

Moving Toward Equity Data Review Tool



Getting Started With Equitable Access Data

How to Use This Tool

The *Moving Toward Equity Data Review Tool* and supporting resources are designed to be used electronically by a small internal team of state education agency staff to identify available and relevant equitable access metrics, analyze the policy implications of these data, and present the findings to a variety of audiences effectively. These individuals may come to the conversation with varying levels of familiarity with data analysis.

You can download the document and its supporting resources, open them on your computer, and then complete the activities as a group.

Note: Many of the tool's activities require a computer. Therefore, it is not recommended that the collection of activities be completed using printed copies.

Online Version

- *Moving Toward Equity Data Review Tool*
http://www.gtlcenter.org/data_review_tool

Supporting Resources

The *Moving Toward Equity Data Review Tool* was created for use with the following resources:

- Equitable Access: Example Metrics
http://www.gtlcenter.org/example_priority_metrics
- Equitable Access: Sample Data (Excel file)
http://www.gtlcenter.org/sample_data
- Equitable Access: Sample Data Codebook
http://www.gtlcenter.org/sample_data_codebook
- Equitable Access: Sample Data Displays
http://www.gtlcenter.org/sample_data_displays

Companion Resources

- *Moving Toward Equity: Stakeholder Engagement Guide*
http://www.gtlcenter.org/stakeholder_engagement_guide
- *Moving Toward Equity: Root-Cause Analysis Workbook*
http://www.gtlcenter.org/root_cause_analysis

GTL Center staff are available to provide SEAs with direct technical assistance in using this tool and other resources, including stakeholder engagement tools and the *Talent Development Framework for 21st Century Educators: Moving Toward State Policy Alignment and Coherence*. (http://www.gtlcenter.org/talent_development_framework). For more information, please contact Ellen Sherratt at esherratt@air.org.

Moving Toward Equity Data Review Tool: Getting Started With Equitable Access Data

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Introduction

On July 7, 2014, the U.S. Department of Education launched the Excellent Educators for All initiative to help states and school districts ensure that all students have equitable access to excellent educators. This initiative is based upon the results from several recent studies from the Institute of Education Sciences (IES)^[1] and data from the U.S. Department of Education’s Office for Civil Rights^[2] demonstrating that inequities in access to great teachers and leaders, or equity gaps, continue to persist across the United States. Students of color, from low-income families, from rural communities, with disabilities, with limited English proficiency, or who are behind academically are less likely than their peers to have access to great teachers and school leaders. The causes of these inequities vary by place and context, with numerous policy, practice, economic, and sociocultural factors at play. Because of the multiple causes of inequities in access to great teaching and leading, it is crucial that a robust menu of high-quality metrics be collected and analyzed to support the development of policy solutions.

The Excellent Educators for All initiative calls for each state to submit a State Plan to Ensure Equitable Access to Excellent Educators describing the steps that state education agencies (SEAs) will take to ensure that students from low-income families and students of color are not taught at higher rates than other students by inexperienced, unqualified, or out-of-field teachers. In his July 2014 letter to Chief State School Officers,^[3] Education Secretary Arne Duncan stated that “to prepare a strong plan, each SEA will analyze what its stakeholders and **data** [emphasis added] have to say about the root causes of inequities.”

The *Moving Toward Equity Data Review Tool* provides step-by-step considerations to help your SEA prepare to engage in a collaborative process to identify available and relevant equitable access metrics, analyze the policy implications of these data, and present the findings to a variety of audiences effectively.

About This Tool

The *Moving Toward Equity Data Review Tool* and its supporting resources are intended to help education leaders understand and assess equitable access data to support a root-cause analysis and, ultimately, draft a State Plan to Ensure Equitable Access to Excellent Educators. Assessment of state data is vital to assess the scope of equity gaps, determine the root causes behind these equity gaps, and address those challenges. The activities in this tool introduce relevant metrics, increase staff capacity for analyzing equitable access data, and provide tools to communicate what the data suggest about the equitable access challenges in your state.

^[1] The IES brief outlining these studies is available online (<http://ies.ed.gov/ncee/pubs/20144010/pdf/20144010.pdf>).

^[2] This data snapshot from the Office for Civil rights is available online (<http://www2.ed.gov/about/offices/list/ocr/docs/crdc-teacher-equity-snapshot.pdf>).

^[3] The letter to Chief State School Officers from Secretary Duncan is available online (<http://www2.ed.gov/policy/elsec/guid/secletter/140707.html>).

Overall Instructions

This tool is structured around a number of guiding questions and organized by specific activity goals into the following three sections:

- Section 1: Considering Equitable Access Example Metrics
- Section 2: Interpreting Your State’s Equitable Access Data
- Section 3: Using Your State’s Equitable Access Data

These sections provide guiding questions that are intended to help education leaders:

- Deepen their understanding of equitable access metrics.
- Strengthen their capacity to analyze equitable access data and the story that these data tell.
- Overcome common mistakes made when drawing inferences from equitable access data.
- Effectively communicate findings from analysis of equitable access data.
- Plan and track progress as they work to ensure that *all* students have equitable access to effective teaching and leading.

Section 1: Considering Equitable Access Example Metrics

The first stage of reviewing equitable access data involves identifying and selecting the metrics that will be used in your state and the data required to develop them, preparing to analyze data and assess quality, and creating new equitable access metrics. This section consists of three steps.

Step 1.1: Identify Equitable Access Metrics

First, consider what equitable access metrics you wish to use, regardless of the data available (what data you would ideally want to use to develop these metrics). Next, determine what data are available at present and how these data are managed.

Begin by reviewing the supporting worksheet titled *Equitable Access: Example Metrics* (http://www.gtlcenter.org/example_priority_metrics). This worksheet presents examples of equitable access metrics that states and districts could use. Consider the following questions:

1. Which metrics are most meaningful in your state's context? What data are required to develop these metrics?
2. What data currently are available in your state? Are any data necessary to develop meaningful metrics not available? What data that are available but not necessary still have a place in your state's equity planning?
3. What are the collection methods for key data identified? How are these data stored? Do these data need to be combined, and is this combination possible? Who is responsible for maintaining the key data?
4. What specific steps would your state need to take to obtain data that are necessary to develop meaningful metrics but are not available?
5. What would be a meaningful way to consider these metrics by school poverty status? For example, is comparing the percentage of teachers exhibiting these attributes at high-poverty and low-poverty schools (the top and bottom quartile of free or reduced-price lunch eligibility) meaningful? Is there another approach that could be more meaningful? Does the same hold true for considering equitable access for minority, low-performing, special needs, English language learner, or other populations of students?
6. Would it be meaningful to consider these metrics by rural communities or other geographic and regional contexts?
7. Are there metrics that are missing from the *Equitable Access: Example Metrics* worksheet? If so, add them in the space provided on the worksheet.

Step 1.2: Analyze Data and Assess Quality

Note: Those with expertise in data analysis may want to skip this section because they already will be familiar with the topics covered.

Bearing in mind that it may be difficult to immediately access all of the available data and put these data in a format that allows all elements to be easily analyzed, this step uses sample data to allow you prepare to analyze data and assess quality. If you are unfamiliar with data analysis or it has been a long time since you reviewed data, this step may be particularly helpful. Your own state’s educator effectiveness data will be analyzed in Section 2.

Begin by reviewing the supporting Excel data file titled *Equitable Access: Sample Data* (http://www.gtlcenter.org/sample_data) and the corresponding *Equitable Access: Sample Data Codebook* (http://www.gtlcenter.org/sample_data_codebook). The data in these resources represent three hypothetical districts that are adjacent geographically: Districts A, B, and C.

As a team, look at the data for hypothetical Districts A, B, and C to conduct a preliminary analysis of these sample data and assess the quality. Then respond to the following questions about data anomalies or challenges:

1. Are there any values that seem illogical or unusual? How might this be explained?
2. How complete is the Excel data file? Are there any values missing?
3. Are any variable definitions in the *Codebook* unclear? Is there any additional information you would need to know about how a particular variable is defined (e.g., the precise definition of “alternative certification”)?
4. In District A, value-added measurement (VAM) data are disaggregated by reading and math, while in Districts B and C these data are presented in the aggregate. Do you think disaggregating data by subject area is necessary or helpful? Why or why not?

Next, respond to the following questions about analyzing trends and patterns:

1. Which district is the most high-poverty? The least high-poverty?
2. How do teachers’ effectiveness ratings compare to the poverty levels of their schools? VAM ratings?
3. Which district has the highest percentage of teachers with three years of experience or less?
4. For District A, what can you conclude from the retention data? What does this information tell you about equity gaps in this district, if anything?
5. For District B, are the inequities clearer when you look at the data for educator effectiveness or experience? What can you conclude from these data?
6. For District C, are the inequities the worst at the high school, middle school, or elementary school level?

After completing your review of the sample data, consider the following questions:

1. Now that you can see how some of the example metrics might appear in a dataset, has your view on which are most meaningful changed from Step 1.1?
2. Is any important information missing from the data? How might such information affect your conclusions about equity gaps in Districts A, B, and C?

Step 1.3: Create Equitable Access Metrics

If your state has not already done so, it is time to create, revise, or develop new equitable access metrics. One option, though not the only one, is to divide districts into quartiles by the percentage of students receiving free or reduced-price lunch as well as by the percentage of students from minority backgrounds. For each district, report the teacher quality metrics. Then simply present the percentage of districts by quartile characterized by the teacher quality metrics selected. Finally, do the same for school leaders. Several states in earlier teacher equitable access plans used this approach.

Using Deciles

Other approaches for your state’s consideration include presenting poverty and minority data by deciles rather than quartiles. For those who may be unfamiliar, a decile is similar to a quartile but separates the data into 10 equal parts instead of four. So the “highest minority” schools using deciles would be the 90th percentile and above, rather than the 75th percentile and above.

Dividing the data into more, and thus smaller, groups allows you to more precisely distinguish schools. This approach is particularly helpful when there is little variation in your available data. For example, if all schools in a particular district have at least 75 percent of their students in poverty, labeling the 75th percentile and above as “high poverty” is less meaningful than using the 90th percentile and above. Put another way, there would be less of a difference between schools in the 75th and 25th percentiles than there is between the 10th and 90th percentiles. Therefore, if there is less variation in your data, deciles will be useful.

On the other hand, if there is plenty of variation in your data, quartiles are fine. In fact, because deciles inherently create smaller groups, it may be less desirable to use them if distinguishing schools is not an issue. In fact, as the group gets smaller, the label “high-poverty” begins to include less schools and may leave out schools that should be included in that category.

In the end, the decision of whether to use quartiles or deciles (or another percentile) is subjective. The context of your state and the nature of your poverty and minority populations, as well as personal preference, will likely determine which is used.

Example: New York

Table 1, from the New York 2006 equity plan, organized local education agency (LEA) poverty rates by deciles. This is one illustration of how deciles could be used to display these data.

Table 1. New York Data

Table 2 Teacher qualifications by LEA poverty decile		
Poverty decile of LEAs (N = 792 LEAs)	Percent of core classes <u>not taught</u> by highly qualified teachers	Percent of teaching assignments <u>not taught</u> by appropriately certified teachers
1 (highest poverty rate)	18	18
2	16	16
3	9	9
4	3	3
5	4	4
6	2	2
7	2	2
8	2	2
9	2	2
10 (lowest poverty rate)	2	2
All deciles	7	7
Includes 792 LEAs that had enrollment and poverty data. Excludes BOCES. <i>Teaching assignments not taught by appropriately certified teachers</i> include approved “incidental” teaching that is permitted by State regulations when there are demonstrated teacher shortages. Percentages are the same in both columns although they are based on different measures.		

Source: New York State Department of Education

Section 2: Interpreting Your State’s Equitable Access Data

The second stage of reviewing equitable access data involves interpreting your state’s equitable access data and identifying the policy implications that should inform your state’s equitable access plan. This section consists of two steps.

Step 2.1: Examine Available Data

Note: It is ideal that those with expertise in data analysis be present during this step to provide expertise and assistance to those with relatively little experience analyzing data.

With your own state’s data and metrics sufficiently prepared, take a deeper dive into analyzing what it means for equitable access in your state. You may rely on the data profiles provided by the U.S. Department of Education or use your own state data. If your state’s data are not available or sufficiently prepared for analysis, you may explore these items using the sample data in the supporting document *Equitable Access: Sample Data* (http://www.gtcenter.org/sample_data) and refer to Districts A, B, and C.

First, take stock of your data. As a team, consider the following general questions:

1. Were your data collected at the district level? The student level? The classroom level?
2. Are your data disaggregated by subject area and grade level?
3. Are any variable definitions unclear? Is there any additional information you need to know about how a particular variable is defined?
4. Are there any values that seem illogical or unusual? How might this be explained?
5. How complete is your data set? Are there any values missing?
6. Are you familiar with all federal or state laws on protecting the privacy of student data, in particular the Family Educational Rights and Privacy Act (FERPA)? Does your state have any internal controls in place that should be considered?

Next, consider the quality and comprehensiveness of your data:

1. What information do you have available that leads you to trust the accuracy of the data?
2. Do you have any reason for concerns about the accuracy of the data? Can something be done to improve the accuracy of the data for the future?
3. Data quality is often considered on a continuum, and no data are of perfect quality. It is therefore important to acknowledge any limitations or assumptions at the outset. Given this, do you have any other questions or concerns about the quality of your state’s data?

Finally, analyze your data and the story behind it. Consider the following questions:

1. Which districts in your state are the most high-poverty? The least high-poverty? Which have the most and least students from minority backgrounds?
2. How does each teacher quality or principal quality metric compare across districts when broken down by student poverty minority status?

3. How do *the most meaningful metrics* that you identified earlier compare across districts when broken down by poverty and minority status?
4. Are the trends that you see with different metrics aligned with or in conflict with one another? (e.g., are these the same districts doing best/worst for each metric, or are some districts strong according to certain metrics and other districts strong in terms of other metrics?) If the different metrics do not depict similar results, how can this contradiction be explained (e.g., demographic trends, recent policies)?
5. What patterns do you see at the regional level? What patterns do you see at the high school, middle school, or elementary school levels? What patterns do you see among high-performing or low-performing districts? What other patterns do you observe?
6. How do the trends above apply to your state's principals? Are the trends the same or different than the observed teacher trends?
7. Are there specific data points relating to students with special needs, English language learners, rural students, career and technical education, or other specific subgroups that ought to be explored further?

Step 2.2: Using Quantitative Data to Develop Practical Solutions

Given your state's available equitable access data, use Table 2 as a means to connect the quantitative data to practical solutions for addressing equitable access challenges in your state. If you have teacher supply-and-demand reports or other workforce reports in your state, you also may want to consult them.

Equitable Access Challenges

Note that equity gaps can be the result of challenges in the pipeline (i.e., expected supply of new teachers), challenges with recruitment to specific schools and districts, challenges with performance effectiveness, or challenges with retention. The policy solutions that are appropriate to address equity gaps depend on the source and nature of the challenges.

Using the descriptions in Table 2, consider if your available data indicate that these challenges are facing your state, in particular for high-poverty and high-minority districts.

Table 2. Challenges Leading to Equity Gaps

Challenge 1: Challenges in the Teacher and School Leader Pipeline Using available data on your state’s supply of teachers and school leaders (e.g., the number of newly certified teachers, the number teachers that recently completed an education program), consider if your state has a limited hiring pool of high-quality applicants. Does this limited pool result in shortages that disproportionately impact high-poverty or high-minority schools or districts?		
Evidence That This Is a Challenge in Your State’s High-Poverty Schools or Districts	Evidence That This Is a Challenge in Your State’s High-Minority Schools or Districts	Notes
	<ul style="list-style-type: none"> <i>The majority of teachers completing in-state education programs receive assignments in low-minority districts.</i> 	

Challenge 2: Challenges in Teacher and School Leader Recruitment Using available data on the hiring of teachers and school leaders (e.g., the number of applicants per vacancy, recruiting dollars spent), consider if some schools or districts are chronically unable to recruit teachers to fill open slots. Is this particularly an issue for high-poverty or high-minority schools or districts?		
Evidence That This Is a Challenge in Your State’s High-Poverty Schools or Districts	Evidence That This Is a Challenge in Your State’s High-Minority Schools or Districts	Notes
<ul style="list-style-type: none"> <i>The high-poverty schools in your state have a consistently lower number of applicants per vacancy.</i> 		

Challenge 3: Challenges With Teacher and School Leader Effectiveness Using available data on measures of teacher and school leader effectiveness (e.g., measures of student growth, teacher/leader evaluation results), consider what schools and districts employ the most effective teachers. How effective are teachers in high-poverty or high-minority schools in particular?		
Evidence That This Is a Challenge in Your State’s High-Poverty Schools or Districts	Evidence That This Is a Challenge in Your State’s High-Minority Schools or Districts	Notes
	<ul style="list-style-type: none"> <i>Leaders rated effective on multiple measures are disproportionately working at low-minority schools.</i> 	

Challenge 4: Challenges With Teacher and School Leader Retention

Using available data on teacher and leader retention and attrition (e.g., the number of teachers with renewed contracts, the number of leaders voluntarily leaving the profession), consider if your state has a problem retaining effective teachers. Is this problem disproportionately large at high-poverty or high-minority schools or districts?

Evidence That This Is a Challenge in Your State’s High-Poverty Schools or Districts	Evidence That This Is a Challenge in Your State’s High-Minority Schools or Districts	Notes
▪ <i>Teachers rated effective on multiple measures are disproportionately teaching at low-poverty schools.</i>		

Based on the information gleaned in Table 2, consider the following questions:

1. What policy implications can you draw?
2. Does a clear story take shape when the evidence is considered as a whole, or is the picture muddled?

Consider ranking the challenges in order from least to greatest based on the evidence collected above:

1. What surprises you about this ranking?
2. Where is your state strong? Where is your state weak?
3. Are you able to depict trends over time and, if so, what do they show?

The Extent of Equitable Access Challenges

Next, use Table 3 to consider the extent to which inequities may exist across districts within the state, across schools within districts, or across classrooms within schools. The policy solutions that are appropriate to address equity gaps depend on the level where inequities are greatest. What types of inequities are you able to discern, based on your state’s equitable access data? Use the challenges in Table 2 as examples of the types of inequities you might observe at each level.

Table 3. Equitable Access Challenges by Level of School Governance

Level of School Governance	Evidence That This Level of the System Exhibits Inequities	Notes
Across Districts Within the State	<ul style="list-style-type: none"> ▪ <i>Pipeline and recruitment challenges are present statewide but primarily impact high-poverty districts.</i> 	
Across Schools Within Districts		
Across Classrooms Within Schools		

Based on the information gleaned in Table 3, consider the following questions:

1. What policy implications can you draw?
2. From the evidence above, is it clear at what level the most inequities exist?

It may be necessary to suggest, request, or require LEAs to collect and analyze their own equitable access data to inform strategic and targeted interventions that ensure all students have equitable access to effective educators. Consider the following questions as a team:

1. Do the LEAs in your state already collect equitable access data? Is doing so a good use of their resources? Which state-level questions cannot be answered without data from your districts?
2. How can your SEA support LEAs in collecting the data that they need and that the state needs to assess equitable access?
3. How do your LEAs currently use the data that they have?
4. How can your SEA support LEAs in better using the data that they have?
5. What types of policy questions are you still unable to address with these data? How problematic is that for your equitable access plan?

Working Within the Limits of Your State’s Data

Ongoing efforts should be made to continually improve the quality of your state’s equitable access data. But data limitations—as well as inherent challenges with measuring a construct as complex as quality teaching and leading—should not keep students in your state from having access to effective teaching and leading. If your state has not yet evaluated the validity of its educator evaluation system, if your state has found through an evaluation of the educator evaluation system that there are some problems with rating accuracy or consistency that must be addressed, or if for any other reason the quality of data collected by your LEAs or SEA is not yet where it needs to be, do not let these challenges immobilize your state. Rather, recognize the limitations and put together a plan for strengthening the quality of your state’s data so that, in time, these data will provide the information that state leaders need to ensure that all students have equitable access to effective educators.

Section 3: Using Your State’s Equitable Access Data

The third stage of reviewing equitable access data involves using your state’s actual data. This section consists of two steps: considering data displays and connecting your review with a root-cause analysis.

Step 3.1: Review Methods for Displaying Data

Review the supporting data file titled *Equitable Access: Sample Data Displays* (http://www.gtcenter.org/sample_data_displays) and consider approaches to present your state’s equitable access data in a way that will be meaningful to wider stakeholder groups, so that they can add to the interpretation of the data and its implications for your state’s equitable access plan.

Consider the following questions when reviewing the sample displays:

1. As compared to large data files, what do you like about each of these formats for displaying equitable access data? What do you dislike?
2. Think about several upcoming meetings or communication opportunities. What format for displaying your state’s equitable access data will be most meaningful and user-friendly for these audiences?
3. What types of data displays make sense to include in your state’s educator equitable access plan?

For more ideas on presenting your state’s equitable access data, review the *School District Demographics System* (<http://nces.ed.gov/surveys/sdds/index.aspx>), a Web-based resource offered by the National Center for Education Statistics. This resource provides an interactive example of how data can be used to identify statewide patterns.

After determining the data presentation approach that is needed in your state, create the presentation using your state’s data and then present it at stakeholder meetings. For detailed information about communicating about equitable access with stakeholders in your state, see *Resource 1: Four Key Steps for Equitable Access Communication Planning* (http://www.gtcenter.org/resource_1).

Step 3.2: Connect the Review of Data to a Root-Cause Analysis

For this step, it is suggested that you connect your review of data to a root-cause analysis and then develop your theory of action. This process is outlined in the *Moving Toward Equity Root Cause Analysis Workbook* (http://www.gtcenter.org/root_cause_analysis).

In addition, a companion stakeholder engagement resource guides an SEA team through the process of leading stakeholder groups through a root cause analysis. This resource is *Resource 7: Engaging Stakeholders in a Root-Cause Analysis* (http://www.gtcenter.org/resource_7).

Considerations for Reviewing Equitable Access Data With Stakeholders

When selecting the meeting formats for reviewing data with stakeholders, be sure to consider implications for reviewing data. Small groups of participants can partake in deep “data dives” or review large electronic data sets (e.g., each participant brings a laptop). In larger group settings, key data may be presented on a screen or small-group discussions at roundtables can allow for more detailed data reviews. If the data are particularly detailed yet clearly labeled and organized, it may make sense to distribute the data in advance of the meeting.

Following are some specific suggestions for engaging stakeholders when complex data are involved:

- **Check for Size.** Confirm that the data are large enough to read, particularly if they will be presented on a screen. If it is not clear that the screen will be large enough for all participants to see the data clearly, consider bringing printouts as well. Make sure the font size in the printouts is large enough to read.
- **Modify the Data Display.** Consider changing the data presentation format from how it came to you to a format that will be as user-friendly as possible for stakeholders to review. This time spent up front will prevent headaches later if participants are confused or frustrated by the data.
- **Start With a Presentation of the Data.** For most people, it is not immediately apparent what the numbers represent without an initial walk-through. Plan to repeat much of this information twice, depending on the level of familiarity that the stakeholder group has with data of this nature.
- **Give Participants Ample Time to Digest the Data.** Before rushing into a discussion of the story told by the data and the recommendations that should emerge, give participants time to think through the data themselves, with guiding questions that they can answer as individuals or in small groups.
- **Have Data Experts on Hand.** Especially where data literacy is lacking, consider providing each group with an expert who can guide the group in accurately exploring the data.
- **Divide and Conquer.** If the amount of data to dig through is extensive, break it into smaller pieces and assign small groups to tackle individual sections. Leave time for a whole-group share-out at the end so participants can weigh in on all sections in which they can lend perspective.
- **Highlight Key Data Points.** It is easy to get lost in spreadsheets of numbers, so consider highlighting in color or in bold the data that matter the most to the present discussion.

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