

# Leveraging State Longitudinal Data Systems To Inform Teacher Preparation and Continuous Improvement

## A Data-Sharing Template To Prompt Discussion and Strategic Planning

An increasing number of states can now connect teacher and student information systems. In 2005, only 13 states had the ability to match information on teachers and students; today, 24 states report being able to do so, and every state is committed to having this ability by 2011 as a condition of receiving stimulus funding. As part of an aggressive policy agenda, states are looking to leverage their longitudinal data systems, particularly the teacher/student data link, to inform the policies and practices that support educator success.

Through its 10 Essential Elements, the Data Quality Campaign (DQC) has clearly articulated what data constitute the “student” side of the teacher/student data link, but the “teacher” side has remained largely undefined. As states move toward using data for continuous improvement, it is essential that they bring critical stakeholders together in partnership to determine what teacher data the state should be collecting and matching to student data and how the information will be used.

### ■ Partnership Is the Key to Data Sharing and Use

A key aspect of this partnership will be the sharing of data about teachers with their teacher preparation programs. Not only will data sharing help preparation institutions refine their programs and allocate resources appropriately, but it is also required by many

states for accreditation, is a criterion for the state to receive credit for DQC’s State Action 9 and is a requirement for certain federal grant opportunities. In a recent report, the National Academy of Sciences noted the lack of comparable information linking teachers with preparation programs and recommended comprehensive systems that collect data on candidates, preparation programs, practicing teachers, the schools in which those teachers teach and the students they teach, including:

- **For practicing teachers:** observational measures of their skills and practice linked with the content of preparation;
- **For their students:** broad measures of student learning, including, but not limited to, standardized performance measures; and
- **For candidates:**
  - candidate characteristics by program or pathway,
  - where graduates teach,
  - how long teachers with different types of preparation continue, and
  - how the knowledge and teaching practices of teachers differ by types of preparation and effects of state policies on program approval.

This work will require cross-sector and agency collaboration to be successful. To inform the growing partnerships among state policymakers, K–12 and postsecondary leaders, and teacher preparation programs and help build understanding and trust around the use of these shared data, the DQC, American Association of Colleges for Teacher Education, Council of Chief State School Officers and National Council for Accreditation of Teacher Education provide this template. States can use the template to guide conversations among a broad-based representative state team (state education agencies, teacher preparation programs, teacher unions, accrediting agencies, institutions of higher education and licensing agencies). The results of these conversations can include:

- **Developing a memorandum of understanding (MOU) to share data:** The MOU should, at a minimum, address:
  - What data elements need to be shared?
  - In what form and level of disaggregation should they be shared, and for what purposes will they be used?
  - Who will receive or have access to the data?
  - How will privacy considerations be addressed and sensitive data be protected?
  - What data can be aggregated, and what data need to be at the teacher level?
  - What type of metadata (e.g., definitions, data collection dates, etc.) will be included?

- **Identifying and prioritizing critical policy questions:** Representative teams can use this template to develop the policy questions states need to answer around teacher and program effectiveness. They also can provide recommendations to the state about how it could move forward in collecting the data elements necessary to answer such questions if the data are not currently available.
- **Reducing duplication of efforts and reinforcing synergies:** The template includes a sample survey that the state can administer to teachers about their teacher preparation experience. This survey would be in lieu of existing surveys conducted by individual programs and would provide the state and the programs — as well as potential employers — comparable information across programs.
- **Increasing transparency and effective communication about teacher preparation/continuous improvement:** Teacher preparation programs can help the state determine what data and contextual information to post about programs so that the public will be better informed (as required in Race to the Top) and, reciprocally, determine what background information on preparation programs would inform district hiring decisions as well as how to account for the teachers that are prepared in one state but employed in another.

Each state will approach this work differently — some will use this template in its entirety, some will draw on pieces of it and some may create their own from scratch. It is also foreseeable that states will have a different process and agreement in place for each individual teacher preparation program within the state. The following pages are meant to *spur and guide a conversation* so that stakeholders can come to the table with something in hand to react to and modify based on their needs as well as set expectations based on defined roles.

## Suggested Template for Discussion: Longitudinal Data That States Can Share with Teacher Preparation Institutions and Programs

Data items displayed in the first two columns of this chart could be useful for evaluating the ultimate success of educator preparation programs in terms of candidate performance on the job. The data identified are/will be collected and stored by the state for teachers/administrators currently employed within the state.

TEACHER DATA	ADMINISTRATIVE LEADER DATA	ANALYTIC PURPOSE (BY PREPARATION PROGRAM/INSTITUTION)
<p><b>Career Path</b></p> <ul style="list-style-type: none"> <li>■ Year hired</li> <li>■ Characteristics of school at which employed (high needs/high minority/high poverty/low performing/urban/rural)</li> <li>■ Subject(s) taught</li> <li>■ In original job placement in year two and year three after program completion (options could include same school, moved to another school in district, taught in another district, left the state, left the profession and write in reason for turnover)</li> <li>■ Characteristics of students in the school such as percentage of English language learners, percentage of students with disabilities, student learning, attendance, graduation rates and college/community college matriculation where applicable in terms of status or growth</li> <li>■ Characteristics of students the teacher is assigned in terms of poverty level, education of parents and previous education performance</li> </ul>	<p><b>Career Path</b></p> <ul style="list-style-type: none"> <li>■ Year hired</li> <li>■ Characteristics of school at which employed (high needs/high minority/high poverty/low performing/urban/rural)</li> <li>■ In original job placement in year two and year three after program completion (options could include same school, moved to another school in district, taught in another district, left the state, left the profession and write in reason for turnover)</li> </ul>	<p><b>Meeting Program Goals</b></p> <p>Career path analysis helps institutions and programs know whether program goals are being met for employment and preparation of teachers to meet the needs of diverse students in different situations. Also, feedback on persistence in teaching, or whether former candidates remain in other education positions, would help further refine the institution's education preparation goals.</p>
<p><b>Induction Experience</b></p> <ul style="list-style-type: none"> <li>■ Licensure status (remain on initial license, next level state license, district tenure status or National Board Certification)</li> <li>■ Teacher satisfaction with preparation program (surveys, focus groups or interviews on quality of their preparation programs overall and on specific dimensions such as content, pedagogy, assessment, clinical and field experiences, classroom management, addressing diverse learning needs, teamwork, etc.)</li> <li>■ Assistance the school or district provides to teachers in their first year of teaching (structured mentoring program, making consultants available, etc.)</li> <li>■ Principal satisfaction with quality of the teachers</li> </ul>	<p><b>Induction Experience</b></p> <ul style="list-style-type: none"> <li>■ Leader satisfaction (as measured by surveys, focus groups or interviews) with perceived quality of their preparation programs overall and on specific dimensions</li> <li>■ Assistance the school or district provides to leaders in their first year of service (structured mentoring, making consultants available, etc.)</li> <li>■ Superintendent satisfaction with quality of the leader and also with quality of leaders coming from all preparation programs</li> </ul>	<p><b>Evaluating Program Strengths and Weaknesses</b></p> <p>Information on licensure status is one way to determine whether candidates who are teaching are appropriately progressing in early stages of their career.</p> <p>Information on the satisfaction of former candidates, tracked over time, should be directly relevant in assessing how well candidates are being prepared for the challenges they will actually face on the job.</p> <p>The information may identify particular courses or experiences that fall short, prompting further discussion, perhaps personal and in depth, with former candidates to determine what specific changes are needed.</p> <p>Information on assistance provided by the employing school or district will also identify topics on which new teachers need help and become additional sources of program evaluation data.</p> <p>Institutions will know whether their own program provides assistance to graduates in their first year of teaching (through structured programs in induction, online or otherwise) or arranges for such assistance through their employers or third parties. The areas/topics of this assistance would be useful to institutions in identifying areas of weakness in their preparation programs.</p>

continued

TEACHER DATA	ADMINISTRATIVE LEADER DATA	ANALYTIC PURPOSE (BY PREPARATION PROGRAM/INSTITUTION)
<b>Performance Measures of Individual Teachers</b>	<b>Performance Measures of Individual Administrative Leaders</b>	<b>Achieving Preparation Purpose</b>
<ul style="list-style-type: none"> <li>■ Measures of value added by teachers to growth in student learning</li> <li>■ Re-administration of performance assessments from preparation clinical experience as indicators of growth</li> <li>■ Performance evaluation results</li> <li>■ Merit pay and/or other awards received</li> <li>■ Observational measures of teacher’s classroom performance (e.g., Framework for Teaching and Classroom Assessment Scoring System-Secondary [CLASS-S] as well as domain-specific protocols such as Mathematical Quality of Instruction [MQI] and Protocol for Language Arts Teaching Observations [PLATO]).</li> <li>■ Evidence of leadership roles (e.g., National Board Certification, academic coaching, team leadership, union leadership, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>■ Measures of value added by leaders to growth in student learning</li> <li>■ Other school-level student performance measures such as graduation rates and college/ community college matriculation (where applicable) in terms of status or growth measures</li> <li>■ Measures of improved school-level working conditions with self-reporting, teacher perceptions and/or observational protocols</li> <li>■ Performance evaluation results</li> </ul>	<p>With the current policy interest in judging teacher performance on the basis of the success of students, this category of information is critical for institutions to judge their own success in preparing teachers. Measures for administrators are less well defined at this point but will emphasize creating environments conducive to student learning.</p> <p>The addition of measures such as merit pay, observations, leadership roles performed, etc. help to supplement the student learning data but do not substitute for them.</p> <p>Institutions will be able to look across all of their former candidates hired in a district and the experiences of all former candidates program by program to determine if patterns of strengths or weaknesses are identified.</p>

## Ensuring That Data Are Actionable

In addition to returning to each preparing institution pertinent statistics about the educators employed in the state who came from an institution/program, the state can add great value by the way it packages the data so that the data can be interpreted and acted on by institutions. There are two aspects of this that are particularly significant for data relevance and utility: disaggregation and points of comparison.

- Disaggregation** — Information in the chart on pages 3 and 4 should be provided separately for each individual candidate from a *specific preparation program* (such as elementary teaching or secondary science teaching). Data aggregated by institution of higher education can be useful to colleges/departments of education but will be of little use at the program level where decisions are made about courses and field, clinical and other experiences.
- Points of comparison** — States can help institutions interpret the data sent back to them if they accompany information on the institution’s former candidates with comparative information — that is, information from *all educators in a cohort of years of employment and all educators from similar institutions*. Thus, states would return to the institution (a) aggregated data for each type of professional (teachers, administrative leaders, other school professionals) in the first year, second year or third year of employment following completion of preparation; *and* (b) for each type of professional in a first-year, second-year or third-year category, the state-aggregated totals by type of preparation program *sponsor* (i.e., research institutions, master’s institution, bachelor of arts institution, alternative pathway sponsor). So, for example, on the item for employment in high-needs schools that appears in the chart at right, one part of the state report might look like this for your preparation program.

A two-way exchange of information from longitudinal systems is warranted — that is, programs should provide information about themselves and the courses

ELEMENTARY TEACHERS EMPLOYED IN HIGH-NEEDS SCHOOLS	YEAR AFTER COMPLETION OF PREPARATION PROGRAM		
	In first year	In second year	In third year
All elementary teachers employed in high-needs schools from your preparation program	187	172	178
<b>Points of comparison:</b>			
All elementary teachers employed in all schools in the state	4,000	3,850	3,900
All elementary teachers employed in high-needs schools in the state	1,000	900	950
Coming from research institutions	30	30	30
Coming from master’s institutions	700	630	675
Coming from bachelor of arts institutions	170	160	165
Coming from alternative pathway sponsors	100	90	80

and experiences of candidates to employing school districts. Such information would be relevant when hiring decisions are made and also when districts are judging their own teaching and other school professional workforce, bringing together their own data on educator career progress with the preparing institution’s information about the program from which these educators have come. The following two templates provide examples of how to facilitate this exchange.

1. An example of a state-administered teacher satisfaction survey to provide comparable information regarding teachers’ perceptions of their preservice experience based on the skills they acquired.
2. An example of a checklist of comparable descriptive information about teacher preparation programs in the state.

## Suggested Template for Discussion: Introductory Language for a Survey on Teachers' Satisfaction with Their Preparation

Below is a list of topics that may have been a part of your teacher preparation program. Look over the entire list, mark the two from your preparation program that MOST prepared you for challenges you faced in this year of teaching and then mark the two that LEAST prepared you for your challenges.

DESCRIPTION OF PREPARATION PROGRAM COMPONENTS Preparation included:	MOST PREPARED ME (CHECK TWO)	LEAST PREPARED ME (CHECK TWO)
Developing an understanding of how students grow and develop and the impact that growth and development have on learning at different ages		
Developing an understanding of how assessments can improve instructional practice and student learning by: <ul style="list-style-type: none"> <li>■ Developing learning goals that are clear and align instruction with instruction</li> <li>■ Ensuring that teacher candidates were required to demonstrate proficiency in practice that is aligned to learning goals</li> <li>■ Providing opportunities for constructive feedback to inform improvements in instruction</li> </ul>		
Developing an understanding of and experience in teaching students of diverse backgrounds and abilities, including those with disabilities		
Developing an understanding of subject matter content and its alignment with curriculum		
Faculty who modeled instruction so that teacher candidates were prepared to teach students how to make use of their knowledge and skills in the areas of problem solving, critical thinking and effective communication		
Experience in reviewing student work, providing feedback to students and using it to develop an understanding of student potential		
Learning how to effectively use media and applications of technology in instruction		
Experiences to practice using research- and evidence-based instructional strategies		
Experiences to learn how to work in a collegial environment with school leaders and families		
Experience in how to differentiate instruction for students with particular needs, such as English language learners and students with disabilities		

For each item you marked as LEAST prepared, write in what you wish had happened during your program that would have helped you cope more satisfactorily in this year of teaching. \_\_\_\_\_

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## Suggested Template for Discussion: Descriptive Information That a Preparation Program Can Share With Hiring Districts and States

Descriptive information about the program and its candidates could be used by hiring districts when they make selections and to help explain the subsequent on-the-job record of teachers. The following template could be adopted (in whole or in part) as part of the emerging partnership between teacher preparation programs and states. Programs would use the scale provided at right to describe the degree to which they provide teacher candidates with certain types of courses and experiences and should be encouraged to write in additional program provisions not identified on the final template.

On a scale of 0 to 3, our teacher preparation program provides ...

### *Child and adolescent growth and development*

1. A grounding in how students grow and develop and the influences that growth and development have on learning at different ages
2. Opportunities in the field and clinical experiences to apply knowledge of child development

### *Standards- and assessments-based instruction*

3. An understanding of a teacher's responsibilities in a standards-based curriculum
4. An understanding of how assessments can be used constructively to improve instruction and enhance student learning
5. Opportunities to practice creating and interpreting curriculum-embedded assessments in field and clinical experiences
6. An understanding of how assessments can provide incentives to students by feedback that identifies the learning goals they still must master

### *Content knowledge*

7. An understanding of the content of the subject(s) candidates are preparing to teach

### **Scale**

A scale would permit four choices for each of these items:

- 0:** This is not a part of our preparation program.
- 1:** This is a part of our program but receives little emphasis.
- 2:** This is a part of our program, and faculty include it in readings, lectures and projects.
- 3:** This is a part of our program, and faculty include it in field and clinical experiences as well as courses and make sure that supervising teachers know our intent as they work with candidates

8. That the subject content requirement is the same as, or equivalent to, a college major in the same field in the institution
9. Licensure exam results for all individuals in each program who took licensure exams in the past three years

### *Content pedagogy*

10. Experiences in review of student work and using it to understand student capabilities
11. Field and clinical experiences that provide opportunities to differentiate instruction for students with diverse needs, including children with disabilities and English language learners
12. Instruction on classroom management
13. Instruction on how to use media and adapt technology to improve the effectiveness of instruction
14. Opportunities to learn instructional methods that are research based, practice using them and receive constructive feedback from experienced teachers