

Teacher Data Framework

This *Teacher Data Framework* looks at teacher quality through five lenses:

- **The Big Picture:** the characteristics of district teachers as a whole
- **Distribution:** the distribution of teacher characteristics in different kinds of schools
- **Flow:** the characteristics of teachers entering and leaving the system
- **Structure and Process:** the policies and practices that affect teacher characteristics
- **Community:** the impact of players beyond the school community—higher education institutions, the business community, community organizations, parents—on teacher quality

For each lens, the framework presents a set of guiding questions for communities to answer and

gives indicators that can be used to measure responses to the guiding questions.

The indicators cited in the first three lenses provide a descriptive picture of teachers, how they are distributed across schools, and what kinds of changes are taking place over time. Data for the first three lenses also provides the basis for conducting a needs assessment regarding district teachers.

Lenses four and five move from description to explanation by examining the policies and practices that influence the indicators for the first three lenses. Data gathered for lenses one through three helps determine what needs to be changed; data gathered for lenses four and five helps identify possible avenues of change.

THE BIG PICTURE LENS

Guiding questions to help determine characteristics of district teachers as a whole

- How do district teachers fare on the characteristics?
- How have these characteristics changed over time in the district?

Note: Indicators are measures of teacher characteristics, not necessarily of the *quality of teachers*. While research links some of these indicators to student achievement, the evidence is mixed or non-existent for others. The big picture indicators were chosen either because some research supports a connection between the indicator and student achievement or because community members are likely to be interested in learning more about a particular characteristic, its distribution, and its change over time.

MEASURES	INDICATORS OF TEACHER CHARACTERISTICS
Measures of academic competence	Scores on verbal ability tests Scores on state licensing exams A major in assigned area(s) A minor in assigned area(s) A master's degree or higher (disaggregated by type of master's degree) Scores on tests of subject matter knowledge Graduate coursework completed

MEASURES	INDICATORS OF TEACHER CHARACTERISTICS
Measures of practical competence	Possession of NBPTS certification Scores on tests of professional/pedagogical knowledge
Measures of professional achievement	Certification in assigned area(s) Alternative certification in assigned area(s) Level attained on state/district/school career ladders
Measures of performance	Value-added teacher contributions to student achievement Results of evaluations by supervisors, peers, parents, students, graduates, and former students that capture teacher behavior in the classroom Receipt of awards, fellowships, grants School and/or district leadership positions Absenteeism
Other measures	Race Gender Years of experience in teaching Years until retirement age Salary Mobility within/out of district Years of experience in current school Teacher satisfaction with parent support, school environment, etc.

Note: PEN recommends giving priority to the indicators listed in bold.

DISTRIBUTION LENS

Guiding questions to help determine distribution of teacher characteristics across different kinds of schools, students, and programs

- What is the number and percentage of teachers in each of the groups listed below?
- How does each group fare on the measures listed in the big picture lens?
- How has each group changed over time regarding those measures?

Subgroups to examine

- **Teachers at schools with different performance levels on official assessments**
- **Teachers at schools in each of the four percentage quartiles of minority students**
- **Teachers at schools in each of the four percentage quartiles of students eligible for free/reduced-price lunches**
- **Out-of-field teachers—defined as those teaching at least one class for which they are not certified or for which they have no preparation based on a major or minor**
- Teachers at different categories of schools—magnet schools, charter schools, alternative schools
- Teachers of subpopulations of students within schools—special needs, gifted and talented, limited English proficiency, advanced placement, remedial, vocational

Note: PEN recommends giving priority to the ways of looking at subgroups indicated in bold.

FLOW LENS

Guiding questions to help determine characteristics of teachers entering, leaving, and moving within the system

- What is the number and percentage of individuals in each group for the district as a whole? For each school in the district?
- How do the following groups fare on various big picture indicators?
- How have the measures for the following groups changed over time?
- For individuals leaving the district before retirement or those moving within the system, why are they making the change? What are the characteristics of the jobs they are taking, such as pay, demographics, and performance level?
- For individuals moving within the system, do any patterns underlie this movement? Are teachers moving from one school subgroup to another?

Subgroups to Examine

- Individuals applying for teaching jobs
- Individuals offered teaching jobs
- **Individuals accepting teaching jobs**
- Individuals with alternative certification who accept teaching jobs
- **Individuals exiting the school system voluntarily who**
 - **teach in another district**
 - **take administrative posts**
 - **leave the teaching profession**
 - **leave within three years of starting**
 - **retire**
- **Individuals exiting the school system due to termination/dismissal**
- Individuals with alternative certification who voluntarily exit the school system
- Individuals with alternative certification who exit due to termination/dismissal
- **Individuals moving from one school to another school within the district**
- Individuals completing local certification programs but opting not to teach
- Substitute teachers

Note: PEN recommends giving priority to the ways of looking at subgroups indicated in bold.

STRUCTURE AND PROCESS LENS

Guiding questions to help identify state/district policies and practices that affect teacher quality

- What are the state licensing requirements?
- What criteria are used by the state to approve teacher preparation programs?
- How does the state/district's school accountability system promote practices that lead to good teaching?
- How does the district recruit new teachers?
- What hiring standards and practices does the district use?
- How are teachers assigned to schools?

- How are new teachers inducted into the district?
- How are teachers compensated?
- What is the structure of and funding for district-provided/facilitated professional development?
- What are the characteristics of teachers' work environments?
- How are teachers evaluated, and what happens as a result of evaluation?
- Are resources aligned with district objectives?
- How does the district share information about teachers with parents and the public?
- Where is such data maintained and how does the district compare to state/national norms on these issues?

EXTERNAL FACTOR	STRUCTURE AND PROCESS INDICATORS
Licensure	<ul style="list-style-type: none"> ▪ State licensure/certification requirements and categories ▪ State relicensure/recertification requirements
Teacher preparation program approval	<ul style="list-style-type: none"> ▪ Criteria used to approve teacher preparation programs ▪ Method used to approve/renew approval of teacher preparation programs
School accountability system	<ul style="list-style-type: none"> ▪ Type/use of support services ▪ Rewards for meeting/exceeding expectations ▪ Consequences for not meeting expectations
Recruitment	<ul style="list-style-type: none"> ▪ Methods used by the district to recruit new teachers ▪ Availability of alternative paths to the classroom
Hiring	<ul style="list-style-type: none"> ▪ Standards hired teachers must meet ▪ Percentage of teachers hired who meet these standards ▪ Percentage of district budget dedicated to recruiting/hiring ▪ Colleges/universities from which most teachers are hired ▪ Quality of professional staff involved in recruiting/hiring ▪ Professional quality of the hiring process ▪ Hiring calendar: dates by which teachers must announce retirement, on which applications for teaching positions are due ▪ "Portability" of incoming teachers' experience, benefits, etc.
Placement/assignment	<ul style="list-style-type: none"> ▪ Method by which teachers are assigned to schools ▪ Procedures by which veteran teachers are reassigned within the system ▪ Incentives for placement in high-needs schools/subject areas/grade levels
Induction/early professional development	<ul style="list-style-type: none"> ▪ Percentage of new teachers who participate in a formal induction program ▪ Length/depth of induction programs ▪ Percentage of new teachers assigned a mentor teacher or support team ▪ Length/depth of mentoring ▪ Incentives provided for mentor teachers/support teams ▪ Training provided for mentor teachers/support team ▪ Ratio of mentors to new teachers ▪ Quality measures for professional development activities

EXTERNAL FACTOR	STRUCTURE AND PROCESS INDICATORS
Continuing/ongoing professional development	<ul style="list-style-type: none"> ▪ Types of professional development available ▪ Percentage of district budget devoted to professional development ▪ Percentage of teacher time devoted to professional development ▪ School/teacher flexibility in choosing professional development ▪ Cooperative relationships between district and providers of professional development ▪ Time available to teachers for planning, professional development, and working with other teachers ▪ Results of evaluations of district professional development efforts
Compensation	<ul style="list-style-type: none"> ▪ Components of district salary schedule ▪ Starting salary for new teachers with no experience and an undergraduate degree ▪ Incentives offered to all new hires ▪ Incentives offered to specific subgroups of new hires ▪ Incentives offered to teachers based on the following circumstances: <ul style="list-style-type: none"> • Acceptance of certain kinds of assignments • Performance of school or students • Other evidence of accomplished teaching
Work environment	<ul style="list-style-type: none"> ▪ Quality measures for professional development activities ▪ Level of teacher control over resources, professional development, etc. ▪ Access to resources for special projects, professional development, and other professional needs ▪ Facilities use/maintenance ▪ Percentage of teacher time spent on instruction ▪ Percentage of teacher time dedicated to individual and common planning ▪ Opportunities for leadership by teachers ▪ Quality of principals' leadership ▪ Percentage of total budget devoted to classroom teaching ▪ Number of students taught by each teacher (student load)
Evaluation	<ul style="list-style-type: none"> ▪ Establishment of clear goals/expectations for teachers ▪ Measurement/monitoring of teaching success and growth ▪ Use of evaluation data to promote improvement ▪ Use of evaluation data to terminate poor teachers
Resource deployment	<ul style="list-style-type: none"> ▪ Percentage of system employees involved in instruction vs. administration ▪ Organizational structure of central office—program based vs. school based ▪ Alignment between budget and district objectives ▪ Staff/services devoted to district objectives
Information	<ul style="list-style-type: none"> ▪ Accessibility of data aggregated by school

COMMUNITY IMPACT LENS

Guiding questions to help determine the impact of other players on teacher quality

- What is the relationship between the school board and school system?
- What is the relationship between the teachers union and the school system?
- How responsive are local college- and university-based teacher preparation programs to the hiring needs of the district?
- How responsive are local colleges and universities to the professional development needs of district teachers?
- How well do parents support the work of teachers?
- What steps have area businesses taken to support quality teaching?
- What steps have area community organizations taken to support teacher quality?
- Does the local media cover teacher quality issues?
- How aware is the public of teacher quality issues?
- To what extent do local residents participate in efforts to discuss or improve teacher quality?

EXTERNAL FACTOR	COMMUNITY IMPACT INDICATORS
School board	<ul style="list-style-type: none"> ■ Public support/advocacy of school system by board ■ Degree of input by school employees in board deliberations
Teachers unions	<ul style="list-style-type: none"> ■ Terms of state/district agreements with teachers unions ■ Level of respect/trust between school system and teachers unions
College and university programs	<ul style="list-style-type: none"> ■ Number of graduates of area preparation programs each year ■ Number of graduates of area preparation programs accepting jobs in the district each year ■ Accreditation of teacher prep programs from which most area teachers graduate ■ Graduation requirements/standards of teacher prep programs from which most area teachers graduate ■ Number of graduates of area preparation programs each year with characteristics deemed high priority by the district (for example, specialists in shortage content areas, minority candidates) ■ Number of such graduates accepting jobs in the district each year ■ Number of student teachers provided by area programs each year ■ Number of district teachers enrolled in area college and university programs each year (degree programs and other kinds of professional development) ■ Number/quality of college/university programs that place faculty in K–12 schools as consultants and/or in other positions that strengthen ties between university research and in-service practices ■ Number/quality of college/university programs that use in-service teachers to help design and teach courses for pre-service teachers ■ Evidence of other ways colleges/universities contribute to teacher quality
Parent involvement	<ul style="list-style-type: none"> ■ Teacher satisfaction with parent involvement/support as expressed on surveys, in focus groups, etc. ■ Forms such as parent report cards that allow teachers to alert and/or assess parents on how well they support their children’s education

EXTERNAL FACTOR	COMMUNITY IMPACT INDICATORS
Business involvement	<ul style="list-style-type: none"> ▪ Number of teachers and administrators participating in business-offered training/internship opportunities each year ▪ Business facilitation of programs in which mid-career and retiring professionals enter into the teaching profession ▪ Funding by businesses to support teacher quality
Media coverage	<ul style="list-style-type: none"> ▪ Percentage of stories focusing on teacher quality issues ▪ Quality and accuracy of teacher-related coverage ▪ Extent of coverage of teacher quality improvement efforts
Public awareness and involvement	<ul style="list-style-type: none"> ▪ Percentage demonstrating awareness of teacher quality issues ▪ Percentage rating improved teacher quality as a high community priority ▪ Percentage who volunteer in schools ▪ Percentage who serve in leadership positions in a school or community-related organization or initiative ▪ Number/diversity of residents participating in focus groups, town meetings, and other forums on teacher issues ▪ Citizen turnout for school board elections and school bond referenda
Community organization involvement	<ul style="list-style-type: none"> ▪ Number/diversity of community organizations adopting teacher quality as part of their agenda ▪ Provision of grants to teachers for special projects ▪ Community organizations providing professional development to teachers