equity data).

CDE recognizes that data on teacher qualification and experience without an examination of school performance can have limited utility for districts seeking to understand the impact of teacher equity gaps on student learning.

It is recommended that districts look at the percentage of novice teachers (defined as those with less than three years of total teaching experience) at the schools in your district, school-level student demographic data, and whether each school is meeting academic growth expectations. This recommendation applies if a school does not meet academic growth expectations, serves a high population of students receiving free and reduced price lunch (FRL) and/or minority student population, and has a high percentage of novice teachers (above the state mean).

Recommended Guiding Principles or Common Questions Include:

- What is the capacity of the leadership at the school? How are the school’s leaders prepared and supported?
- To what extent might teacher experience factor into the challenges facing the school?
- How are new teachers prepared, supported and evaluated in the school? Are they receiving adequate support to raise student achievement?
- What is the retention rate of teachers in the school? Is the school experiencing high turnover of its best teachers and leaders? What is the turnover rate for teachers and leaders?
- What are the hiring practices at the school/district? How is the school/district working to recruit the best teachers and leaders into the school?

- How are students assigned to teachers? Are poor and minority students more likely to be assigned to novice or ineffective teachers? Are struggling students more likely to be assigned novice or ineffective teachers? How does the assignment process allow for each student to be assigned to the teacher(s) who can best meet his or her needs?
- Does the school have additional data to investigate these issues further (e.g. ,TELL Colorado Survey, climate surveys, turnover data, teacher absenteeism data)? If not, does the school/district have the means to begin collecting this kind of data?

The following guidance is organized by different types of schools:

- Part I lists schools that: 1) did not meet academic growth expectations (they received an overall School Performance Framework Academic Growth Rating of “Does Not Meet” or “Approaching”); 2) serve a high free and reduced lunch and/or minority population; and 3) have a greater percentage of novice teachers than the state mean.
- Part II identifies schools that: 1) met academic growth expectations (they received an overall School Performance Framework Academic Growth Rating of “Meets” or “Exceeds”); 2) serve a high free and reduced lunch and/or minority population; and 3) have a greater percentage of novice teachers than the state mean.
- Part III lists schools that: 1) did not meet academic growth expectations (they received an overall School Performance Framework Academic Growth Rating of “Does Not Meet” or “Approaching”); 2) may or may not have a greater percentage of novice teachers compared to the state mean; and 3) may or may not have a high free and reduced lunch and/or minority population.

Thinking about Equity:

Use of the recommended guiding principles also correlates with the use of related data from other sources (e.g. TELL survey data, student perception data, district and school performance frameworks), keeping in mind that **equity** is different from **equality**. Equity requires a careful consideration of the needs of each child to ensure that he or she has the right learning experiences to meet his or her needs; it is not about providing all students the same inputs.

Examining Schools with a High Percentage of Novice Teachers that are Not Meeting Growth Expectations (Part I). Schools identified as having a high number of novice teachers compared to the state mean and have high student poverty. Part I provides guidelines for schools and any others that may not be high poverty, but have a high minority population and also meet the

above requirements. It is recommended using the following questions to examine why the school is not meeting growth expectations.

Questions for Schools with High Percentages of Novice Teachers that are NOT Meeting Growth Expectations:

Overarching Question:

- What are the root causes for the school not meeting growth expectations? Why is the school not making adequate growth?
- What is the culture of the school? Are there high learning expectations for students? Is there shared accountability for ensuring students meet those expectations? Are goals being set above the minimum state accountability expectations?
- Also refer to Guiding Principles or Common Questions above.

Examining Schools with a High Percentage of Novice Teachers that are Meeting Growth Expectations (Part II).

Schools identified as having a high number of novice teachers compared to the state mean and having high student poverty. Part II provides guidelines for schools and any others that may not be high poverty but have a high minority population and also meet the above requirements. It is recommended using the following questions to help you understand what you might be doing differently than the schools in Part I and identify improvement strategies that might be applicable across schools.

Questions for Schools with High Percentage of Novice Teachers that are Meeting Growth Expectations

Overarching Questions:

- What are these schools doing differently than the schools with similar teacher and student demographics that are not meeting growth expectations? How are they meeting growth expectations with novice staff and high student poverty?
- What can be learned from these schools to inform improvement in schools with similar teacher and student demographics that are not meeting growth expectations?
- Are all students disaggregated groups meeting growth expectations? While the school may be meeting growth expectations overall, how is it doing with specific student groups?
- What is the culture of the school? Are there high learning expectations for students? Is there shared accountability for ensuring students meet those expectations? Are goals being set above the minimum state accountability expectations?
- Also refer to Guiding Principles or Common Questions above.

Examining Remaining Schools that are Not Meeting Growth Expectation (Part III)

Schools identified as not meeting growth expectations that do not fall into the category of high novice teachers and high student poverty. While not highlighted through the lens of teacher experience, these schools are equally important to review. The district may want to identify the root causes of performance challenges by asking the following questions along with the recommended guiding principles and common questions:

- If the school has experienced teachers but is demonstrating low growth what can the district learn from how teachers in the school are evaluated and provided with support to improve?
- Are there other schools in the district with similar teacher demographics that are showing high growth that could provide lessons/models to the Part III schools?
- How can the district think about the schools in Part III and Part I TOGETHER to identify systemic challenges to achieving student growth (apart from teacher experience)?

District-wide Considerations:

Districts should examine district-level practices that might be contributing to disparities in student performance and/or disproportionate assignment of novice teachers to needy schools. Hiring practices, induction programs, educator evaluation systems, professional development schedules/methods, and related practices should be review to ensure they are supportive of equitable assignment of teacher, enhanced teacher effectiveness, and improved student performance.

Sample Questions to Ask at a District Level:

Overarching Questions:

- What district level policies and/or processes may be contributing to performance disparities across the district?

Probing Questions:

- How does the district cultivate potential teacher candidates?
- Do the district's recruitment, selection, hiring and placement practices promote and ensure effective teachers in every classroom and effective leaders in every school? How do these practices ensure that the neediest students have the most effective teachers?
- Are there schools in the district that consistently have challenges in recruiting, selecting, hiring and placing qualified educators? What are the root causes of these challenges? How can the district support these schools?

- How does the district support new educators? Is the district's induction program effective? Is the program well-implemented across the district? What processes are in place to monitor and continuously improve the quality of services to new educators?
- Does the district provide adequate support to teachers and school leaders (e.g. professional development, relevant and timely student performance data, instructional resources, collaboration time)?
- Does the district's evaluation system promote increased educator effectiveness? Are the evaluations meaningful and timely? Do they result in high quality instructional feedback? Are they focused on student results and demonstrated educator effectiveness? Does the district use the results of educator evaluations to make promotion and dismissal decisions?
- What support does the district provide to struggling schools? How does the district know if these supports are working?

Using the Data to Inform Improvement Efforts

Ultimately districts should use the findings from their analysis to inform district-wide and school-specific improvement strategies by helping to identify root causes for performance challenges. The root causes and improvement strategies should be incorporated into the districts' and schools' unified improvement plans (UIPs) and articulated in the district's teacher equity plan. The district should identify a process for implementing and monitoring the improvement strategies through implementation benchmarks to gauge their impact on improving student growth and performance.

The following list of example improvement strategies that some districts have used after identifying root causes of teacher equity gaps and school performance challenges:

- Analysis of recruitment and hiring practices to ensure hiring of the most qualified teachers
- Targeted mentoring and coaching of new teachers that is meaningful and drives increased effectiveness
- Purposeful assignment of high needs students to the most effective teachers
- Studies of highly effective teachers to identify and spread best practices
- Monitoring effectiveness by tracking student performance data for teachers

Appendix E

Research Scan by The New Teacher Project for the Colorado Quality Teachers Commission

Linked Title	Source/Author	Date	General Information	Findings
The Changing Distribution of Teacher Qualifications Across Schools: A Statewide Perspective Post-NCLB	Education policy analysis archives	2010	Teacher quality has improved under NCLB, however measuring attributes that relate to teacher effectiveness remain difficult to conceptualize.	Teacher quality has improved under NCLB, however measuring attributes that relate to teacher effectiveness remain difficult to conceptualize.
Teacher Employment Patterns and Student Results in Charlotte Mecklenburg Schools	Center for Education Policy Research at Harvard University	2010	This report examines the employment patterns and distribution of teachers to schools and students in the Charlotte Mecklenburg Schools (CMS) across several years.	No specific findings. It evaluates the effectiveness of the human capital system and the makes suggestions on how teachers can be matched with students in the most effective manner.
An Evaluation of the Teacher Advancement Program (TAP) in Chicago: Year One Impact Report	Mathematica Policy Research, Inc	2009	The study examined whether the Chicago Teacher Advancement Program, which provides financial incentives for teachers.	Findings indicate that the incentives had minimal impact on retention at the school level and none at the district level.
The Effect of Performance-Pay in Little Rock, Arkansas on Student Achievement	Vanderbilt Peabody College	2008	This study examined whether the Achievement Challenge Pilot Project, a performance-pay program for teachers, improved the academic achievement of elementary school students.	Limited evidence suggested that student achievement improved when teachers were eligible for bonuses based on achievement gains. This is especially true for teachers who were previously least effective.
Individual Teacher Incentives and Student Performance	David N. Figlio and Lawrence W. Kenny	2006	This paper documents the relationship between individual teacher performance incentives and student achievement using United States data.	Test scores were higher in schools that offer individual financial incentives for good performance, with the strongest relationship between merit pay and test scores found in schools with the least parental oversight.

<p>WHAT DOES CERTIFICATION TELL US ABOUT TEACHER EFFECTIVENESS? EVIDENCE FROM NEW YORK CITY</p>	<p>NATIONAL BUREAU OF ECONOMIC RESEARCH</p>	<p>2006</p>	<p>A review of six years of data on student test performance to evaluate the effectiveness of certified, uncertified, and alternatively certified teachers in the New York City public schools.</p>	<p>On average, the certification status of a teacher has at most small impacts on student test performance. Instead evidence suggests that classroom performance during the first two years, rather than certification status, is a more reliable indicator of a teacher's future effectiveness.</p>
<p>Impacts of Comprehensive Teacher Induction</p>	<p>Mathematica Policy Research, Inc</p>	<p>2008</p>	<p>The study examined the effects of comprehensive teacher induction (CTI) programs on teacher outcomes and student achievement.</p>	<p>Study found that after one year the induction program had no impact on teacher practices, student test scores, or teacher retention.</p>
<p>National Board Certification and Teacher Effectiveness: Evidence from a Random Assignment Experiment</p>	<p>National Board for Professional Teaching Standards,</p>	<p>2008</p>	<p>This study examined whether having a teacher with National Board for Professional Teaching Standards (NBPTS) certification improves student achievement.</p>	<p>Students assigned to highly rated NBPTS teachers outperformed peers in assigned to poorly-rated teachers.</p>
<p>Teacher Quality and Educational Equality: Do Teachers with Higher Standards-Based Evaluation Ratings Close Student Achievement Gaps?</p>	<p>Consortium for Policy Research in Education</p>	<p>April 2004</p>	<p>Improve teacher evaluation and prep programs.</p>	<p>Strong teacher evaluation programs are needed because the study found that better teaching leads to better learning outcomes.</p>
<p>The Narrowing Gap in New York City Teacher Qualifications and its Implications for Student Achievement in High-Poverty Schools</p>	<p>Donald Boyd, Hamilton Lankford, Susanna Loeb, Jonah Rockoff, and James Wyckoff</p>	<p>May 2008</p>	<p>Academic study of inequitable distribution of teachers in New York city.</p>	<p>An improvement in the qualifications of teachers led to improved student achievement.</p>

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