NATIONAL COMPREHENSIVE CENTER FOR TEACHER QUALITY

THINKING SYSTEMICALLY: STEPS FOR STATES TO IMPROVE EQUITY IN THE DISTRIBUTION OF TEACHERS

An Action-Planning Workbook to Help Guide Regional Comprehensive Center and State Education Agency Conversation to Address the Inequitable Distribution of Teachers

LEARNING POINT Associates

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About the National Comprehensive Center for Teacher Quality

The National Comprehensive Center for Teacher Quality (TQ Center) is a resource to which the regional comprehensive centers, states, and other education stakeholders turn for strengthening the quality of teaching—especially in high-poverty, low-performing, and hard-to-staff schools—and for finding guidance in addressing specific needs, thereby ensuring that highly qualified teachers are serving students with special needs.

The TQ Center is funded by the U.S. Department of Education and is a collaborative effort of ETS, Learning Point Associates, and Vanderbilt University. Integral to the TQ Center's charge is the provision of timely and relevant resources to build the capacity of regional comprehensive centers to help states effectively implement state policy and practice by ensuring that all teachers meet the federal teacher requirements of the 2001 reauthorization of the Elementary and Secondary Education Act (ESEA), including those regarding the distribution of teachers.

The TQ Center is part of the U.S. Department of Education's Comprehensive Centers program, which includes 16 regional comprehensive centers that provide technical assistance to states and five content centers that provide expert assistance to benefit states and districts nationwide on key issues related to ESEA.

A listing of equitable distribution resources is available on the current TQ Center Educator Quality Resources list, as indicated by the **EDT** icon.

Addressing Inequity in Teacher Quality

Addressing the inequitable distribution of teachers is arguably the most important teacher quality issue today. Research consistently indicates that low-performing and/or high-poverty urban and rural schools are staffed with inexperienced and underqualified teachers at higher rates than their high-performing, low-poverty school counterparts.

Title I, Part A, Section 1111(b)8(C) of ESEA requires states to submit plans "to ensure that both schoolwide programs and targeted assistance schools provide instruction by highly qualified instructional staff" and "to ensure that poor and minority children are not taught at higher rates than other children by inexperienced, unqualified, or out-of-field teachers." Although all states wrote equity plans that were approved by the U.S. Department of Education as a part of their state highly qualified teacher (HQT) plans, early indicators from the second round of monitoring visits reveal that implementation of the equity plans varies by state; some states have not been able to implement the strategies put forth in their plans (all 50 states will be monitored by 2010). In addition, the equitable distribution of teachers continues to be a goal for states. Funding is available through the American Recovery and Reinvestment Act (ARRA) of 2009 to address teacher effectiveness, and the equitable distribution of teachers is one of the areas in which states must make assurances in order to receive funding from the State Fiscal Stabilization Fund program.

When devising plans to address inequities in the distribution of teacher quality, states must be aware that the goal of these plans involves more than just meeting the HQT provisions of ESEA. Namely, the purpose of the equity plans is to address inequities in teacher qualifications (including the percentages of inexperienced teachers) within and across schools with different concentrations of poor and minority students. In addition to focusing on the distribution of HQT characteristics across high-minority and high-poverty schools and districts, states also need to consider the level of teacher experience across districts and schools. For the purpose of these equity plans, comparing rates of highly qualified teachers is insufficient. States must go beyond distribution of high qualified teachers and compare the percentage of teachers who are inexperienced.

States, districts, and schools have an obligation to make concerted efforts to reduce the concentration of underqualified teachers, ensuring that all students—regardless of race, socioeconomic status, or geography—have access to high-quality teachers.

Steps for States: Improving Equity in the Distribution of Teachers

The inequitable distribution of teachers should be addressed systemically. States cannot devise strategies without first identifying areas of need related to the inequitable distribution of teachers. States should consider the following steps as they address inequity in teacher quality:

- Conduct a gap analysis of policies and practices included in the state equity plan versus policies currently being implemented.

  - Create a team at the state education agency (SEA) level to organize a statewide equity management and oversight infrastructure. States and districts need consistency in the development and implementation of strategies to address the inequitable distribution of teachers.

- Define variables used to measure equity and the distribution of teachers.

  - Determine the appropriate metrics for the state.

  - Provide guidance to districts on adapting state metrics for local use.

- Generate and report thorough and reliable data that specifically identify areas in need of equitable distribution. Accurately identify the districts and schools where the greatest inequities exist.

- Identify and develop targeted strategies, policies, and incentives that will decrease the amount of teacher turnover in these schools, ensuring that highly qualified, experienced teachers stay and that openings are filled with highly qualified, experienced teachers whenever possible.

  - Develop and implement appropriate new policies and practices that are systemic in nature and take into account the entire continuum of the educator's career.

  - Create optimal alignment and leverage between and among state and district policies and practices.

  - Involve stakeholders in planning strategies to address the inequitable distribution of teachers. Stakeholders include teachers; administrators; human resource specialists; state and local policymakers; local school board members; parents; and representatives from teachers unions, the business community, and teacher preparation programs.

  - Provide guidance to districts to help them address the equity issue locally. Offer assistance to districts in developing evaluation protocols and data collection systems that can be used to determine whether various incentives, policies, and strategies are having the desired effect. Explore the reasons for inequitable distribution with district and school personnel. The reasons may vary considerably from district to district, and appropriately targeting policies and incentives depends on a solid understanding of the factors contributing to the inequitable distribution of teachers. With this information, schools and districts will be able to determine successful strategies that should continue or be expanded and unsuccessful ones that should be eliminated.

  - Identify funding to support the incentives or programs that will help improve teacher distribution. Because one of the assurances for education funding under ARRA is for states to use the money for teacher effectiveness and equitable distribution, funding for new state strategies is available (see http://www.tqsource.org/arra/ for more information).

Purpose of This Workbook

The TQ Center designed this equitable distribution workbook to facilitate discussion between SEA and regional comprehensive center (RCC) staff. The workbook provides a process to take states and their RCC support staff through a series of steps that the TQ Center sees as vital to promoting equitable distribution. Through this workbook, users have an opportunity to develop plans to identify challenges to the equitable distribution of teachers in their states and brainstorm strategies and solutions to ensure the equitable distribution of teachers across and within districts and schools.

To make best use of this workbook for discussion and action planning, certain data should be readily available:

- The distribution of schools and districts that qualify for the state's current definition of *high-minority* and *high-poverty*
- Current data on the percentage and distribution of highly qualified and experienced teachers to demonstrate areas of greatest challenge
- Information on current policies or initiatives implemented to respond to these challenges, such as recruitment and retention incentives, programs designed to increase the number of available teachers (e.g., alternative preparation or grow-your-own programs), and professional development requirements and opportunities
- Outcomes data on the success of these efforts

Using This Workbook

This workbook is based on the following steps for states to systemically address the inequitable distribution of teachers:

- **Step 1. Conduct a gap analysis using state equity plans.** This component allows states to review the strategies developed in their written plans, the degree to which the plans have been implemented in their states and districts, and areas in which there are gaps between what states indicated they would do and what they are doing.
- **Step 2. Discuss the use of appropriate metrics.** This component provides an opportunity for states to discuss what *high-poverty*, *high-minority, experienced teachers,* and *inequitable distribution* mean in the context of their state and district populations.
- **Step 3. Understand how to collect and analyze the right data.** This component provides states with the opportunity to discuss the essential data needed to accurately identify areas in schools and districts with inequities in teacher distribution. This component includes how to acquire the data from local education agencies (LEAs) as well as how to use the data to make decisions about areas of need.
- **Step 4. Design strategies to address the inequitable distribution of teachers.** This component provides structure for states to discuss the kinds of policies and initiatives that are needed to address inequitable teacher distribution and determine whether they are currently in place, whether they need to be modified, and whether new policies and initiatives are needed.

Together these steps provide an opportunity for promoting effective dialogue regarding the equitable distribution of teachers. Each section of this workbook is designed to help states think through key components involved in identifying and rectifying inequitable distribution. The workbook provides tools for SEA and RCC staff to identify challenges and determine action steps to address these challenges.

Step 1. Gap Analysis

The goal of the following matrix is to identify policy and practice gaps. To do so, users should complete each column. **Column 1** provides a space for users to review the strategies listed in their equity plans and compare them to current state and district policies and practices (**Column 2**). In thinking systemically, users need to consider policies that both promote and hinder statewide equity in teacher quality. When gaps between state plans and current practice are identified, users should brainstorm about how to fill the gaps and how to revise or eliminate counterproductive policies and practices. In **Column 3**, users should indicate how the state is measuring the impact of the equity plan strategies in place. **Column 4** focuses on state and district policies and practices that are not mentioned in the equity plan that may support the equitable distribution of teachers. Finally, **Column 5** provides a space for users to brainstorm policies and practices that may be in place that hinder the equitable distribution of teachers and any action that can be taken to change the policies and practices.

An inequitable distribution of teachers can occur at various levels, so states should conduct gap analyses at state, district, and school levels.

Identifying Policy and Practice Gaps				
Strategy in Equity Plan	Current Status • Is the strategy in place? • If so, was the strategy funded? What supporting policies are in place to address the strategy? • If no, is the strategy still feasible in your state? • Is this an area to develop further?	How is the state agency measuring the impact of this strategy?	What are some other SEA and LEA policies that are in place that support the success of this strategy?	What are some SEA and LEA policies (both perceived and real) that impede the success of this strategy?

Step 2. Metrics to Define Equitable Distribution

Because of the varied nature of state and district populations, states and districts face unique challenges to the equitable distribution of teachers. The metrics used to define teacher distribution patterns include *high-poverty schools*, *high-minority school*s, and *experienced teachers*. The U.S. Department of Education has left the definitions of these metrics up to states to determine locally.

This first matrix provides states with examples of how SEAs and RCCs might define each variable (**Columns 1–3**), ranked by *least precise*, *more precise,* and *most precise*. The matrix also provides suggestions to states and districts on determining what equitable distribution of teachers should look like (**Column 4**) and how to measure the effectiveness of strategies to address the inequitable distribution of teachers (**Column 5**). These sections also are ranked by *least precise, more precise,* and *most precise*. Users should review these possible definitions before moving to the second matrix in this section.

	High-Poverty Schools	High-Minority Schools	Experienced Teachers	Defining Equitable Distribution	Measuring the Effectiveness of Strategies
Defining Variables and Measuring the Effectiveness of Equitable Distribution Strategies					
Least Precise	The state uses cut points created by dividing all schools in the state into quartiles and focusing efforts on the highest quartile.	The state uses cut points created by dividing all schools in the state into quartiles and focusing efforts on the highest quartile.	The state counts years of teaching as reflected in the state teacher database, which may not include teaching experience in other states or account for teachers who left teaching and later returned to the classroom.	The state examines the school-level percentage of highly qualified, experienced teachers within schools over time to see whether the percentages increase.	The state tracks the strategies that have been attempted in *districts* and determines whether improvements in distribution have occurred.
More Precise	The state or district examines the distribution of high-poverty students across schools and selects a cut point that makes sense, given the data.	The state or district examines the distribution of high-minority students across schools and selects a cut point that makes sense, given the data.	N/A	N/A	The state tracks the strategies that have been attempted in *schools* and determines whether improvements in distribution have occurred.

Defining Variables and Measuring the Effectiveness of Equitable Distribution Strategies					
	High-Poverty Schools	High-Minority Schools	Experienced Teachers	Defining Equitable Distribution	Measuring the Effectiveness of Strategies
Most Precise	The state or district considers the school-level distribution of teacher qualifications (highly qualified and experienced), turnover (measured by number of openings each year), and percentages of high poverty to identify schools with the greatest need.	The state or district considers the school-level distribution of teacher qualifications (highly qualified and experienced), turnover (measured by number of openings each year), and percentages of high minority to identify schools with the greatest need.	The state collects data in such a way that allows for counting the total number of years teachers have taught.	The state examines the school-level percentages of highly qualified and experienced teachers *separately* to determine whether or not percentages increase or decrease so that the state will know where to direct future efforts.	The state tracks which *teachers* received incentives or were otherwise specifically targeted and determines whether they moved to, stayed in, or left high-poverty, high-minority schools.

The second matrix for Step 2 is designed to help users think through their current definitions for equitable distribution metrics and determine whether their definitions are accurate. The questions in **Column 1** are designed to help states get started.

SEA representatives should keep in mind that populations vary from district to district within a state; therefore, districts within a state might have different cut points. States should encourage districts to use locally defined cut points when needed to determine equitable distribution at both the state and local levels.

Accuracy of Current Definitions for Equitable Distribution Metrics	
How does your state currently identify *high-poverty schools* for strategic assistance with the distribution of teachers? • Are you satisfied that your state is identifying all schools that should be targeted for assistance? • If not, what are some next steps your state can take to more accurately identify schools in need of assistance?	
How does your state currently identify *high-minority schools* for strategic assistance with the distribution of teachers? • Are you satisfied that your state is identifying all schools that should be targeted for assistance? • If not, what are some next steps your state can take to more accurately identify schools in need of assistance?	
How does your state currently define *experienced* teachers for equitable distribution purposes? • Does this meet your state or district needs? • If not, what are some next steps your state can take to more accurately identify experienced teachers?	
How will your state determine whether teachers are *equitably distributed* within and across schools and districts in your state? • Does this meet your state or district needs? • What might be a more appropriate way of determining this?	
How will your state determine which strategies and incentives have been most effective in improving the distribution of teachers within your state? • Does this meet your state or district needs? • What might be a more appropriate way of determining this?	

Step 3. Data Collection and Analysis

There are two key elements to the data for addressing the inequitable distribution of teachers. The first is determining what data your state needs to collect and ensuring that your state's data system can collect them. The second is analyzing the data to determine how to target resources to the schools and districts in need of intervention and assistance as identified by the state.

Data Collection

States are at different stages in the process of building and supporting data collection and analysis infrastructures. It is important, therefore, to first take stock of current data collection infrastructure in your state. Before determining how the data collection process should proceed for analyzing the distribution of classes taught by highly qualified and experienced teachers, there are a few data-quality essentials to consider. Data should be accurate, verified, complete, clean, defined, organized, and appropriate for longitudinal analysis. States also should consider the following questions:

- How many years of data exist in an electronic database format?
- Is there a unique statewide longitudinal identifier for each teacher?
- What variable is used for teacher experience?
- Can state data systems track teacher assignments over time to determine which schools face problems with turnover and where teachers go when they transfer?
- Is there a database that can show course-level teaching assignments to determine how many out-of-field teachers exist?
- What information does your state currently collect? This might include the following:
    - Certification
    - Education level
    - Completion of specific coursework or required professional development
    - Credentialing process
    - Participation in induction program
    - Teacher scores on praxis or other required certification tests
    - Teacher effect scores
- How are the data collected?
- Is there any reason to believe that the data are inaccurate?

Paired with the questions outlined on page 9, the questions in **Column 1** are designed to help users think through data collection and management in their state and/or district. If the answer is unknown, users should indicate which department is responsible for determining the information, and if possible, a contact person for the following questions:

Data Collection and Management	
What data are needed for the following purposes? • To determine which schools and districts to target • To determine which specific teachers to target [e.g., hard-to-fill positions such as secondary mathematics and science teachers, special education teachers, and teachers of English language learners (ELLs)] • To determine whether policies, incentives, and interventions are having an impact on teacher distribution	
Do you have the data necessary to understand the specific challenges to equitable distribution in your state and/or district?	
What are the main obstacles that are arising with regard to data (e.g., collection, reporting, verification)?	
Do you need to create new data systems or modify your data elements or procedure? Who should be involved in this process?	

Data Analysis

Once the necessary data are available, the following questions will help users think through what the data mean. Using these data, states and districts will be able to brainstorm strategies to address the inequitable distribution of teachers. The questions in **Column 1** are designed to help users think through the analysis of data their state has collected. If the answer is unknown, users should indicate which department is responsible for determining the information, and if possible, a contact person for follow-up.

Considering the Data	
In which areas do your state's highest rates of out-of-field teaching occur? • Geographical regions • Particular districts • Particular schools • Grade levels • Content areas • Teachers of ELLs or special education teachers	
What are some of the reasons that out-of-field teaching occurs in these areas?	
What are the main obstacles that are arising with regard to data (e.g., collection, reporting, verification)?	
What are some of the working conditions that contribute to the recruitment and retention of teachers for these areas?	

Step 4. Strategies to Address the Inequitable Distribution of Teachers

Strategies Matrix

The strategies matrix walks users through a process to develop strategies that can address inequities in teacher distribution.

Column 1 of the matrix provides space for RCC and SEA staff to brainstorm strategies to help meet the equitable distribution needs in their states, as identified through the previous sections of the workbook. Examples of strategies include the following:

- Create incentives (monetary and nonmonetary) to attract and retain teachers and school leaders in hard-to-staff schools.
- Redesign job responsibilities to parallel compensation, including job-sharing and part-time positions for retired or semi-retired teachers willing to teach in hard-to-staff schools or shortage subject areas.
- Increase the local supply of teachers.
- Improve new teacher induction and professional development to increase teacher qualifications and enhance teacher quality.
- Redesign teacher professional development and school schedules so learning opportunities are job-embedded, collaborative, data-driven, and focused on student instructional needs.
- Consider compensation reform—reward factors related to contribution and effectiveness.
- Ensure a fair and reliable teacher evaluation system.

Column 2 is designed for states to detail the desired effects of the strategy from Column 1. The matrix encourages users to be explicit about the desired effects and the necessary conditions. This should be completed for each strategy mentioned. Some examples of desired effects include the following:

- Equalize the quality and quantity of highly qualified applicants to schools and positions.
- Reduce turnover in high-turnover schools or positions.
- Redistribute some resources from schools with high teacher salaries to those with low teacher salaries.
- Equalize applicants to schools and positions, and fill vacancies with high-quality teachers.
- Improve teacher quality and increase teacher qualifications in some schools or positions.

Column 3 provides space for states to describe how the strategy and desired effect addresses a specific state need. This should be completed for each strategy mentioned. Examples include the following:

- Incentives are applied strategically to schools or positions with low numbers of highly qualified applicants or high turnover.

- Incentives may improve recruiting and hiring practices and increase the retention of high-quality teachers.

- Novice teachers may be more effective when given fewer responsibilities and may stay longer in a position.

- More high-quality (localized) paths to certification increase the supply of available high-quality teachers.

- Professional development is focused on schools or positions with lower quality and less qualified teachers and works to increase teacher quality and effectiveness.

- Teachers who receive targeted, high-quality professional development are more likely to stay in their positions (instead of moving to other schools or positions).

In **Column 4**, users are challenged to list the actual steps needed at the state level to execute each strategy. **Column 5** requires users to think about the means of measuring progress—the kinds of data that states would need to collect and analyze in order to measure the effectiveness of the proposed strategies. Users also should determine how progress toward equitable distribution can be assessed. Finally, **Column 6** provides space for users to brainstorm the types of resources and support that states and/or districts will need in order to go through the process to implement their new strategies for addressing the inequitable distribution of teachers. This also includes resources and supports needed in order to determine and implement means of measuring progress.

Equitable Distribution Strategies Matrix

Strategy	Desired Effect	Necessary Conditions to Ensure Equity in Teacher Quality

Steps for States	Means of Measuring Progress

Equitable Distribution Strategies Matrix

Strategy	Desired Effect	Necessary Conditions to Ensure Equity in Teacher Quality

National Comprehensive Center for Teacher Quality

Steps for States	Means of Measuring Progress

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