Center on
GREAT TEACHERS & LEADERS
at American Institutes for Research ■

INSIGHTS ON DIVERSIFYING THE EDUCATOR WORKFORCE

Data Tool for Practitioners

Insights on Diversifying the Educator Workforce: Data Tool for Practitioners

Guidebook

The **Insights on Diversifying the Educator Workforce: Data Tool for Practitioners** supports districts and states in identifying and visualizing diversity gaps across the entire educator career continuum, from "future teachers" graduating from high school and entering preparation programs, to preservice teachers entering the educator workforce, and growing and developing into experienced classroom instructors.

This tool fits within the already robust suite of tools that the Center on Great Teachers & Leaders (GTL Center) offers to help states and districts improve equitable access to excellent teachers for students of color and low-income students. This guidebook is a supplemental document to help users understand the purpose of the tool and the way to use it in context.

State education agencies, educator preparation programs (EPPs), regional education agencies, and districts can use the data tool to do the following:

- Reveal insights about the diversity of the educator workforce at the state, district, school, or EPP level.

- Identify the main drivers behind the existing disparities within the educator workforce.

- Pinpoint crucial points across the educator career continuum where implementing carefully selected strategies can help diversify the educator workforce and improve equitable access.

What Does *Diversity* Mean for the Educator Workforce?

The Data Tool supports users in examining educator workforce diversity gaps through three distinct lenses, enabling practitioners to develop a deeper understanding of the gaps in their systems by exploring the problem from multiple data-based perspectives.

Data Tool Lenses

- **The Development of Gaps** focuses on the educator career continuum, charting the differences between the number of White educators and educators of color in the workforce as they move from preservice to in-service roles over time.

- **The Minority Hiring Funnel** focuses on the educator career continuum specifically for educators of color, identifying the most significant moments of attrition.

- **Parity Gaps** focuses on the classroom, identifying racial disparities in composition between the student and teacher populations.

For each lens, users can enter their own data into the Data Tool and automatically generate an intuitive visualization to support interpreting the data, exploring potential root causes and planning next steps. The Development of Gaps and Minority Hiring Funnel lenses emphasize the importance of diversifying the workforce overall; whereas the Parity Gaps lens focuses on matching students with teachers of their own race. Research suggests that students benefit both from having teachers of their own race and from having access to a diverse array of teachers overall (for example Dee, 2004; Egalite, Kisida, & Winters, 2015; Meier, Wrinkle, & Polinard, 1999).

What Is the Data Tool?

The Data Tool is available as a set of three Excel workbooks, one for each different potential user role (see Table 1). Users enter their own data directly into the workbook, which automatically generates easy-to-understand graphs and charts that visualize disparities in educator workforce diversity. Each lens described above has a dedicated tab in each workbook. When a user enters data, the workbook immediately updates its visuals. In addition, when a user enters data into the "Development of Gaps" lens tab, the workbook automatically copies that data into the "Minority Hiring Funnel" lens tab, saving time and avoiding redundant data entry. The GTL Center expressly designed the workbooks to be fast, responsive, and easy to understand, regardless of a user's skill level in working with data or spreadsheets.

The Data Tool enables users to identify where and when gaps are occurring along the educator career continuum, but not *why* those gaps exist. The Data Tool should be a first step for users in a longer, data-rich conversation about diversity disparities and ways to address them. For example, if the Data Tool reveals that few people of color have enrolled in EPPs, practitioners may wish to use interviews, surveys, and other data to discover the circumstances and reasoning for that data point.

Who Should Use the Data Tool?

The Data Tool supports different types of roles at different levels of the education system: states, districts, schools, and EPPs. Each key player in the education system can gather valuable insight from the Data Tool. As each of these roles has its own priorities, the GTL Center has developed three versions of the Data Tool, each focusing for the areas of the teacher career continuum that are relevant to the different roles.

Figure 1 describes the way the different versions of the tool apply to different points on the teacher career continuum.

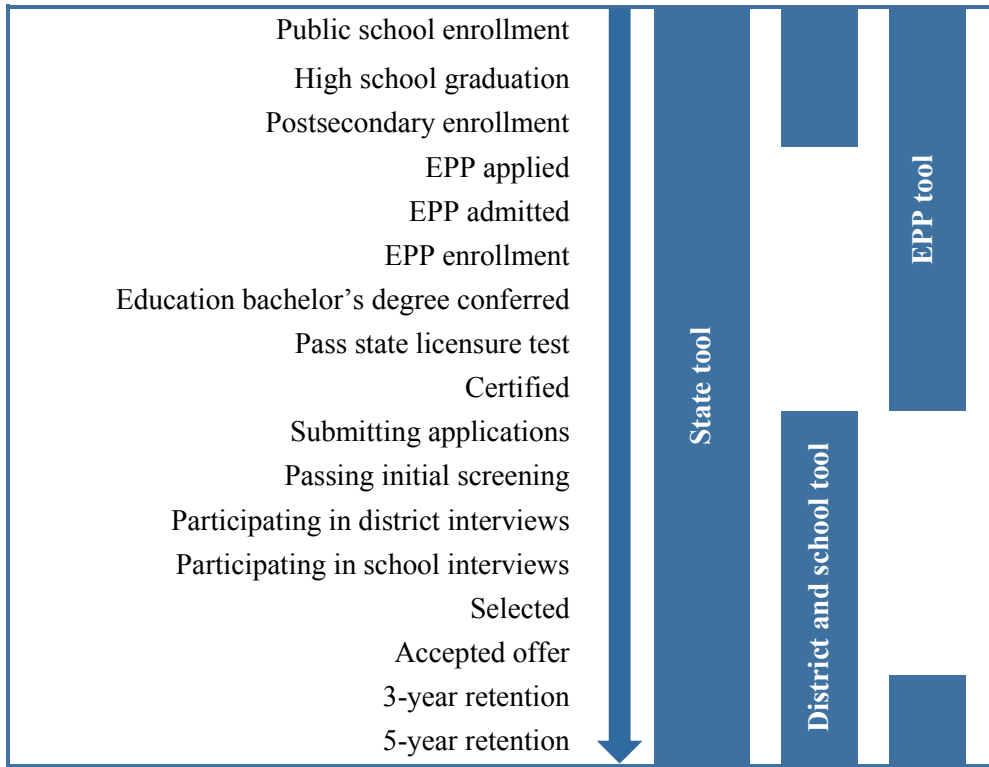**Figure 1. Data Tool Roles and the Career Continuum**

Table 1. Roles Description and Potential Data Types

Role	Focus within the continuum	Some data considered
State	All stages[a]	Graduation rates, EPP admissions, licensure test passage rates, teacher hiring, retention
District and school	Latter stages	Teacher hiring, retention
EPP	Early stages	EPP admissions, certification, retention[b]

[a]The state, as the main organizer of the education system, should understand what drives disparities within the system and the key stakeholders that the state should collaborate with to eliminate disparities.
[b]Current retention data can provide insights into programs on potential gaps in the future retention of candidates by race.

Using the Data Tool

This section describes each of the lenses in greater depth:

- Purpose
- Sample visual
- Guidance on how to interpret the data and visuals
- Questions for going deeper

Technical instructions on ways to input the actual data appear directly in the Excel workbooks.

The Development of Gaps Lens

Purpose

The Development of Gaps lens identifies the steps at which the largest discrepancies between White teachers and teachers of color occur across the educator career continuum.

Figure 2. Development of Gaps Visual

Development of Gaps
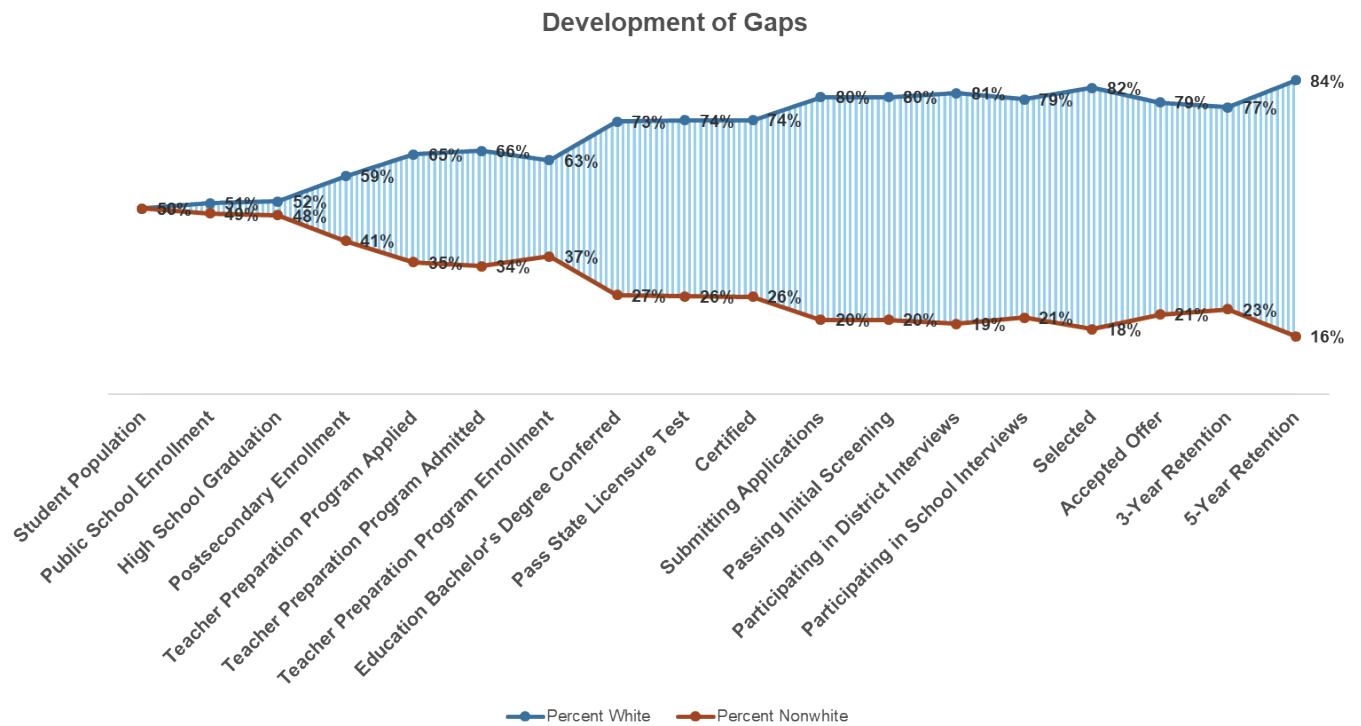
Beginning with the student population of the state, district, or school, this chart tracks each step of the educator pipeline and measures the difference between the number of White and non-White candidates at each point. If data are missing, the visual will display gaps according to available data.

About Missing Data

Having data available for each category is not necessary in order to obtain valuable insights. While having multiple data points is valuable, the Data Tool will provide useful visuals with limited data and point to open questions that the missing data leave unanswered.

Interpreting the Data

This Development of Gaps lens assumes that gaps build on one another. Each step in the educator pipeline inherits the disparity of the previous step and then maintains, widens, or narrows it. The steps in the pipeline at which gaps widen or narrow are of greatest interest.

Widening identifies steps at which gaps grow. Deeper analysis and exploration regarding these steps can lead to strategies and actions for preventing widening and eventually supporting narrowing. Narrowing identifies steps at which the gaps are closing. For example, in Figure 2 above, the gaps widen most significantly between enrolling in the educator preparation program and completing a degree, and between 3-year and 5-year retention, while the gaps actually narrow between being selected and accepting an offer. Practitioners can explore these steps to identify lessons and best practices that they can apply to steps that maintain or widen gaps.

The tool also produces a prioritization table (see Table 2) that ranks the steps of the pipeline in order of those that widen the gap most to those that narrow it most. For example, in the sample data in Figures 1 and 2, the "education bachelor's degree conferred" step represents the largest widening of the gap (21% difference), even though the gap is at that point smaller than the gap at the "5-year retention" step.

One caveat for using this visual and prioritization table is that the steps that demonstrate the greatest widening in diversity gaps may not be very responsive to change or within a particular user's locus of control. A user may have access to more levers and opportunities to address gaps that are lower on the prioritization table. Developing strategies to address lower priority steps that the user has more direct control over may produce greater impacts in such circumstances. Practitioners should carefully consider where among the steps that widen or maintain gaps they have the greatest leverage to influence change.

Table 2. Development of Gaps Prioritization Table

| Rank	Category	Gap Increase
1	Education Bachelor's Degree Conferred	21%
2	5-Year Retention	15%
3	Postsecondary Enrollment	14%
4	Submitting Applications	12%
5	Public School Enrollment	3%
6	Participating in District Interviews	2%
7	High School Graduation	1%
8	Pass State Licensure Test	1%
9	Certified	0%
10	Passing Initial Screening	0%
11	Teacher Preparation Program Enrollment	-1%
12	3-Year Retention	-3%
13	Teacher Preparation Program Applied	-3%
14	Participating in School Interviews	-3%
15	Accepted Offer	-8%

Questions for Going Deeper

- Where in the pipelines are the disproportionalities between White and non-White educators most severe?

- What types of strategies may be impactful for closing these gaps at these particular stages of the pipeline?

- Which of the steps at which the gap develops can be impacted most, given your role and scope of control?

- What additional quantitative and qualitative data can be collected (or are already available) to shed light on the reasons for the gaps between White and non-White candidates and teachers at the steps that are prioritized by the tool?

Minority Hiring Funnel

Purpose

This Minority Hiring Funnel lens focuses on the number—not percentage—of candidates of color at each step of the educator pipeline. The lens reveals the steps in the pipeline result in the greatest minority teacher attrition. The visual displays in Figure 3, below, illustrate the way the total population of candidates of color shrinks, grows, or remains the same through each step of the pipeline. Because this figure is taken from the district and school versions of the tool, it focuses only on the later steps of the pipeline.

Figure 3. Minority Hiring Funnel Visual (School Role Version)
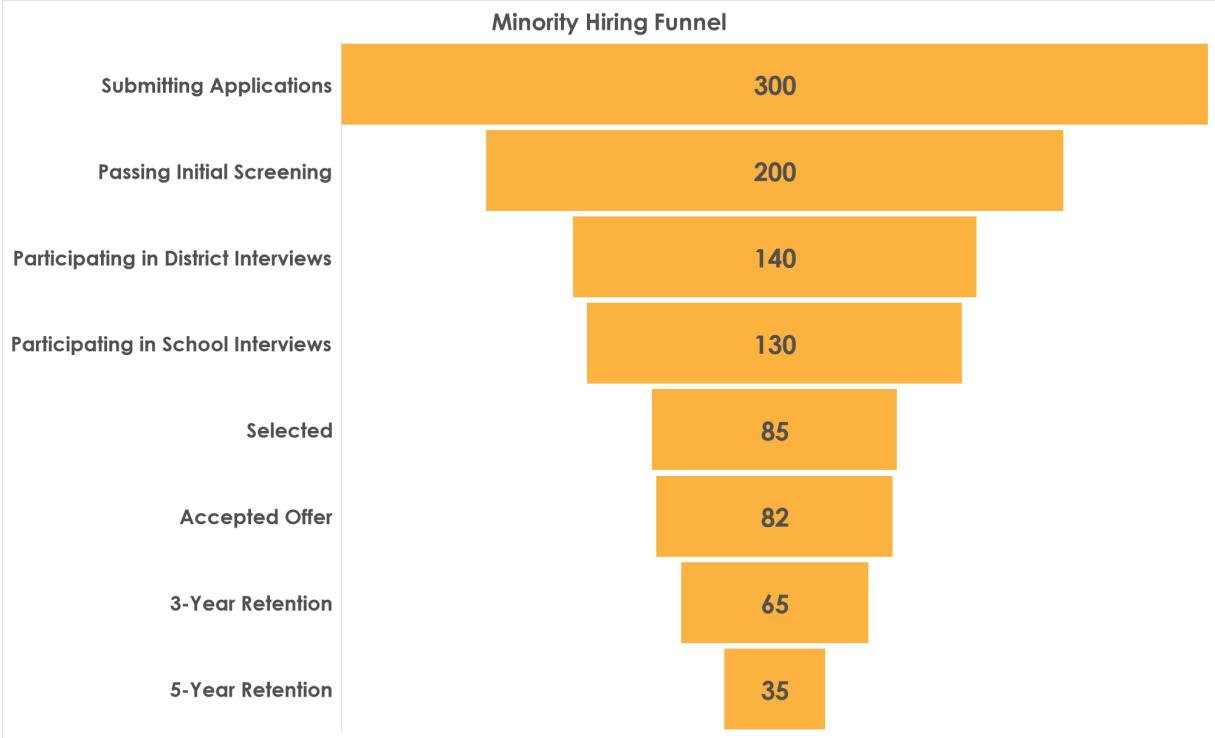
Interpreting the Data

This lens encourages users to question the reasons why candidates of color are leaving the pipeline at a given step, regardless of how that step affects the population of White candidates. This perspective enables practitioners to better understand the characteristics of the teacher shortage by bringing teachers of color into the foreground of the data analysis.

To help users identify the steps that represent the greatest points of attrition, this lens also includes a prioritization table (see Table 3), which ranks the steps of the educator pipeline in order of most to least significant loss of candidates or teachers of color.

Questions for Going Deeper

- Where in the pipeline do most candidates or educators of color drop out of the profession?

- What types of strategies may be impactful for retaining more candidates or educators of color at critical points in the career continuum?

Rank	Category	Teacher Loss
1	Passing Initial Screening	-100
2	Participating in District Interviews	-60
3	Selected	-45
4	5-Year Retention	-30
5	3-Year Retention	-17
6	Participating in School Interviews	-10
7	Accepted Offer	-3

Table 3. Minority Funnel Prioritization Table (School Role Version)

- What additional quantitative and qualitative data can be collected (or already exists), to shed light on the reasons candidates and educators of color are leaving the profession at the steps that the tool prioritizes?

Parity Gaps

Research suggests that racial parity between students and teachers affects student outcomes, making this Parity Gaps lens important to consider (for example Dee, 2004; Egalite et al., 2015). Among the outcomes for students of color found to be influenced by teachers of color are (a) expectations from minority students, (b) serving as role models for students, (c) equitable assignment to gifted and talented programs, (d) improvements on disciplinary outcomes, and (e) improving academic outcomes for students (Villegas & Irvine, 2010). Therefore, while the first two lenses offer the user strong visuals to pinpoint strategies at specific points along the career continuum, this lens pushes the conversation deeper by delving into the disparities between students and teachers in different ethnic or racial minority categories.

The lighter bars in Figure 4 represent the student population. The dark bars represent the teacher population. The percentages highlighted represent the gaps between the light and dark bars. If the dark bar is longer than a light bar, the percentage shows as negative.

Figure 4. Parity Gaps Visual
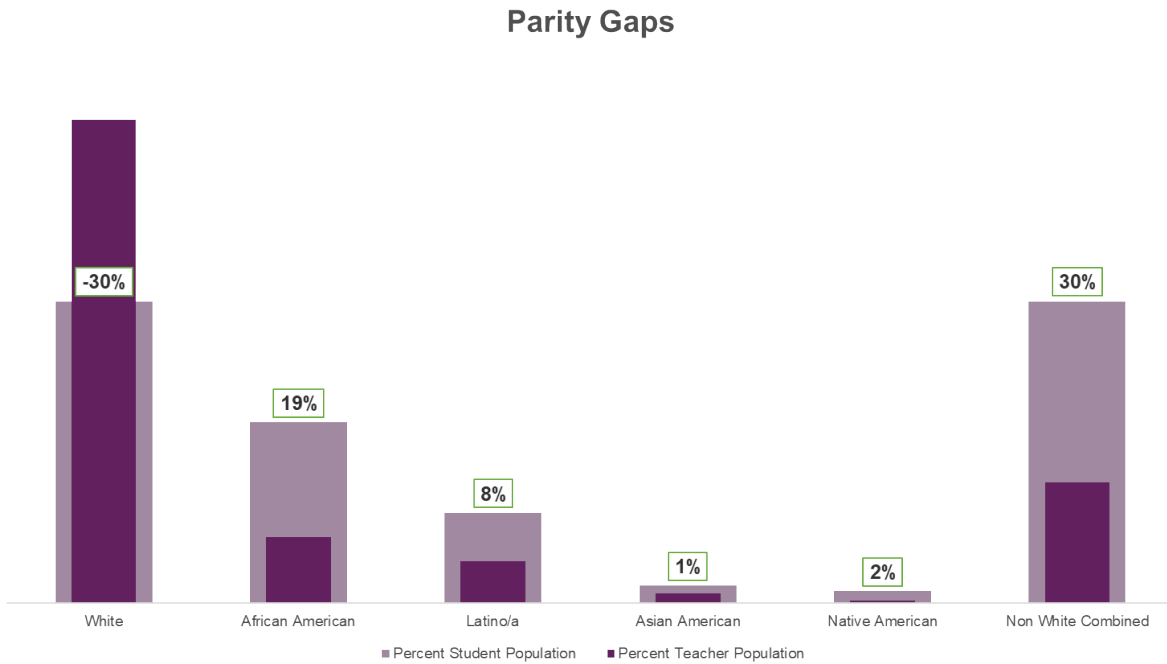
Interpreting the Data

One way to understand the visual in this Parity Gaps lens is to interpret the student population (light purple) as a target for the teacher population (dark purple). This interpretation moves toward the goal of having the teacher and student populations reflect each other.

One caveat for using the Parity Gaps lens this way is that this sets low targets for diversity in segregated schools that serve students primarily from a single racial or ethnic community. In such schools, using the student population as a target for the teacher population would lead to little diversity among the staff. Research, however, supports the positive impact for all students of a diverse educator workforce, regardless of the student population (Meier et. al, 1999).

Therefore, while decreasing parity gaps is important, increasing diversity overall is also critical to ensuring that all students learn in settings that encourage their growth and success.

To help practitioners target their recruitment and retention efforts, this lens also includes a prioritization table (Table 4). This table ranks the racial groups by the size of the parity gap between the student and teacher populations.

Practitioners can use this table to identify the racial groups within their educator workforce that are most

Table 4. Parity Gaps Prioritization Table

Rank	Race Ethnicity	Size of Parity Gap
1	African American	18%
2	Latino	10%
3	Asian American	2%
4	Native American	0%
5	White	-30%

underrepresented. This information may help schools and districts to better understand recruitment and retention and to target their candidate outreach when positions open. EPPs may also use that information to target their recruitment efforts, encouraging more candidates from underrepresented populations to join the educator pipeline.

Questions for Going Deeper

- Which student groups are most underrepresented in the educator workforce? Which students are least likely to be taught by teachers of the same background?

- What are some potential reasons for these groups' being underrepresented? Can the Development of Gaps and Minority Hiring Funnel lenses shed light on these reasons?

- How can these data inform your strategies and action steps for diversifying the workforce through teacher recruitment and retention?

- What additional data (quantitative and qualitative) may help you understand why these groups are underrepresented in the teaching workforce?

Next Steps

Completing the Data Tool and obtaining these insights is only the first of many steps that are necessary to diversify the educator workforce in a state, district, or school.

On the basis of the insights that practitioners obtain by using the tool, they should next plan processes for robust stakeholder engagement and root cause analysis to uncover the reasons for the gaps that were revealed and design strategies to close them.

The GTL Center offers a range of resources, tools, and technical assistance supports to guide states and districts in these next steps. Explore the GTL Center's Equitable Access Toolkit webpage, as well as all our Equitable Access Supports, to ensure your state or district can take concrete actions to act on what you have learned through the Data Tool. The GTL Center offers focused supports to states in using the Data Tool and in planning for next steps. Contact the GTL Center (information in box, below) to request support or learn more.

Feedback and Support

This is version 1.0 of the Data Tool. The GTL Center looks forward to using practitioner feedback to refine and improve this tool. Please contact the GTL Center at gtlcenter@air.org with any

- questions;
- general comments;
- ideas for improving the Data Tool;
- thoughts on ways to make the Data Tool more relevant to state, districts, school, and EPPs;
- support using the Data Tool; and
- support developing plans to diversity the educator workforce.

References

Dee, T. S. (2004). Teachers, race, and student achievement in a randomized experiment. *Review of Economics and Statistics, 86*(1), 195–210.

Egalite, A. J., Kisida, B., & Winters, M. A. (2015). Representation in the classroom: The effect of own-race teachers on student achievement. *Economics of Education Review, 45,* 44–52.

Meier, K. J., Wrinkle, R. D., & Polinard, J. L. (1999). Representative bureaucracy and distributional equity: Addressing the hard question. *The Journal of Politics, 61*(4), 1025–1039.

Villegas, A. M., & Irvine, J. J. (2010). Diversifying the teaching force: An examination of major arguments. The Urban Review, 42(3), 175-192.

Center on
GREAT TEACHERS & LEADERS
at American Institutes for Research ■

1000 Thomas Jefferson Street NW
Washington, DC 20007-3835
877.322.8700

www.gtlcenter.org

AIR®
AMERICAN INSTITUTES FOR RESEARCH®

www.air.org