Knowledge Alliance Issue Brief Series: Educator Workforce Shortage

In the 2022 State of the Union message, President Biden acknowledged teacher shortages and the critical challenge schools and districts across the country are facing in addressing them. Building on the President's message, U.S. Education Secretary Miguel Cardona called on states, districts, and higher education institutions to address the nationwide educator shortage.

To coincide with the Secretary's call to action, the U.S. Department of Education (ED) released a fact sheet providing concrete examples of how states, districts, and schools are taking up the call to action to strengthen the teacher pipeline and get more educators into the classroom.

While the COVID-19 pandemic has shined a spotlight on the educator shortage, it is not a new problem, but rather one that has been growing over an extended period.

Knowledge Alliance (KA) member organizations have long been at work supporting state educational agencies (SEAs) and local educational agencies (LEAs) in identifying localized origins of the educator shortage and implementing evidence-based strategies to recruit and retain teachers, with special attention to recruiting and retaining educators who are Black, Indigenous, and People of Color (BIPOC).

This KA Issue Brief provides concrete examples of how these leading education research and technical assistance organizations have been addressing the educator shortage. Specifically, you will find detailed examples of how KA member organizations are:

- Building predictive models to help SEAs and LEAs understand staffing issues and interpret different sources of information.

- Conducting webinars and trainings, and designing tools, frameworks, and ready-to-use resources to help SEA and LEAs address challenges with attracting, preparing, and retaining educators.

- Promoting evidence-based practices for recruiting, hiring, developing, and retaining diverse educators.

- Building partnerships with state agencies and teacher preparation programs on the identification and implementation of those practices.

This brief provides examples of activities addressing the educator shortage, carried out by federally funded KA member organizations: the Regional Educational Laboratories (RELs), the Comprehensive Centers (CCs), followed by examples of KA member activities funded from other

sources, such as states or philanthropies.

The REL and CC examples illustrate how Federal investment in education research, in the building and use of effective evidence-based practices, and in dissemination, evaluation, and innovation continue to be critical to solving the biggest education challenges facing our country today. The additional examples showcase other activities, some of which also have government support.

We urge Congress to adopt the President's Fiscal Year (FY) 23 budget request of $514 million for the Education Innovation and Research (EIR) program, including the requested $350 million to further identify and scale up evidence-based strategies to strengthen the educator workforce.

In addition, KA members encourage Congress to recognize and elevate the role of RELs and CCs in collecting and disseminating evidence-based resources addressing the educator shortage. KA members also emphasize that all classroom roles are critical to a district's success and urge the Federal Government to consider how the entire educator workforce pipeline can be strengthened.

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About the RELs

The Regional Educational Laboratories (RELs) partner with educators and policymakers nationwide. For nearly 60 years, the RELs have collaborated with school districts, state departments of education, and other education stakeholders to help generate and apply evidence, with the goal of improving learner outcomes. REL work is change-oriented, rigorous, and high-leverage, supporting consequential local, regional, or statewide decisions about education policies, programs, and practices. RELs contribute to the growing body of research on how experiences within the nation's education system differ by context and student group and how those factors affect outcomes and potential solutions.

The current authorization for the REL Program is under the Education Sciences Reform Act (ESRA) of 2002, Part D, Section 174, (20 U.S.C. 9564). The REL contracts are administered by the National Center for Education Evaluation and Regional Assistance (NCEE), a component of the Institute of Education Sciences. The ten RELs each operate under a five-year contract with NCEE. The current REL contract cycle runs from 2022 to 2027.

About the CCs

The statutory authorization of the Comprehensive Centers program, the Educational Technical Assistance Act of 2002, supports the establishment of not less than 20 Comprehensive Centers (CCs) to provide capacity-building services to state educational agencies (SEAs), regional educational agencies (REAs), local educational agencies (LEAs), and schools that improve educational outcomes for all students, close achievement gaps, and improve the quality of instruction. ED's cooperative agreements with the CCs are administered by the Office of Elementary and Secondary Education (OESE).

By statute, ED is required to establish at least one center in each of the 10 geographic regions served by the Department's RELs.

REGIONAL EDUCATIONAL LABORATORIES (RELS)

Understanding the Educator Pipeline

REL Central at Marzano Research worked with Missouri Department of Elementary and Secondary Education (MO DESE) staff to use data those officials were already collecting in ways that helped them better understand teacher staffing issues. REL Central at Marzano Research created a model for predicting teacher shortages, provided an external review of the model's validity, developed a training manual, and provided in-person training to help staff interpret results. Building on this work, REL Central at Marzano Research compiled the steps to develop and use the teacher predictor model in a report: *The Teacher Predictor Model: An Approach to Using Teacher and Student Data to Understand and Predict Teacher Shortages*. Educational agencies can adopt or adapt the approach described in this report to help understand and predict teacher shortages, including shortage trends in content and certification areas, in their own contexts, and may also use their predictions to inform efforts to address inequities in students' access to excellent educators. In 2021, **REL Central at Marzano Research** hosted a webinar about its Teacher Predictor Model. Presenters described the development and use of the model by state leaders; how the model might be adapted in other states; and strategies for states. districts, and educator preparation programs to use the model in addressing predicted shortages.

At the request of the Michigan Department of Education and Midwest Alliance to Improve Teacher Preparation (MAITP) members, **REL Midwest at AIR** conducted a study to explore potential teacher shortages by subject area, school characteristics, socioeconomic context, and geographic region. REL Midwest at AIR and the MAITP studied recent trends and projected future trends in teacher supply and demand in Michigan. The study found that some subject areas and regions of the state were expected to experience teacher shortages between 2018-19 and 2022-23. However, Michigan's total teacher supply was expected to meet overall demand. To analyze trends in teacher demand and supply, the study looked at data on teacher certification, hiring, personnel, and salary, as well as student enrollment and vital statistics for Michigan public schools for the 2013-14 to 2017-18 school years. The study also used regression analysis to project teacher supply and demand trends through 2022-23.

In 2019, **REL Central at Marzano Research** conducted a study using administrative data from Colorado, Missouri, Nebraska, and South Dakota to help education leaders better understand the dynamic and geographic character of the teacher labor market. Researchers produced two reports providing region- and state-specific information about teacher retention, mobility, and attrition. The first report described teacher retention, mobility, and attrition rates in rural and nonrural settings in the four states and provided information about the characteristics of stayers, movers, and leavers, including on the extent to which teachers change grade-level assignments within a school, the extent to which teachers who change schools also change districts, and the extent to which teachers who leave a classroom teaching position also leave their state public school system. The second report described teacher and school characteristics related to teacher movement within and out of public-school systems in Colorado, Missouri, and South Dakota. The results suggested that the likelihood of teachers either moving or leaving was most strongly related to age, years of experience in their schools or districts, special education teaching assignments, average salaries, school demographics, and school performance, including a school's state accountability designation. State and district administrators may use the findings, taken together, to identify needs for recruitment and retention, target workforce improvement strategies, inform progress toward state and district teacher-equity goals, and improve supports or incentives to strengthen teacher recruitment and retention where the need is greatest.

Widening and Diversifying the Educator Pipeline

REL Northeast and Islands at EDC, in collaboration with the **Region 2 Comprehensive Center** (R2CC) led by **WestEd,** is assisting the Connecticut State Department of Education (CSDE) as it undertakes a multi-year process for increasing educator diversity, in compliance with Connecticut Public Act 18-34 and reflective of a high-priority goal of the State Board of Education and the CSDE. WestEd has worked closely with CSDE to develop a state-level strategic plan, along with a toolkit for districts. In addition, WestEd is providing coaching to districts to support the development of their own strategic plans. This project is intended to increase educator diversity and Connecticut students' access to educators from diverse racial, ethnic, and linguistic backgrounds.

For **REL Midwest at AIR**, **Policy Studies Associates** directed a technical assistance and training project intended to help the Michigan Department of Education (MDE) build knowledge about effective or promising teacher residency programs as a potential strategy both to develop highly effective new teachers and to remedy the state's teacher shortage problem. The first training activity profiled effective or promising teacher residency programs, the implementation challenges that teacher residencies typically face, and the strategies used to overcome them. The second phase of the training explored the feasibility of developing local district-university partnerships to design and implement teacher residency programs in Michigan. Both phases brought together national experts on teacher residency programs.

In Colorado, state education leaders have proactively addressed teacher-staffing challenges in rural districts in various ways, including by developing an innovative, multifaceted stipend program that provides pre- and in-service teachers with funding to complete their teacher preparation programs and further their professional learning. In 2019, **REL Central at Marzano Research** worked with the Colorado Center for Rural Education (CCRE) and the Colorado Department of Higher Education (CDHE) to design and conduct an evaluation study to gauge the impact of the rural educator stipend program on teacher retention. As a part of its research dissemination activities, in 2019 REL Central at Marzano Research hosted a webinar, *Diversifying and Widening the Teacher Pipeline with Grow Your Own Programs*. Dr. Conra D. Gist, one of the presenters, shared with attendees her research on grow-your-own programs and teachers of color and her research examining the projects, frameworks, and research on this topic. The webinar was intended for SEA and LEA personnel, higher education faculty and staff, other educators, students, and community members who wanted to increase their understanding of grow-your-own programs and learn more about implementing such programs within their states, districts, or communities.

REL Northwest at Education Northwest partnered with state agencies, teacher preparation programs and school districts in identifying strategies for recruiting, hiring, developing, and retaining diverse educators. As an example of partnership activities, REL Northwest at Education Northwest worked with the Professional Educators Standards Board in Washington state to examine the barriers teachers face in passing credentialing examinations (report) and becoming fully certificated. This work has led to important changes in Washington state law.

REL Northwest at Education Northwest also supported grow-your-own teacher partnerships between school districts and teacher preparation programs, working as a "thought partner" in collecting and using data that identify barriers,

successes, and opportunities for BIPOC and bilingual teacher candidates in becoming teachers in their communities. In a virtual event, REL Northwest at Education Northwest provided a number of event resources, including a recording of the event on YouTube for participants to reference later or for those who were not able to attend the livestream.

Educator Mental Health

Through a collaboration between the Center to Improve Social and Emotional Learning and School Safety, **REL West at WestEd**, and the **Region 15 Comprehensive Center, led by WestEd** produced a webinar series that offered practical information and guidance backed by research to help school staff cope with the stresses of school closures, of service provision, and of quarantine due to the COVID-19 pandemic. Presenters defined the concept of self-care and discussed the importance of educators addressing their own self-care needs so that they are better able to support the needs of students and their school community. Strategies addressed included healthy mindsets; connectedness and belonging; and healthy, realistic boundaries and interactions. This webinar was the first in a three-part series on supporting the social and emotional

needs of educators and students during and after the COVID-19 pandemic.

In October 2020, **REL Appalachia at SRI** responded to a question from the Ask A REL reference desk that asked, "What does research say about measuring teacher well-being, stress, and burnout after a crisis event?" (Ask A REL is a collaborative reference desk service provided by the 10 RELs that, by design, functions as a technical reference library.) It provides references, referrals, and brief responses in the form of citations in response to questions about available education research.) Following an established REL Appalachia research protocol, a search was conducted for peer-reviewed articles and other research products. The sources included ERIC and other federally funded databases and information from organizations, research institutions, and academic research databases.

REL Appalachia at SRI hosted a three-part webinar series on addressing trauma in educational settings. The series included provision of information on strategies for helping educators recognize and process "vicarious trauma" and on strategies for self-care.

COMPREHENSIVE CENTERS PROGRAM (CCS)

Understanding the Educator Pipeline

The **South Central Comprehensive Center, led by the University of Oklahoma Outreach/College of Continuing Education** (2012-2019) supported the Arkansas Department of Education Division of Elementary and Secondary Education (ADE-DESE) and its stakeholders in developing a model to predict the geographic, subject-matter, and grade-level shortages in the educator workforce statewide. ADE-DESE used this information to refine its annual determination of critical shortage areas for targeting through Federal and state financial incentives and to create a Workforce Stability Index (WSI) for each school, district, region and the state as a whole. The WSI makes a calculation to depict the strength or stability of a school or district's faculty. It relies on the percentage of the faculty that are inexperienced, teaching out-of-field, provisionally licensed, or leaving the school or district each year. Data are available through the state's My School Info [portal](#).

In this [project](#), *Using Geographic Information System (GIS) Maps to Understand Colorado's Unique Challenges and Opportunities for Strengthening the Educator Workforce*, Jessica Giffin from **AIR's the Center on Great Teachers and Leaders (GTL Center)** worked with the **Region 12 Comprehensive Center** to build GIS maps that supported teams of districts, schools, educator preparation programs, and other partners in carrying out a facilitated analysis of Colorado educator workforce data and in developing recommendations and priorities to strengthen the educator workforce. As a part of the project, the GTL Center produced a ready-to-use resource, titled the Root Cause Analysis Workbook, for states and districts to use in targeting efforts to address teacher shortages. This Workbook takes state leaders through eight steps for conducting a root-cause analysis in a deliberate way to ensure that strategies are targeted to the real cause behind equity gaps.

The **National Comprehensive Center**, led by **Westat and supported by RMC Research**, hosted [a meeting](#) for the Comprehensive Center Network with two national researchers - Stacey Pelika, Director of Research at the National Education Association (NEA) and Chad Adelman from Edunomics Lab, who spoke about how to ask the right questions about the educator workforce shortage, understand how different sources of information tell unique stories about this issue, and help SEAs and LEAs identify tailored, evidence-based strategies for addressing workforce-related challenges.

The **Region 4 Comprehensive Center, led by Policy Studies Associates and supported by RMC Research** and **SRI International**, worked with the New Jersey Department of Education (NJDOE) to understand the strengths and weaknesses of the state's teacher certification website and develop a plan for a comprehensive revision. Center staff interviewed NJDOE state and county staff to assess the challenges with navigating the site and the extent to which it created barriers to obtaining certification in New Jersey. In addition, Center staff interviewed site users, such as new teachers and individuals looking to add certifications, about their experiences with the site to determine which areas of the site most confused them. By compiling this array of user data and feedback, as well as exemplars from other states, Center staff helped NJDOE create a detailed action plan for site revisions.

The [Region 3 Comprehensive Center](#), **led by Educational Testing Service (ETS)**, is collaborating with the Department of Education of Puerto Rico (PRDE) and the Institute of Professional Development (IDP) to support the centralization of IDP and the streamlining of professional development delivery and monitoring systems. This is

also an effort to establish teacher and leader pipelines and address critical shortage areas through alternative licensure pathways.

Widening and Diversifying the Educator Pipeline

In 2021, the **Region 8 Comprehensive Center** and **AIR's GTL Center** produced the report, the *Power of Teaching Diversity: Fostering Inclusive Conversations Through Mentoring*. This conversation guide is intended to help mentors better understand their role in supporting new teachers who have identities that are underrepresented in the existing teacher corps, including but not limited to teachers of color, teachers who identify as LGBTQ+, teachers from low-income backgrounds, and teachers entering the profession through nontraditional routes. The guide highlights the principles that mentors should keep in mind when mentoring for diversity. The guide is not comprehensive but rather is intended to act as a starting place to help mentors learn and engage in self-reflection.

For three years, the **National Comprehensive Center, led by Westat and supported by RMC Research**, has facilitated a "Diversifying the Educator Workforce" work group. Most recently, the National Comprehensive Center hosted a national webinar with Gloria Ladson Billings on "Culturally Responsive Practice as a Strategy for Diversifying the Educator Workforce."

The **Region 4 Comprehensive Center, led by Policy Studies Associates** and supported by **RMC Research** and **SRI International**, which works to support Delaware, the District of Columbia, Maryland, New Jersey, and Pennsylvania, produced a four-part series of policy briefs focused on bilingual education, including on bilingual teacher shortages, in contexts across the United States. The series also addressed possibilities for grow-your-own programs to address shortages.

The **Region 2 Comprehensive Center, led by WestEd**, is collaborating with the Rhode Island Department of Education (RIDE) and key stakeholders to increase the racial diversity of the Rhode Island educator workforce and ensure that all educators implement culturally responsive and culturally sustaining practices. Staff will co-facilitate development of an agencywide equity decision-making tool and develop RIDE expertise and capacity to facilitate accompanying professional learning that guides quality implementation of the tool and other equity-related initiatives. This effort is intended to result in an increased RIDE capacity to develop, implement, and monitor new and existing programs, policies, and practices as well as to confirm that those programs, policies, and practices are in alignment with RIDE's culturally responsive and sustaining efforts and to prepare SEA staff for the next phase of work.

RMC Research at the **Region 8 Comprehensive Center** has worked with the Michigan Department of Education (MDE) over the past three years to design, support, implement and market a career and technical education (CTE) pathway for high schoolers to earn credentials in early childhood education (enabling them to get entry-level employment in programs serving children 0-5) and for work in school-age youth programs (after-school and summer programs, coaching, and community recreation). Those credentials typically are recognized by colleges for some credit as students continue their path to become teachers. The 2022-23 school year will be the first year of implementation and 1,000 students have already enrolled.

The **National Comprehensive Center, supported by RMC Research**, leads an educator workforce work group, comprised of representatives from the regional centers who are working on a variety of grow-your-own programs. The work group has sponsored webinars about diversifying the educator work force and grow -your-own models.

Convening, Knowledge Sharing, and Coaching

The [Alabama Coaching Framework](#), a resource created by **Comprehensive Center 7, led by RMC Research**, provides an evidence-based framework to assist coaches in any content area conduct their work in Alabama. It includes contributions across various areas of expertise within the state education department, it was created with "implementation science" in mind, and will support teachers in English, math, and science. Alabama was diligent to include the voice of special educators and to specify the importance of coaches' collaboration with teachers to ensure equal opportunities for all students. The intent is that coaches using the framework will make results-driven, data-educated decisions that enhance teaching and learning in Alabama.

Alongside Regional **Comprehensive Centers 1, 9, and 12**, in Colorado, Illinois and Vermont, **AIR's GTL Center** facilitated five peer-to-peer [engagements with state teams](#) to identify local challenges related to educator shortages exacerbated by COVID-19 and to share strategies and opportunities for strengthening the educator workforce. Using a collaborative inquiry protocol, state teams shared a topic-specific problem of practice, received feedback and ideas, and engaged in collective brainstorming with their peers and experts. Each session included a brief presentation on the topic (focused on the research,) as well as best practices or other innovative strategies to share with state teams. Topics included: (1) addressing educator shortage through educator prep programs (EPPs) and engaging teacher candidates; (2) addressing substitute teacher shortages; (3) developing innovative staffing structures; (4) preventing educator attrition and early retirements; and (5) investing in teachers. This process resulted in participating states teams establishing strategies to address short-term and long-term challenges with educator shortages and in a community of SEAs, as summarized in this [brief.](#)

The **Region 2 Comprehensive Center, led by WestEd,** hosted a cross-SEA workshop series launched in March 2022. The series is focused on identifying and disseminating emerging practices in addressing longstanding and widespread educator shortages to ensure all schools have equitable access to effective, qualified personnel to meet critical pandemic recovery needs. Participating SEA staff are gathering virtually to (1) learn from subject-matter experts and SEA peers about emerging strategies for effectively managing shortage areas; (2) identify and disseminate emerging promising practices and lessons learned in recruiting, supporting, and retaining effective personnel; and (3) build capacity to equitably invest American Rescue Plan (ARP)/Elementary and Secondary School Emergency Relief (ESSER) funds to address short- and long-term personnel shortages, and plan for sustainability once funding sunsets.

Since 2017, the **University of Oklahoma Outreach/College of Continuing Education (OU)**, first through the **South-Central Comprehensive Center (2017-2019)** and then through its partnership in the Arkansas Leadership Academy, has supported Arkansas Department of Education, Department of Elementary and Secondary Education (ADE-DESE) in the creation and expansion of the Arkansas Career Continuum, focusing on teacher leadership and retention, particularly of teachers from nontraditional backgrounds. Through the Career Continuum, teachers have the opportunity to demonstrate mastery of competencies associated with master professionals and lead professionals. Currently, OU Outreach/CCE's [Teacher Leader Program](#) is an approved pathway for ADE-DESE licensure as a Lead Professional. As more districts offer unique teacher leadership opportunities compensated at higher levels for more responsibility, more excellent teachers are retained, lead from the classroom, and expand their reach to more students.

Created in 2019 through Assembly Bill 276, the Nevada State Teacher Recruitment and Retention Advisory Task Force seeks to "evaluate and address the challenges of attracting and retaining

teachers throughout Nevada." Since its launch, **WestEd** has worked shoulder to shoulder with Nevada Department of Education (NDE) staff, through the **Region 15 Comprehensive Center** to support all aspects of Task Force operations.

OTHER EXAMPLES

Understanding the Educator Pipeline

Basis Policy Research is working with six grantees, across five states, to design, develop, and evaluate programmatic efforts, embedded in human capital management systems, for teacher recruitment and retention. These efforts vary by program, from designing and facilitating performance-based compensation systems to designing a campus health assessment to evaluating and understanding the impact of these efforts within partner districts.

For the Wallace Foundation, **Policy Studies Associates** produced a resource to help districts develop a [Leader Tracking System](#) (LTS), which is a dashboard or tool that minimizes the need for users to go to several different databases to gather the information they need to make a decision regarding, for example, principal hiring, placement or principal support, and succession planning. Districts can use their LTS to make sound forecasts about future leader vacancies, potentially avoiding workforce shortages. An LTS can help district leaders identify and prepare aspiring leaders who can best meet anticipated needs.

The American Institutes for Research's (AIR's) [Talent Development Framework](#) provides guidance to state and local policymakers to systemically address educator shortages by supporting them in analyzing challenges with attraction, preparation, and retention across the career continuum. This framework features a data tool that assists states and districts in analyzing where initiatives are most needed and helps them target initiatives for the greatest impact.

In this [paper](#) on teacher attrition and mobility over time, published in *Educational Researcher,* author Dan Goldhaber from **AIR's National Center for Analysis of Longitudinal Data in Education Research (CALDER)** finds that there is a strong negative relationship between overall unemployment rates and rates of teacher attrition.

The history suggests that teacher attrition is likely to increase as the economy recovers after the pandemic, but this increase is likely to be modest.

Increasing and Diversifying the Educator Pipeline

The Community Training and Assistance Center (CTAC) is evaluating the initiative of the Missouri Department of Elementary and Secondary Education (MO DESE) to improve teacher recruitment and retention. MO DESE is providing more than $50 million in grants to spur innovation. As a result, 508 LEAs, EPPs and 13 community colleges are developing and implementing multiple strategies to address their recruitment and retention challenges. The evaluation illuminates what LEAs, EPPs, and community colleges are trying to achieve, how they are trying to get there, and which approaches show promise with their innovation and impact. CTAC's evaluation will inform the scaling up of successful efforts in comparable contexts. It will also provide MO DESE with the information needed to create a long-term, statewide system for recruitment and retention.

To meet the urgent need for districts to provide, ongoing, job-embedded support for beginning teachers to help ensure they remain and thrive in the profession, **Learning Forward** offers the [Mentor Teacher Academy](#) for districts seeking to provide new teachers with an experienced, knowledgeable mentor. The program is for skilled teachers who are ready to mentor colleagues during their first three years in the classroom by applying a mentoring framework to support those beginning teachers in growing their practice. The Academy is grounded in the *Standards for Professional Learning* (described below) and adult learning theory and is designed around a "mentoring cycle" of diagnosing beginning teacher needs, providing coaching to address those needs, and monitoring progress to measure growth. Learning Forward's newly revised

Standards for Professional Learning offer educators the latest knowledge and insights for designing, implementing, and sustaining high-quality professional learning. The standards are intended to lead to environments in which educators and students have equitable access to powerful learning.

WestEd and **SRI International** conducted an evaluation to examine and share learnings about the California State University-led effort to implement large-scale clinically oriented teacher preparation reform, which resulted in lessons for the field on how to build clinically oriented teacher preparation programs in large systems.

WestEd provided technical assistance to the California State University's Chancellor's Office on strengthening data infrastructure, which has resulted in significant improvement in capacity to support program improvement throughout the system, including (1) a new set of systemwide data dashboards that can track all teacher preparation candidates from admission into the field and (2) a new strategic plan.

In 2021, **WestEd** was contracted by the Ohio Department of Education (ODE) to conduct an evaluation of the state's Troops to Teachers program (TTT), an initiative that aims to help eligible military personnel begin new careers as teachers in PK-12 public schools. The Ohio TTT program provides incentives and assistance (e.g., recruitment, counseling and support services) to the nation's veterans seeking to enter the teaching field. WestEd developed and implemented a comprehensive mixed-methods evaluation aligned with the Ohio TTT program goals. WestEd researchers employed a variety of data collection methods, including surveys, interviews, and analyses of extant data. A final report with findings and recommendations was presented to ODE in July 2021.

In a video interview produced by **AIR**, *Long Story Short: How Can We Alleviate the Shortage of Special Education Teachers?*, Lynn Holdheide discusses her work with AIR's GTL Center to address the special education teacher shortage and support students with disabilities.

Education Northwest partnered with teacher preparation programs to evaluate existing teacher development programs, such as those funded by the US Department of Education's Office of English Language Acquisition, to understand how teacher preparation and endorsement lead to greater preparation for working with diverse students and can improve teacher retention.

For the Center on American Progress, **Policy Studies Associates** surveyed a nationally representative sample of 200 districts on their human resource policies and practices. The study was intended to help policymakers and practitioners better understand district successes and challenges with respect to teacher recruitment, selection, compensation, induction, evaluation, and support.

For the Center on Education Policy and the Bill & Melinda Gates Foundation, **Policy Studies Associates** collected and analyzed surveys of a nationally representative sample of over 100,000 teachers. The study focused on teachers' perceptions of the teaching profession, including what they found rewarding, what was challenging, and what actions would improve teaching.

AIR's brief, *Selecting Career Changers with Real Potential for Teaching and Designing a Program to Meet Their Needs*, provides guidelines for stakeholders on building a high-quality and diverse teaching workforce by selecting career changers with strong potential and restructuring preparation to meet the needs of diverse candidates.

In collaboration with the Ohio Department of Education (ODE) and the Great Lakes Comprehensive Center (GLCC), **AIR's GTL Center** developed a four-step process, with a suite of supporting tools and resources that allow states to create a locally driven, evidence-based action plan to improve the diversity of their educator workforce.

ETS works with Educator Preparation Programs (EPPs) and with the state agencies that oversee the preparation and licensure of new teachers to ensure that stakeholders involved in the development of state teacher examinations include teacher candidates of color and minority serving EPPs at every stage of the development process to help verify that the tests are free of cultural bias.

In Alabama, to boost PRAXIS passage rates for minority test-takers, **ETS**, with the National Education Association of Alabama (NEA-AL), hosted a weeklong boot camp for teacher candidates of color on the Praxis® Core Academic Skills for Educators assessment (or Praxis® Core), which measures academic skills in reading, writing, and mathematics deemed by teacher educators to be essential for all candidates entering the teaching profession.

ETS has worked with Connecticut's state and district leaders, and EPPs, to identify ways to bolster diversity in the state's teacher pipeline. As part of the effort, ETS has engaged with state policymakers, EPPs, community members, and alternate route programs: disseminated research and information to the CT Minority Recruitment Task Force; provided guidance on test development and test resources; helped EPPs with test review sessions; and supported an alternate certification program that provides test-preparation resources to candidates of color. ETS has also initiated a joint effort with the Hartford Public Schools to support a grow-your-own program that enables paraprofessionals to earn additional credit in the areas of teaching practice and pedagogy. In addition, ETS has also worked with the Greater New England Association of Black School Educators to promote equity by sponsoring conferences focused on diversifying the

teacher pipeline and on culturally responsive teaching in the classroom.

In Indiana, **ETS** collaborated with the Indiana Commission on Higher Education to sponsor a "Diversity in the Teacher Workforce" symposium. The event brought together ETS researchers, state policymakers, and education community members to explore research-based approaches that promote diversity and equity in education.

In Virginia, **ETS** worked with the state Secretary of Education, the Governor's Task Force on Diversifying the Teacher Pipeline, and the Virginia Association of Colleges for Teacher Education to strengthen diversity in the state's teacher pipeline. ETS staff provided research findings and led presentations on successful strategies for increasing teacher diversity. More examples can be found in ETS' report: *Expanding the Teacher Pipeline: Initiatives for Driving Quality and Diversity in the Teacher Workforce.*

WestEd has served as an evaluator of teacher residency programs for teacher preparation programs in California, including those at California Polytechnic State University, San Luis Obispo, and California State University, Bakersfield. WestEd is particularly focused on supporting residencies that have a specific goal, including a special education and bilingual teacher residency, a rural teacher residency for elementary teachers with a STEM focus, and a residency for increasing the number of candidates of color. WestEd finds that teacher residencies offering community-based clinical preparation that is tailored to partner school districts' context are a proven strategy to increase teacher diversity, effectiveness, and retention. The partners have seen positive results, including the development of teacher candidates of color, with mostly local applicants and high retention rates.

The **University of Oklahoma Outreach/College of Continuing Education** partnered with the Oklahoma

Foundation of Excellence to establish a Teachers of English Learners [online learning network](#) that includes a preparation course for the state's English as a Second Language (ESL) Certification Exam. In its first year (2020-2021), 759 teachers from 95 districts utilized the project's online platform and 69 educators completed the preparation course. The network offers professional learning to enhance the skills of current teachers while developing and recruiting new teachers to the critical shortage area of ESL.

SRI partners with [teacher preparation programs](#) to evaluate new and expanding teacher residency programs. One partnership, with the California State University at Chico, seeks to address STEM teacher shortages in rural communities. Another partnership, with the Alder Graduate School of Educations, is establishing new residency programs in school districts that are designed to improve preparation and diversify the workforce, typically through grow-your-own models.

In 2020, **WestEd** began working with the Teacher Residency Lab of the CDE Foundation to collaborate in the development and presentation of a series of virtual seminars that address the topic of reducing the impact of racism on teaching. The California Commission on Teacher Credentialing (CTC) has awarded grants to 33 school-university partnerships to establish teacher residencies. These partnerships of LEAs and accredited teacher preparation programs are established to develop and scale teacher residencies to ensure that teachers are student-ready on their very first day in the classroom.

Educator Leadership

Education Northwest led a project commissioned by the Coalition of Oregon School Administrators (COSA), the Oregon Department of Education (ODE) and the Oregon School Boards Association (OSBA) to learn more about the lived experiences of current and former superintendents of color in Oregon. Education

Northwest conducted a qualitative study with 16 current and former superintendents of color to assist key stakeholders in better understanding the specific experiences and needs of superintendents of color and in identifying strategies and next steps for recruiting, hiring, retaining and supporting them in their journey as superintendents. The report found that superintendent leadership training and graduate-level programs were of mixed quality and that prior experience in various teaching and administrator roles, having a mentor, and participating in affinity groups were the most impactful supports in preparing them for the superintendency. Superintendents of color, especially women, reported incidents where their physical safety was threatened, but also reported remaining resilient in continuing to fight for advancing educational equity. The [report](#) made specific recommendations for recruiting, hiring, and retaining superintendents of color.

For the Wallace Foundation, **Policy Studies Associates** developed a [tool](#) and procedures for facilitated assessment of school districts' readiness to expand their leadership pipelines. In particular, the tool helps districts identify strategies to prepare, strengthen, retain, and expand a pool of educators to fill vacancies in leadership positions.

Educator Mental Health

In New Mexico, dozens of schools are participating in a grant-funded opportunity to continuously capture, elevate, and use real-time data to enhance and cultivate a school improvement culture and promote teacher agency and voice. **Cognia's** MyVoice is a real-time culture-monitoring platform leveraging research-based drivers and indicators of school culture to provide point-in-time ratings and indicators of progress to foster collaboration and develop a schoolwide commitment to improvement. MyVoice identifies school culture drivers and school culture indicators, including in such domains as

"Sense of Belonging" and "Teacher Advancement," that define, measure, and monitor a school's culture. Further, MyVoice established COVID-19 domains in order to provide deeper insight into indicators directly associated with the greatest needs as identified by MyVoice users. These domains include social-emotional support, resource support, and teacher health, all focused on the health and well-being of educators. The concept is that, through teacher voice and agency, the school culture is shaped so that collective action and responsibility create an environment in which teachers stay engaged in schools, and in the field of education.

The EdResearch for Recovery team, a partnership between **Results for America** and the Annenberg Institute at Brown University, produced a [brief](#), Structural Supports to Promote Teacher Well-Being, to help districts consider evidence-based strategies for addressing teacher demoralization and burn-out, both of which influence decisions to remain in the profession. In partnership with EdWeek, EdResearch for Recovery brought the brief's authors together with practitioners to share key evidence-based strategies and practical examples of how district leaders are supporting their teams. A recording of this session, Examining the Evidence: Supports to Promote Teacher Well-Being, is available [online](#).

AIR's GTL Center collaborated with national partners and leading educators to produce a [webinar series](#) focused on the developing the use of evidence-based trauma-informed practices. Included in this work are three webinars that highlight strategies specific to fostering resilience and well-being for educators, for educators as they work with their students, and for school leaders as they work to build trust and well-being in their school communities. To support teachers during unprecedented times, AIR's GTL Center produced the *Educator Resilience and Trauma-Informed Self-Care: Self Assessment and Planning Tool*. This [guidebook](#) includes a self-care self-assessment with key strategies for fostering

resilience and a self-care planning tool to assist educators in identifying areas of strength and growth related to self-care and developing self-care plans.

Technical Assistance

In 2021, the **University of Oklahoma Outreach/College of Continuing Education** became one of three partners in the [Arkansas Leadership Academy (ALA)](#). The ALA provides professional learning for leaders from the classroom to the boardroom in the evidence-based areas of Collaborative Leadership, Collective Efficacy, and Cultural Competence. A key strategy of the ALA is selection of a diverse population of educators for each professional learning cohort, with the understanding that current and aspiring leaders from rural communities, low-performing schools, and charter schools, as well as leaders of color, leaders who identify as LGBTQ+, leaders from low-income backgrounds, and leaders entering the profession through nontraditional routes have traditionally been excluded or minimized in such leadership development programs.

AIR produced a [brief](#), titled "An Opportunity to Invest in the Educator Workforce", to support SEAs and LEAs in strategically leveraging Federal recovery funds to attract, prepare, and retain educators. This brief provides recommendations to state and local educational agencies by highlighting short- and long-term educator talent management strategies, at all points of the educator career continuum, that are currently being implemented throughout the country.

AIR produced a [toolkit](#) organized around the guiding principle that short-term strategies to meet immediate demand must be intentionally paired with long-term, systemic strategies to attract, prepare, and retain effective special education teachers who will create comprehensive shortage solutions. This toolkit

was created in collaboration between the GTL Center and the Collaboration for Effective Educator Development, Accountability, and Reform Center (CEEDAR Center) to support states and districts in identifying short- and long-term evidence-based strategies for addressing teacher shortages in special education. The Toolkit is organized around a Facilitator's Guide and three supporting sets of tools: a special education teacher shortage primer, a data tool, and a strategy selection tool.

Tutoring

In Rhode Island, EdResearch for Recovery, a partnership between **Results for America** and the Annenberg Institute at Brown University, is working with a network of districts designing and implementing evidence-based high-dosage tutoring programs. When many partner districts faced delays in program implementation because

of a shortage of tutors, the EdResearch for Recovery team quickly galvanized students from Brown University to serve as tutors, meeting districts' real-time need for support.

REL Appalachia, led by SRI, is evaluating the implementation of Project On-Track, a high-dosage tutoring program that leverages the Amplify Reading platform to help K–4 students shore up their foundational literacy skills. In school year 2021-22, Project On-Track served 1,500 students in 54 sites in 16 rural districts in northeast Tennessee.

In partnership with the Center on Reinventing Public Education (CRPE), **SRI** profiled a charter school in Bridgeport, CT, that leveraged its existing high-dosage tutoring model, made possible through a partnership with AmeriCorps, during pandemic-related school closures.

Knowledge Alliance

Founded in 1971, Knowledge Alliance (KA) is a non-profit, non-partisan organization focused on dramatically improving K-12 public education by advocating for the widespread, effective use of research-based knowledge in policy and practice.

Knowledge Alliance is comprised of leading education organizations that share the belief that high-quality, relevant research is key to solving the biggest education problems facing our country today. Collectively we promote the use of rigorous research to figure out "what works," and why, to improve student outcomes and then share those findings with policymakers, practitioners and the general public.

We believe that education policy and funding decisions should be grounded in research-based evidence – not on partisan or political interests. We advocate for Federal and state policies that are supported by a strong research-base. At the same time, we also believe it is critical for research to be shared with educators on the front lines who are directly impacting student learning. Our expertise in applying research helps educators put research-based knowledge into practice in classrooms.

Issue Brief Series

Following a strategic planning process in 2021, KA established a Work Group to identify education policy and research priorities focused on systems change in education. KA would like to thank the members of the working group for their support: Augustus Mays (WestEd), Elizabeth Kingsley (ETS), Allison Crean Davis (Westat), Monica Blomker (Cognia), Christopher Mazzeo (Education Northwest), Libby Pier (Education Analytics) and Tracy Nicholson (Curriculum Associates) as well as all KA member organizations for their contributions. This issue brief was produced by Rachel Dinkes and Soraya Zrikem.