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Colorado Final Report

Executive Summary:

The Colorado State Department of Education (CDE) in collaboration with the Center for Educational Leadership and Technology (CELT) worked on the Teacher-Student Data Link (TSDL) Project funded by the Gates Foundation with support from the Data Quality Campaign (DQC). Colorado and Kentucky were TSDL Project phase two states and each received technical assistance, opportunities for collaboration and learning and support for travel, meetings and other expenses such as focus groups.

Colorado's TSDL initiative was closely linked to the Department's work with several pieces of state legislation:

- SB-07-140, Quality Teachers Act: Established the Quality Teachers Commission, a committee appointed to assess the development and implementation of a unique teacher identifier system integrated with existing and emerging educational databases.
- HB-09-1065, Educator Identifier: "…for the purposes of linking teacher/student data."
- SB-10-036: Report on Educator Preparation Program Effectiveness: CDE and DHE must report annually on the effectiveness of educator preparation program using data obtained through the Educator ID system.
- 2009 SLDS/RISE: Required a teacher-student link in order to PROVIDE meaningful measurements to districts, schools, teachers, parents, students, and the public (aggregated information).

Additionally, changes to requirements for teacher and principal evaluations and support in Senate Bill 10-191 (http://www.cde.state.co.us/educatoreffectiveness/overviewofsb191) needed to be supported. The legislation mandated that all school districts and BOCES (Boards of Cooperative Education Services) implement or adjust their local performance evaluation system to be aligned to the teacher and principal Quality Standards and the State Board Rules by July 2013. CDE focused on the development of an optional Colorado Model Evaluation System including the TSDL definitions and processes for districts/BOCES to use. Beginning in the 2012-2013 school year, pilot districts tested the Colorado Model Evaluation System with statewide availability and implementation the following school year.

Colorado is to be commended for their accomplishments including engaging a variety of stakeholders in the deliberations related to establishing processes for valid and reliable teacher-student data links. It was stakeholder input that helped the Department create the term of "Educator of Record", known as EOR, with a definition of "an individual or individuals

who have been assigned responsibility for a student's learning in a subject/course with aligned performance measures." Likewise, they developed the Contributing Professional (CP) definition of "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."

Colorado drew on collaborative partnerships, such as the Colorado Legacy Foundation (CLF), and CDE in-house expertise to address the challenges of getting the Colorado Model Evaluation System and TSDL effort developed with high quality under a tight deadline and pressure from the changing evaluation environment. For answers to questions on the Model Evaluation System and Educator Effectiveness work, refer to http://www.cde.state.co.us/educatoreffectiveness/faqs.

The lessons learned from Colorado's TSDL work are especially appropriate for states in which public education systems are organized with a high value on local autonomy. CDE works diligently to provide best practices, recommended models and teaching and learning resources to districts, BOCES and charter schools across the state. This was true with their teacher-student data link with recommendations developed rather than mandated policies. The important lesson is to consider the culture of the state's education system to ensure success and buy-in with TSDL practices. Another message from the Colorado experience was the effectiveness of embedding the TSDL within the business architecture of an Enterprise Architecture model. This is explained further in the following focus area narrative, but the point is that the teacher-student data link is not a stand-alone process, but rather part of an overall system of support for teaching and learning. In addition to Enterprise Architecture, the TSDL project in Colorado focused on other data system work, TSDL development with stakeholder engagement, teacher effectiveness connections and TSDL communication resources.

Focus Areas:

I.   TSDL Data System Work

The work to prepare and enhance Colorado's data system to collect accurate teacher-student data link information was completed within the planning for an Enterprise Architecture. Supported by the CLF, the Enterprise Architecture plan developed by CDE and CELT was to design a comprehensive system of collection, aggregation, dissemination and use of data to inform and improve student, school, district and state performance. The data movement architecture was part of this integrated approach and developed the necessary foundation for TSDL.

Colorado also understood the importance of having a roster verification process to enable teachers and principals to confirm accurate rosters and wanted to pilot a model that would be optional for districts. They participated in the TSDL Annual Summits and discussed roster verification options from other states and attended a presentation by Battelle for Kids (BfK) on their roster verification tool. CELT hosted conference calls with BfK and shared best practice material on roster verification. BfK developed a concept paper specific to the Colorado education environment and worked with CDE and CELT to enroll and train pilot districts in the

process. CDE added roster verification variables to their data collection elements and required all districts to map their local course codes to the CDE standard codes by fall 2012.

CDE successfully piloted the collection of TSDL data with a group of districts across the state:

- Cheyenne Mountain School District 12
- Denver Public Schools
- Durango 9-R
- East Grand School District
- Garfield RE-2 School District
- Hanover School District 28
- Harrison School District Two
- Jefferson County Public Schools
- LaVeta RE- 2
- Widefield School District 3
- Weld RE-3J School District

Results of the pilot including district feedback were used to inform the data collection and use practices for the state rollout beginning in September, 2013.

II.   TSDL Development with Strong Stakeholder Engagement

Colorado's Teacher-Student Data Link project was led by a project manager (PM) as part of their evolving project management approach and had a strong internal team working with the PM. The TSDL work began with an understanding of the purpose of building a teacher-student data link. The Colorado TSDL Purpose Wheel (see page 6) was developed over a series of sessions with stakeholders and focus group input. It has become a model shared and used by other states. The team further refined those purposes into three main priorities for the use of the TSDL:

- Improving instruction
- Informing and increasing educator effectiveness
- Supporting the continuous improvement of teaching and learning. – See more at: http://www.cde.state.co.us/rise/tsdl#sthash.nMZueblv.dpuf

CDE places a high value on stakeholder involvement and had good representation in the TSDL effort including both internal CDE program areas like teacher quality and special education services and external partners such as school districts, higher education and the Colorado Legacy Foundation. They held a series of focus groups on the TSDL practices at the Colorado Education Association and in school districts with a geographical diversity from their state. Focus group outcomes were to (1) have a shared understanding of the benefits of linking teachers and students and (2) utilize teacher input and suggestions to improve the CDE implementation plan. As noted above, the EOR and CP definitions were among the practices developed and validated through these various engagements.

The Colorado team hosted a visit with Kentucky DOE colleagues to discuss TSDL issues addressed, lessons learned and current challenges. The teams held a series of meetings to discuss the status of their TSDL including project management and communication plans,

regulations and legislation, TSDL uses including teacher prep program reviews and professional development planning, stakeholder engagement and data governance. A priority of their joint discussion was interaction with higher education and both included university representatives in their teams.

III.   Teacher Effectiveness Work

From the beginning, the emphasis on TSDL in Colorado has been how it could best support improved teaching and learning. This connection was done primarily in two ways through the TSDL project. First, it was highlighted as part of RISE (Relevant Information to Strengthen Education), Colorado's instructional improvement system in their longitudinal data system that will provide immediate information about students, educators and schools to improve instruction and support student success from preschool to career. TSDL is under "Link" one of four objectives of RISE joining "Capture, Provide and Perform." The Link objective "seeks to link data and digital content about students and educators with records from relevant agencies using a state-of-the-are data system." The relevant point is that TSDL was not developed in isolation but was crafted as a strategic initiative to support an overarching system of educator support.

The second connection for TSDL to teaching and learning came through close interaction with the lead for teacher quality at CDE. Having teacher quality not only participate on the TSDL team, but also take an active role in developing material, doing video presentations to the field, providing feedback and prioritizing TSDL communication throughout the educator effectiveness work was a strong benefit. Information was provided on how other states established a dialogue between TSDL and educator effectiveness, but Colorado clearly was ahead of most states in connecting to leadership in this area. More information on Colorado's educator effectiveness is available at http://www.cde.state.co.us/educatoreffectiveness.   A particular request was on confidentiality issues related to TSDL and CELT introduced CDE to and participated with them in the ongoing work by the Education Counsel with states on educator effectiveness and privacy concerns.

IV.   Colorado TSDL Communication

Effective communication strategies and materials were a priority in Colorado's TSDL effort. They examined models from other states and districts, participated in TSDL Summits and conference calls and worked with CELT to research documents and find good ideas especially around messaging the use of their teacher-student data link. Battelle for Kids was an excellent partner in developing such materials for the roster verification pilot. In facilitating discussions and providing guidance on communication, CELT also found the Data Quality Campaign to a good resource for papers and language on the use of data including TSDL.

The TSDL PM led the team in looking for opportunities to share information, answer questions and gather feedback and scheduled presentations to a variety of audiences. They steadily
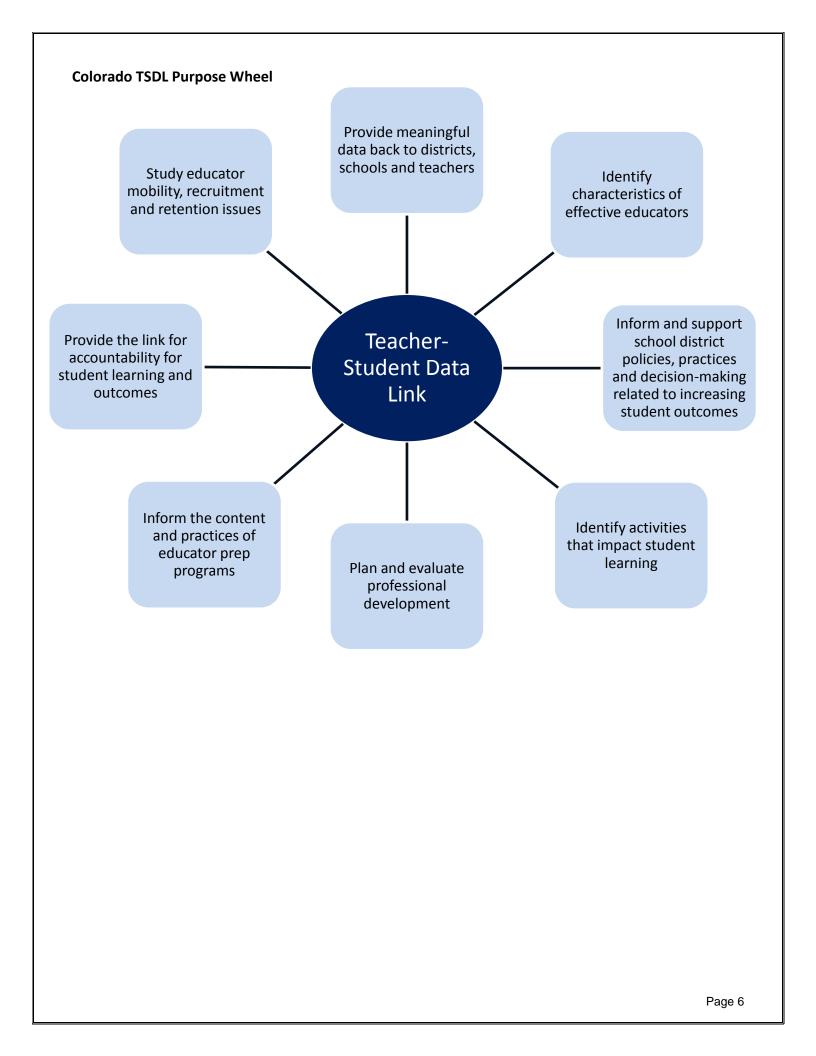
increased their TSDL content portfolio with a focus on user-friendly material and graphics; for example, they created a slide on how TSDL supports CDE goals (see page 7).

The TSDL website (http://www.cde.state.co.us/rise/tsdl) was developed early on and documented progress made as well as providing communication resources. Other sites within the Department website were enhanced to include and link to TSDL information. A fact sheet was drafted and recently finalized to help educators and other stakeholders understand TSDL in Colorado (see page 8).

V.   Conclusion:

Colorado has made significant progress in developing the capacity to link teachers and students through their data system. They improved their IT system design and capacity to collect data, developed TSDL definitions and practices, piloted critical pieces of the TSDL work including an optional roster verification tool, steadily gathered feedback to make informed improvements and prioritized communicating to the field on TSDL and its connections to educator effectiveness.

CDE had put in place the foundational components needed for a valid TSDL such as unique educator IDs and statewide course mapping. The team worked with CELT on those next steps which would, within their education environment of local autonomy, establish TSDL as an enabler to better support teaching and learning. The resources they developed will also provide guidance to similar states and districts working on their teacher-student data link.

Colorado TSDL Purpose Wheel

Teacher-Student Data Link

- Provide meaningful data back to districts, schools and teachers
- Identify characteristics of effective educators
- Inform and support school district policies, practices and decision-making related to increasing student outcomes
- Identify activities that impact student learning
- Plan and evaluate professional development
- Inform the content and practices of educator prep programs
- Provide the link for accountability for student learning and outcomes
- Study educator mobility, recruitment and retention issues

TSDL Supports All of CDE's Goals

Students

- **Globally competitive workforce** → Improved learning experiences

Educators

- **Great teachers and leaders** → Improved preparation for the classroom

Schools/ Districts

- **Outstanding schools and districts** → More informed decision-making

State

- **Best state education agency in the nation** → Improved insight into how to best support teachers, districts and schools

cde
Colorado Department of Education

TSDL Fact Sheet

Generally speaking the teacher(s) that is/are responsible for planning, instructing and assigning grades in a given class/course can be linked to the students that are enrolled in and completing that class/course.

Where can I learn more?
- To learn more about TSDL, visit: www.cde.state.co.us/rise/tsdl
- To learn more about Data Pipeline, visit: www.cde.state.co.us/DataPipeline/

How can an accurate TSDL support districts?

An accurate Teacher Student Data Link enables districts to analyze student learning trends, educator performance across schools, subject areas and educator groups.

With Teacher Student Data Links, districts may be able to use data to:
- Provide differentiated support to teachers
- Support teachers to personalize classroom instruction
- Inform educator evaluation and staffing assignments
- Identify and deploy district resources to meet demonstrated needs
- Conduct program evaluation

How can CDE use an accurate TSDL to support state improvement?

An accurate Teacher Student Data Link enables statewide analysis of student learning and educator performance across districts and schools with similar attributes, subject areas, educator groups, student groups, etc. While districts may already have the ability to connect their student and educator data, they may not have the ability to compare their data with other districts and schools across the state.

With the reported Teacher Student Data Links, CDE may be able to use data to:
- Identify and support professional development needs
- Provide educator effectiveness information to preparation programs for program improvement
- Research best practices that result in increased student outcomes
- Deploy department resources to areas or regions with demonstrated needs

When will districts submit their TSDL to the state?

Beginning in September 2013, all Colorado school districts will begin submitting Teacher Student Data Link information into Data Pipeline.

CDE is working to identify tools that support districts in creating and reporting accurate teacher student data links.