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Examining Educator Certification in Pennsylvania: Research and Recommendations for Chapter 49

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The Pennsylvania Department of Education wishes to acknowledge the contributions of the 234 individuals and organizations who offered their time and expertise as participants at three stakeholder meetings held in July 2018, and whose efforts were essential to developing the recommendations found in this report. A full list of attendees can be found in Appendix A.

Executive Summary

The state of Pennsylvania has witnessed dramatic shifts in its teacher workforce over the past several years. Enrollment in teacher preparation programs has declined nearly 65% since 2009 while the number of emergency permits issued to districts unable to fill open teaching positions has increased substantially. The percentage of teachers of color in Pennsylvania's teacher workforce, currently at 5.6%, lags behind the national average of 20% and falls well below the percentage of students of color (33.1%) enrolled in the state's public schools.

The impact of these trends is felt across the state in both rural and urban districts and has long-term implications for the state's increasingly diverse student population. In response to these challenges, the Pennsylvania Department of Education (PDE) outlined an ambitious set of priorities in its consolidated plan under the Every Student Succeeds Act (ESSA) meant to strengthen the teacher workforce. Specifically, the PDE sought to (1) tackle persistent shortages in subject areas and specific geographic locations across the state, (2) ensure equitable access for all students to quality teachers and school leaders, and (3) increase the diversity of the teacher workforce.

Chapter 49 of the Pennsylvania Code

Coinciding with early implementation of the state's ESSA plan, the Pennsylvania State Board of Education is preparing to undertake a mandatory review of Chapter 49 of the Pennsylvania Code, which establishes state requirements for preparation, certification, and continuing professional education for professional personnel employed in Pennsylvania's pre-k–12 education system. The review presents an opportunity for policymakers to work in collaboration with stakeholders from across the state to strengthen the code and support improvements to the way educators are prepared to support diverse learners in the classroom.

In preparing for the Chapter 49 review, the PDE convened three meetings of stakeholders in July 2018. The meetings, held in Philadelphia, Harrisburg, and Pittsburgh, provided an opportunity to collect feedback from groups invested in teacher preparation and certification regarding potential changes that could strengthen teacher preparation and certification and advance the state's wider priorities for the educator workforce. Attendees included representatives from institutions of higher education, district administrators, practicing teachers, parents, and advocacy groups (among others). In total, 234 stakeholders provided their feedback and insight on current opportunities and challenges in Chapter 49.

Key themes that arose in the three stakeholder meetings included

- the need to support the overall quality, improvement, and consistency of educator preparation across the state;
- the immediate challenges facing districts in staffing vacant classroom positions;
- the belief that improved partnerships between higher education and local pre-k–12 districts could help support both high-quality preparation and early-career induction programs;
- the need to review assessment requirements for preparation and licensure and their impact on supporting a more diverse teacher workforce; and
- the hope that available data and research would inform the eventual changes to Chapter 49.

From the above themes and recommendations collected at the three stakeholder convenings, a set of six recommendations was developed. These recommendations are grounded both in feedback from across the stakeholder meetings and in research demonstrating the potential impact and effectiveness of such policy changes. In addition, the recommendations draw attention where appropriate to Chapter 354 of the Pennsylvania Code, which establishes requirements for educator preparation programs. The recommendations made in this report, while limited to revisions of Chapter 49, may require a review of Chapter 354 as the state seeks to build an aligned system of teacher preparation, certification, and early-career support.

Recommendations for Chapter 49

Recommendation #1: Improve Clinical Training

Improve and extend clinical training experiences.

Recommendation #2: Refine Preparation Standards

Refine preparation program standards to reflect the array of teaching skills needed to fully support the academic, social, and emotional development of a diverse student population.

Recommendation #3: Address Shortages

Address teacher shortages in specific content areas and geographic locations in the state by

- creating targeted service scholarship or loan forgiveness programs to recruit individuals into high-need subjects and locations;
- providing appropriate flexibility around the content requirement for special education candidates and expanding the special education grade span to pre-k–12; and
- ensuring that individuals hired on emergency or substitute permits receive intensive support and training and are placed on an expeditious pathway to full state certification.

Recommendation #4: Revise Testing Requirements

Expand methods for evaluating a candidate's basic skills and readiness to enter a teacher preparation program, and implement a more authentic assessment of candidates' readiness to teach upon completion of such a program.

Recommendation #5: Use Data to Guide Improvement

Increase access to data about candidates' and graduates' characteristics, hiring, retention, and preparedness to support continuous improvement.

Recommendation #6: Support Beginning Teacher Induction

Provide all new teachers with induction that includes mentoring, common planning time, and regularly scheduled collaboration with other teachers.

In building a teacher workforce for the future, Pennsylvania faces a number of key opportunities in revising Chapter 49. These changes have the potential to help advance a comprehensive vision for teacher preparation and early-career support that ensures all principals, teachers, and school staff are prepared to support the state's increasingly diverse student population, and to ensure the state takes a leading role across the country in setting the standard for teacher quality and student success.

Introduction

In 2016, PDE undertook an extensive stakeholder engagement effort around the development of the state’s Every Student Succeeds Act (ESSA) Consolidated State Plan. The effort, which included convening an Educator Preparation Stakeholder Work Group, established a series of goals meant to guide the state into the ESSA era and through emerging educator recruitment and retention challenges across districts and schools. In its ESSA state plan, Pennsylvania emphasized proposals for supporting improvements across the state’s teacher and leader preparation systems with a focus on three major goals: (1) tackling persistent teacher shortages in specific content areas and geographic locations, (2) ensuring equitable access to quality teachers and leaders for all students, and (3) improving the racial diversity of the teacher workforce to better reflect the student populations served in Pennsylvania schools.¹

These goals continue to guide the state as it undertakes a new phase of work: review of Chapter 49 of the Pennsylvania Code, which establishes state requirements for preparation, certification, and continuing professional education for professional personnel employed in Pennsylvania’s pre-k–12 education system. Essential to this review is input from key stakeholders, who best understand how Chapter 49 impacts the experiences of students and educators, including educators-in-training. A review of Chapter 49 should also be grounded in rigorous research on educator preparation, certification, and professional learning, including new research that has emerged since Chapter 49 was last updated more than 10 years ago.

This report proceeds in three parts. Part I provides information on Pennsylvania’s current policy context as it pertains to Chapter 49, including current challenges with educator recruitment and retention, the need to diversify the educator workforce, and key elements of the state’s ESSA state plan. Part II summarizes key takeaways from the stakeholder engagement that PDE conducted in July 2018 to inform the review of Chapter 49. Part III sets forth six recommendations for updating and strengthening Chapter 49, developed based on stakeholder input and grounded in educational research. Where applicable, Part III notes connections between corresponding educator preparation policies housed in Chapter 354 of the Pennsylvania Code, which establishes requirements for educator preparation programs. The recommendations made in this report, while limited to revisions of Chapter 49, may require a review of Chapter 354 as the state seeks to build an aligned system of teacher preparation, certification, and early-career support.

Part I: Pennsylvania’s Policy Context

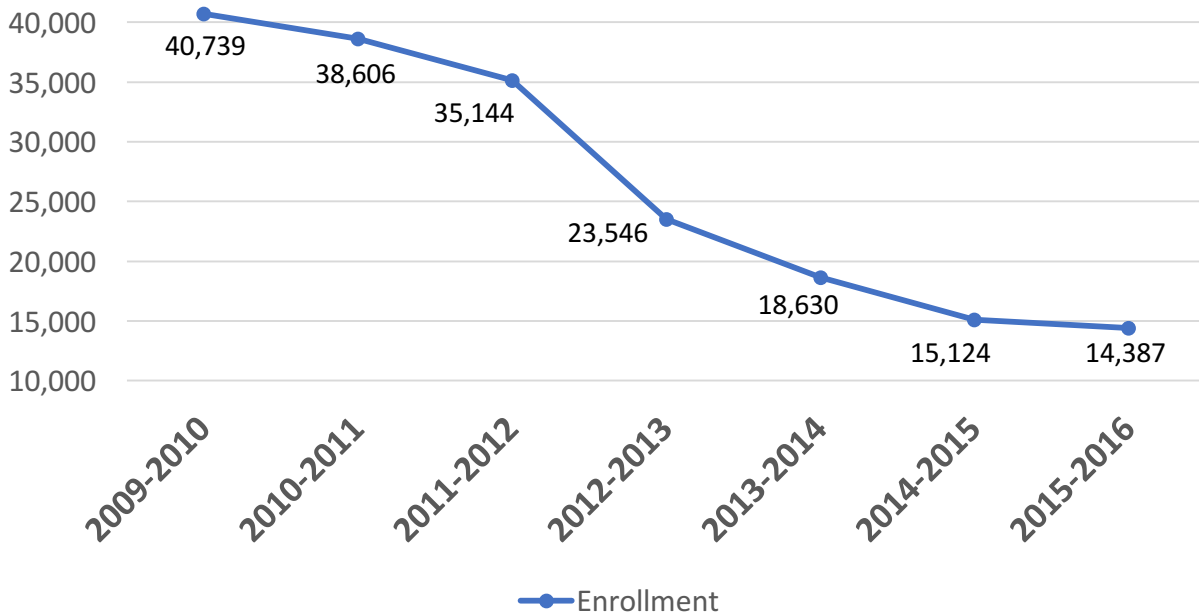
Current educator recruitment and retention challenges in Pennsylvania reflect national trends and are key elements of the policy context that should inform potential changes to Chapter 49. In this section, we take a look at current trends in Pennsylvania’s teacher workforce, including teacher supply, demand, distribution, and diversity. We then describe key programs supporting high-quality teachers and leaders currently underway in the state, as described in Pennsylvania’s ESSA plan.

Current Challenges in Educator Recruitment and Retention in Pennsylvania

Pennsylvania faces growing recruitment and retention challenges that impact districts struggling to fill vacant positions. In many ways, teacher workforce and labor market trends in Pennsylvania mirror national trends and highlight a need to provide robust investment in the teacher workforce to help alleviate teacher shortages and high rates of turnover across the state. These trends in Pennsylvania’s teacher workforce include:

A sharp decline in the number of individuals entering teacher preparation. Teacher preparation enrollment in Pennsylvania is down 65% since 2009–10, contributing to the challenges districts currently face in staffing classrooms with fully prepared educators.²

Figure 1. Pennsylvania Teacher Preparation Enrollment



Source: LPI analysis of Title II Reports, 2017, National Teacher Preparation Data, United States Department of Education.

Persistent shortages of certified educators across the state and in specific subject areas. While overall shortages in Pennsylvania are not as extreme as in some other states, shortages are heavily impacting certain geographic areas and subject areas.

- For the 2017–18 school year, 33 school districts across the state have been designated as geographic areas with an inadequate supply of elementary or secondary teachers (6% of the state’s 500 school districts).³
- For the 2017–18 school year, the state designated the following subjects as shortage areas: English as a Second Language (pre-k–12), fine and performing arts (pre-k–12), foreign languages (pre-k–12), sciences (7–12), mathematics (7–12), special education (pre-k–12), and vocational education (7–12).⁴

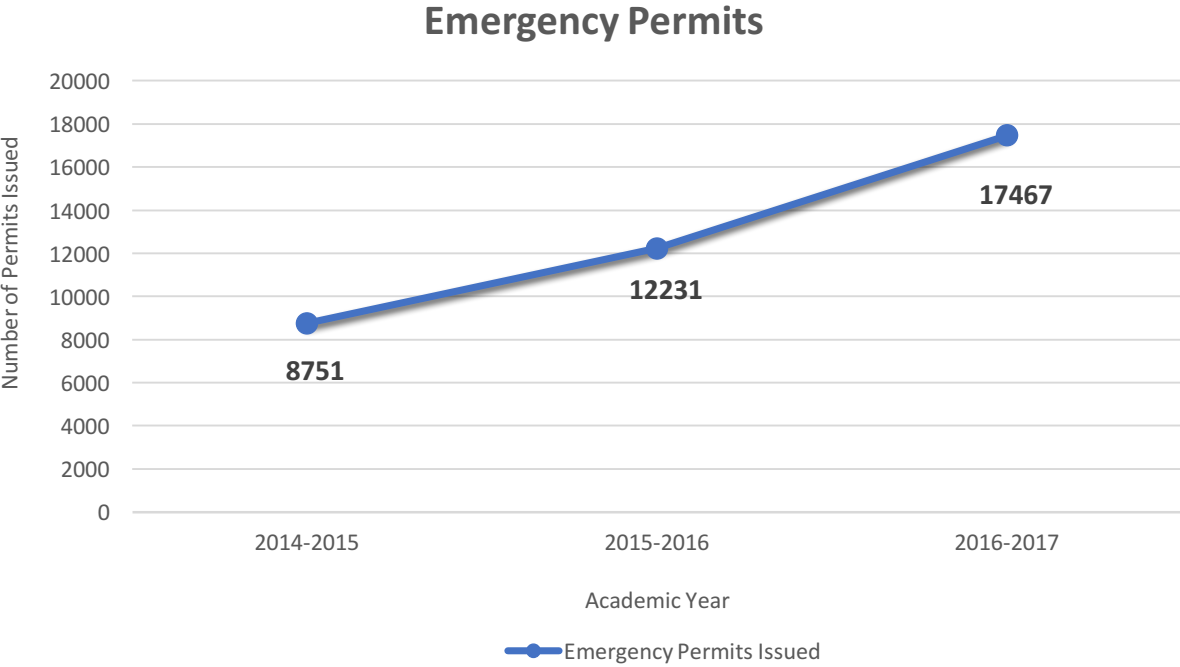
Sharp inequities in access to qualified teachers for students from low-income families and students of color. The decline in supply and the resulting shortages disproportionately impact students who have been historically underserved. As described in *Pennsylvania’s State Plan for Ensuring Equitable Access to Excellent Educators for All Students*, students in high-poverty schools and students of color are much more likely to be taught by “unqualified, not highly qualified teachers.”⁵

- The eight districts that top the state’s list of districts with shortages by number of unfilled vacancies are all Title I districts. Together, they reported 1,431 total vacancies this past year.⁶ While these districts served over 13% of the state’s overall student enrollment in 2016–17, they served over 30% of the students of color enrolled in Pennsylvania schools.⁷
- Six of the eight districts designated with the greatest shortages serve primarily students of color (Allentown City, Harrisburg City, Hazleton Area, Philadelphia City, Pittsburgh Public, and Reading).⁸

An increasing reliance on long-term substitute teachers serving on emergency permits⁹ to fill vacancies. In place of certified and fully prepared educators who support the learning of all students, schools across the state have increasingly had to fill vacancies with individuals who have not yet met Pennsylvania’s educator standards nor earned a Pennsylvania teaching certification.

- Over the past 3 years, the state has seen a 100% increase in the number of emergency permits issued to districts and schools facing staffing shortages.¹⁰
- The rise of emergency permits coincides with a 71% drop in the number of newly issued in-state Instructional I teaching certificates since 2009–10, from 15,247 to 4,412 in 2016–17.¹¹

Figure 2. Pennsylvania Emergency Permits Issued 2014–17



Source: Baumer, C. (2018). Pennsylvania certification of professional personnel landscape. (PowerPoint presentation). Harrisburg, PA: Pennsylvania Department of Education.

Note: Emergency permits include the following types: (1) Vacant Position with an Educational Obligation to Pursue Certification, (2) Long-Term Substitute with No Educational Obligation, and (3) Day-to-Day Substitute. PDE staff report that emergency permits issued for day-to-day substitute teachers account for approximately 85% of the emergency permits issued in a given year.

High rates of teacher turnover that contribute to recurring demand for new teachers and undermine student achievement. While declining teacher supply is a concerning trend, teacher shortages aren’t solely a product of insufficient supply. The demand for new teachers nationally is driven by high rates of teachers leaving the profession or moving schools. In addition to exacerbating shortages, high rates of teacher turnover also undermine student achievement and carry high financial costs for districts in terms of teacher replacement and onboarding.¹² Current trends in teacher turnover reflect the state’s challenges with providing appropriate supports and incentives to keep teachers in the classrooms and subjects in which they are needed most.

A look at Pennsylvania’s State Plan for Ensuring Equitable Access to Excellent Educators for All Students (2015) shows that turnover rates do not impact schools equally.

- High-poverty schools have a turnover rate that is nearly twice the rate of low-poverty schools (8% vs. 4.9%).¹³
- Charter schools experience higher rates of teacher turnover compared to public schools. The turnover rate for high-poverty charter schools (21.4%) is 2.7 times the rate for high-poverty schools and is 4.4 times the rate for low-poverty schools.

The Need to Diversify Pennsylvania’s Educator Workforce

While Pennsylvania’s overall shortages vary across districts, student populations, and subject areas, when considering teacher diversity, it is clear that there are far fewer teachers of color than students of color in the state. By investing in increasing teacher diversity, the state and districts can tackle at least two goals at once: addressing teacher shortages and increasing the number of teachers of color in the workforce.

The percentage of teachers of color in Pennsylvania’s teacher workforce, currently at 5.6%, lags behind the national average of 20% and falls well below the percentage of students of color (33.1%) enrolled in the state’s public schools.¹⁴ Increasing the number of teachers of color in Pennsylvania is a high priority for the state, given the important benefits that being taught by teachers of color offers to all students, and especially to students of color.

- Teachers of color have been found in several studies to improve outcomes for students of color, including improved academic achievement and graduation rates, increased aspirations to attend college, fewer unexcused absences, and lower likelihoods of chronic absenteeism and suspension.¹⁵
- Students of color and White students report having positive perceptions of their teachers of color, including feeling cared for and academically challenged.¹⁶
- Many teachers of color report feeling called to teach in low-income communities of color, where positions are often difficult to fill. Indeed, 3 in 4 teachers of color work in the quartile of schools serving the most students of color nationally.¹⁷

In summary, Pennsylvania faces a pressing set of teacher workforce challenges: a striking decline in the supply of new teachers in Pennsylvania; teacher shortages that are disproportionately impacting certain subjects, locations, and historically underserved student populations; and a current teacher workforce that does not reflect the diversity of the state’s population. Efforts to strengthen teacher preparation in Pennsylvania must address these challenges, while also strengthening the ways in which teacher preparation programs prepare teachers to meet the needs of all students.

Pennsylvania’s ESSA State Plan

Pennsylvania’s ESSA plan, approved in January 2018 by the U.S. Department of Education, highlights a number of initiatives using funds available under Title II, Part A of ESSA to improve the recruitment, retention, support, and development of teachers and the overall racial diversity of the state’s workforce.¹⁸ The plan proposes using funds to expand rigorous, PDE-approved clinical **residency programs for teachers and school leaders** through a competitive grant program. Leveraging partnerships between districts and educator preparation programs, these programs would embed at least 1 year of clinical experience within preparation programs and would emphasize a residency model in which coursework is tightly integrated with clinical practice and residents commit to working in the sponsoring district upon completion of the residency. The plan proposes giving priority consideration to communities that have reported multiple, chronic shortage areas. In May 2018, PDE initiated a \$2 million competitive grant program for “Innovative Teacher and Principal Residency Programs,” implementing this element of Pennsylvania’s ESSA state plan in what it intends to be a multiyear competitive grant program.¹⁹

Another strategy the state hopes will help address teacher shortages is a statewide **Troops to Teachers** program to support veterans transitioning from military service into the educator workforce. Funded through a \$1.6 million, 5-year federal grant managed by the Defense Activity for Nontraditional Education Support (DANTES) office, this initiative provides one or more alternative pathways to Pennsylvania certification that enable veterans who already hold at least a bachelor's degree to complete critical, specially designed education courses and have access to immediate opportunities to practice that knowledge and skills as part of the pathway to Pennsylvania teacher certification.²⁰

In addition to supporting the preparation of new teachers through residencies and the Troops to Teachers program, PDE is exploring the use of federal funding to encourage partnerships between educator preparation programs and school districts to develop **pathways into the classroom for paraprofessionals**. Furthermore, PDE is seeking to proactively promote the long-term development of a diverse and talented educator workforce through a program to provide seed grants and technical assistance to secondary schools implementing curriculum that encourages high school students to explore teaching as a career.

Review of Chapter 49

Coinciding with the early stages of the state's ESSA plan implementation and the continued focus on addressing growing teacher shortages, ensuring equitable access to excellent educators, and improving teacher diversity, the Pennsylvania State Board of Education is preparing to undertake a mandated 10-year major review of Chapter 49 of Section 22 of the Pennsylvania Code.²¹ Chapter 49 establishes state requirements for preparation, certification, and continuing professional education for professional personnel employed in Pennsylvania's pre-k–12 education system. Chapter 49 regulations also overlap and connect with regulations in Chapter 354 that govern educator preparation. Specifically, Chapter 354 sets forth requirements and standards that all preparing institutions must adhere to in constructing their programs. While this report looks exclusively at revisions to Chapter 49, it is important to recognize that some revisions to Chapter 354 may also need to be considered in order to advance an aligned system of regulations that governs both educator preparation and certification in Pennsylvania.

As an initial step in this process, PDE has engaged stakeholders to provide input on potential amendments to Chapter 49. Input from different stakeholder groups across the state will guide proposals from the Secretary of Education to the State Board. Part II of this report provides a summary of key takeaways from PDE's stakeholder engagement process.

Part II: Stakeholder Perspectives on Chapter 49

PDE convened stakeholders at three meetings across the state in July 2018. The meetings were held in Philadelphia (July 24, 2018), Harrisburg (July 25, 2018), and Pittsburgh (July 26, 2018), with a total of 234 attendees representing a comprehensive cross-section of key groups invested in both teacher preparation and certification. These groups included leadership from institutions of higher education; faculty from preparation programs; administrators from both districts and schools; pre-k–12 educators; human resources staff from districts; staff to the General Assembly; representatives from advocacy groups; and membership associations representing major school personnel groups including teachers unions, school psychologists, and early childhood educators. (See Appendix A for a full list of attendees.)

Several key themes surfaced across the three meetings and are summarized below.

Teacher Preparation Standards. Stakeholders presented a wide range of ideas focused on supporting the overall quality, improvement, and consistency of preparation programs across the state. This included a desire to see **improved standards for preparation that included more “culturally responsive” and “trauma-informed” teaching practices.** One district administrator articulated a sentiment shared across all three meetings:

Going through [the] interview process and working with new teachers, [culturally responsive and trauma-informed teaching practices] is an area that is extremely lacking. Given the increase in the diversity of students, the lack creates many challenges. This is an immediate need; [we] must operationalize for preparation to be specific.

Assessments. Stakeholders also spent time discussing revised approaches to candidate assessment, including the value of the basic skills assessment requirement for entrance into an undergraduate program and the larger **need for more authentic assessments of candidate teaching ability.** While there was debate regarding the potential shape of a performance assessment recommendation, there was overwhelming desire to see teacher candidate assessments that actually measure the types of teaching practices needed to support diverse learners in the classroom. For example, stakeholders recommended:

We should be looking at what truly makes a successful teacher and looking at application/practice-based ways to assess and evaluate. —Charter School Administrator

Create and maintain a rigorous assessment of preservice teachers to encourage the best teachers for our children. —Community College Instructor

A number of meeting participants expressed a desire to eliminate barriers to the recruitment and retention of a more diverse teacher workforce. On top of echoing recommendations linked to strengthening preparation standards, stakeholders also identified the basic skills assessment as a current barrier to entrance into a teacher preparation program and area for potential change. The views expressed at the meetings were not necessarily about testing, but about the type of assessment and other factors that matter more in identifying and developing quality teacher candidates:

[There should be] more options to attract more students. Testing can be a hurdle for some. —Higher Education Department Chair

More testing does not always guarantee a good-quality teacher. —Principal

Of additional concern was the high student debt burden that teacher candidates must take on in order to afford high-quality teacher preparation that provides them with significant clinical training, and the barriers such debt posed to bringing more candidates of color into the profession.

Clinical Training. With the goal of supporting better preparation overall, stakeholders also expressed a desire to see **more robust clinical practice** during preparation and a desire to **improve the quality and consistency of cooperating teacher support**. As was highlighted by a number of participants, cooperating teacher selection does not consistently include considerations of quality or skill:

Sometimes the only requirement is willingness to take a student teacher.
—Higher Education Faculty Member

Mentors need more support and training to lead student teachers. —District Administrator

In addition, many stakeholders voiced interest in building **better connections between teacher preparation programs and district induction programs**. This included improved alignment between the standards and expectations guiding these two systems:

More coordination between school districts & institutions of higher education.
—Higher Education Department Chair

[We need] mentor programs to reduce class load in years 1 and 2 to focus on pedagogy mastery. —Union Representative

Not sure how this might work, but this might be the most important thing a new Chapter 49 could do for student achievement. —Higher Education Department Chair

Stakeholders also expressed support for **more flexible routes into the profession while ensuring quality**, such that every candidate receives comprehensive preparation and the opportunity to learn from rigorous clinical practice and coaching:

[We need candidates] in the classroom earlier, with more varied experience[s], [and a] longer student teaching to better prepare them to reduce attrition.
—District Administrator

Maintain high standards for entry to profession while creating pathways.
—Union Representative

Teacher Shortages. Another dominant theme from the stakeholder meetings involved the immediate challenges posed by teacher shortages and high rates of teacher turnover across the state. Districts voiced particular urgency in advocating for changes that might help expand the pool of teachers to fill vacancies in special education, elementary, STEM, and English language learner positions. This included a frequent **recommendation that grade spans be expanded or revised to offer greater flexibility** to administrators and human resources managers in making staffing decisions:

Make cert[ification]s more accessible, not more restrictive. —Higher Education Department Chair

Add flexibility. Allow schools discretion to assign teachers who have worked in the district beyond certificated grade spans. —District Administrator

Views on the use of **emergency and substitute permits** were mixed. Stakeholders representing districts also requested additional flexibility when it came to emergency and substitute permits and voiced resistance to increasing requirements:

Unnecessary burden—districts are already struggling. —Charter School Administrator

Perhaps [requirements should be increased] if there were not a shortage, but we rely heavily on this population. Hence the 99% increase [in emergency permits]. —District Human Resources Director

Other stakeholders expressed concern about the heavy reliance on emergency and substitute permits:

There must be a way to regulate this. Too many unqualified adults are “teaching” with no direction or ongoing [professional development]. —Higher Education Department Chair

We must not rush to fill vacancies with people ill-prepared and ill-equipped to meet the demands of the teaching profession. —Retired Teacher

Another approach to addressing shortages identified by stakeholders was **greater reciprocity for out-of-state teachers**. The hope was that this might lead districts to cast a wider net in their search for licensed teachers to fill immediate openings.

Although some stakeholders saw Chapter 49 revisions as potentially helping to address current pressing teacher shortages, other stakeholders pointed out the challenge of making changes to Chapter 49 with these immediate needs in mind. Given the reality that changes to Chapter 49 could take over 2 years to approve and finalize, there was growing understanding that the impact of potential revisions might take several more years to be felt across the system.

Stakeholders also identified a number of broader considerations that they wanted policymakers to keep in mind in considering changes to Chapter 49. Specifically, there was a desire to avoid adding additional requirements for both preparation programs and teacher candidates without reviewing and eliminating requirements that didn't serve the state's priorities for better preparation. Stakeholders voiced interest in building stronger partnerships between districts and preparation programs and more robust support from the state in terms of capacity and resources. Finally, there was a consistent belief that any policy changes or revisions to Chapter 49 should be informed by both research and data. To this end, Part III of this report presents recommendations for Chapter 49 and provides a brief discussion of relevant research that has informed these recommendations.

Part III: Recommendations

As highlighted in the previous section, consistent across the feedback from stakeholders was a desire to see investment in teacher preparation that provides the needed capacity and resources to support sustained change in such a large system. In addition to the focus on improved preparation, participants expressed a desire to help address growing shortages across subject areas and geographic locations. Finally, stakeholders reiterated a consistent desire to see policy proposals grounded in research and data, knowing that policy changes will likely shape the state of teacher preparation in Pennsylvania for many years to come.

In addressing more specific changes, stakeholders across Pennsylvania expressed a clear interest in Chapter 49 revisions that support improved quality, and consistency in that quality, across all teacher preparation programs. This includes building out supports for stronger clinical experiences and improved collaboration with expert cooperating teachers. Stakeholders also pushed for a review of all candidate assessment requirements, with an understanding that current requirements may fail to accurately measure a future teacher's capacity to support a diverse group of learners and may serve as barriers to the recruitment of a more diverse teacher workforce. In recognizing the need to bridge elements of the broader teacher workforce system, stakeholders voiced support for policies that promote alignment between preparation and district induction programs and greater collaboration between pre-k–12 districts and institutions of higher education.

The following six recommendations are rooted in these recurrent themes and align with the state's current priorities of addressing teacher shortages, ensuring equitable access to quality educators, and increasing the racial diversity of the teacher workforce. Given the stated desire of stakeholders to ground any potential changes to Chapter 49 in research, the following recommendations reflect the most current research underlying such policy proposals.

It should be noted that Chapter 49 references other school personnel and school-based professionals in addition to teachers and principals. While reference to these additional personnel is limited in this report and the following recommendations, a foundational principle in considering any changes to Chapter 49 is that all positions in Pennsylvania public schools should be filled with qualified professionals. Specifically, the goal should be to provide the necessary supports and structures to ensure every individual working within the public school system has the requisite knowledge and skills to support each and every child. Underprepared or unqualified individuals in any position hinder schoolwide efforts to meet the needs of all students and can contribute to teacher attrition. The skills and expertise of all staff should be effectively developed and utilized as part of a comprehensive vision for school and student success.

Recommendation #1: Improve Clinical Training

Improve and extend clinical training experiences.

As previously discussed, Pennsylvania currently faces challenges in both recruiting and retaining new teachers in the classrooms and content areas in which they are needed most. Research has shown that strong preparation increases teachers' efficacy and makes it more likely they will remain in the profession.²² Beginning teachers with little or no preparation are 2 to 3 times more likely to leave the classroom after 1 year compared to their well-prepared peers.²³ Teacher turnover rates are even greater in schools serving the largest populations of students of color.²⁴ Furthermore, higher teacher turnover rates among teachers with inadequate preparation contribute to school instability and can negatively impact student achievement, both among the students in the classrooms of teachers who leave as well as those in the classrooms of those teachers who stay.²⁵

Expanding access to intensive and high-quality clinical training

Given the strong relationship between teacher preparation and teacher retention, a key strategy to counteract high teacher turnover in schools is to strengthen access to high-quality teacher preparation. Research shows that strong clinical training is an essential element of high-quality teacher preparation²⁶ and is strongly associated with lower rates of teacher turnover. An analysis of the U.S. Department of Education's nationally representative Schools and Staffing Survey found that new recruits who had not had practice teaching were 3 times more likely to leave teaching after a year than those who had a semester or more of practice teaching prior to employment.²⁷ Further analysis that examined other aspects of new teacher preparation found that beginning teachers with little or no pedagogical training or practice teaching were 2.5 times more likely to leave teaching after a year in the profession than teachers who had received comprehensive preparation (i.e., observing others teaching, student teaching a full semester, receiving feedback, taking courses in teaching methods, learning theory, and selecting instructional materials).²⁸

High-quality clinical training provides teacher candidates with opportunities to observe and experience high-quality teaching practice, and to enact those practices over an extended period of time with students. In addition, high-quality clinical training allows candidates to work closely with an expert mentor and receive regular guidance and feedback on their teaching practice.²⁹ The impacts of comprehensive preparation and the strong clinical training that is a fundamental feature of such preparation go beyond helping to stem turnover in schools. Research shows strong clinical training is also associated with teacher effectiveness and improved outcomes for students.³⁰

Ensuring future teachers receive rigorous clinical training and opportunities to learn alongside an expert mentor should be a feature of any state-level strategy meant to improve teacher preparation and reduce high levels of teacher turnover that are a key driver of shortages. Currently, Pennsylvania regulations create multiple routes into the classroom that do not necessarily require this level and depth of clinical training, including through an intern certificate and the American Board for Certification of Teacher Excellence (ABCTE).³¹ Some routes into teaching in Pennsylvania do not guarantee the level of preparation that research suggests will best prepare and retain teachers in the classroom.

Because underprepared teachers are more likely to leave the classroom, it is important for the state to consider opportunities in Chapter 49 to improve the quality of clinical practice experiences and overall preparation. Pennsylvania should work to make sure all future teachers have access to early and sustained clinical practice throughout their preparation. A focus on improved clinical experiences also benefits candidates of color, who, according to national data, are more likely to enter the profession through alternative routes that typically often offer limited—if any—student teaching.³² To this end, ensuring that all routes into the profession include intensive clinical practice increases the likelihood that new teachers will have received the kind of training that is more likely to keep them in the classroom long term and buoys the state’s efforts to prepare and retain more teachers of color.³³ Stakeholders across all three meetings consistently expressed a desire for expanded, more rigorous clinical experiences and opportunities to employ more innovative models of preparation to achieve this end.

With these priorities in mind, Pennsylvania could outline a required length of clinical experience in Chapter 49. Specifically, the state could set the length of student teaching at a minimum of 18 weeks, as is increasingly common in the field, or preferably a full year, which is the emerging standard suggested by research.³⁴ Currently, in Chapter 49, regulations governing clinical experience stop short of outlining a clear standard for length and quality, requiring that institutions need only demonstrate candidates “successfully participate in sequential clinical experiences fully integrated within the instructional program.”³⁵ Such a revision to Chapter 49 would require reconciling the current 12-week student teaching requirement outlined in §354.25.³⁶

Strengthening Chapter 49’s clinical experience requirements would increase opportunities for all future teachers to experience intensive and sustained clinical practice prior to earning a Pennsylvania certificate. An expansion of the clinical requirements would provide candidates with greater opportunities to see, experience, and demonstrate the sophisticated teaching practices required to support the learning of all students. Furthermore, candidates would benefit from the experiences gained working in a classroom at the start of the year, when systems are implemented that provide a foundation for successful classroom operation throughout the rest of the school year.

Building on this desire for expanded clinical experiences, stakeholders also expressed interest in developing clinical practice models in the vein of teacher residencies. Teacher residencies, which provide candidates a full-year apprenticeship teaching alongside an expert mentor teacher, are one example of a high-quality, sustained clinical training experience.³⁷ Research on the impact of the residency model suggests that, on average, residents are more racially diverse than other new teachers, are viewed as effective, and are much more likely to stay in teaching, especially in the high-need districts that sponsor them.³⁸

Pennsylvania has a number of teacher residency programs. Building on the vision set forth in Pennsylvania’s ESSA plan, PDE in May 2018 kicked off a new competitive grant program, the Innovative Teacher and Principal Residency Program, to support the growth of teacher and leader residencies in the state. Interest from the field was high, and eight programs were awarded funding, including three implementation grants and five planning grants.³⁹ In this way, the state is seeding new models for intensive clinical training that Chapter 49 revisions could build upon.

Other states have recently moved to lengthen and strengthen their clinical training. For example, the **Louisiana** Board of Elementary and Secondary Education formally adopted regulations in 2016 requiring a yearlong residency as a pathway to licensure. To support the implementation of these new regulations, Louisiana is using federal funds to support staff costs related to the transition of preparation programs, a \$2,000 stipend for candidates completing yearlong residencies, and a \$1,000 stipend for mentor teachers hosting yearlong residents.⁴⁰

Strengthening the quality of cooperating teacher support

An essential element of high-quality clinical training is effective mentoring and support from an expert teacher. Attention to cooperating teacher quality improves teacher candidates' effectiveness and provides valuable learning opportunities and instructional guidance.⁴¹ However, finding high-quality cooperating teachers can be a challenge for preparation programs. As research has shown, many teachers deemed highly effective with their students may still lack the skill set required to effectively support a novice teacher. To further compound this problem, cooperating teachers rarely receive training or professional development aimed at supporting the acquisition of these skills.⁴² Research suggests that cooperating teachers who receive training prior to supporting a student teacher report a greater sense of self-efficacy in their role,⁴³ which may result in stronger performance in the classroom by student teachers under their supervision, as measured by classroom evaluations.⁴⁴

Research on the qualities of effective cooperating teachers indicates a number of ways effective mentors produce impactful interactions with teacher candidates. In addition to being strong teachers who meet standards set by evaluation measures, research identifies qualities and roles effective mentors take on beyond serving as an instructional coach. These include modeling effective teaching practice, acculturating teacher candidates into the professional culture of a school, and providing overall psychological support.⁴⁵ In addition, effective mentors are responsive to a teacher candidate's learning needs and stage of development, personalizing and adapting support and feedback.⁴⁶

Research points to a number of skills that training for cooperating teachers can help to develop. An effective program of cooperating teacher training should include a focus on developing the interpersonal skills necessary to cultivate trust with a new teacher. Training should also support a cooperating teacher's ability to lead and model reflective conversations that include recognition of the pedagogical choices made throughout a lesson.⁴⁷ In addition to developing the individual skills of cooperating teachers, cooperating teachers should be provided opportunities to meet and network regularly with other cooperating teachers to discuss problems of practice.⁴⁸ Training provided by the New Teacher Center (NTC), which operated new teacher induction programs in 108 schools across two large urban districts under a federal Investing in Innovation (i3) grant, offers one example of cooperating teacher training that attends to the development of these different skills. NTC provided selected mentors over 100 hours of training both prior to working with new teachers and throughout their time serving as a mentor. This training and support included intensive training across a mentor academy, mentor forums, mentor-to-mentor shadowing, and peer coaching and goal-setting.⁴⁹ The 2-year induction program, which included intensive cooperating teacher support and training from NTC, improved student achievement in both English language arts and mathematics.⁵⁰

To support more effective mentoring for teacher candidates, Pennsylvania could articulate a more comprehensive set of expectations and skills for cooperating teachers. In addition, the state could pair this expanded role with systems for training and support that help equip potential cooperating teachers with the relevant knowledge and skills they need to support adult learning. Currently, Chapter 49 does not include any specific requirements for training, supports, or qualifications for cooperating teachers who supervise teacher candidates in their clinical placements.⁵¹ The limited requirements for cooperating teachers are outlined in §354.25, which stipulates that cooperating teachers must be trained by teacher preparation program faculty, must be certified, must have 3 years of satisfactory teaching experience, and must have taught for over a year in the school where a student teacher is placed.⁵² While requiring some experience, which is strongly associated with increased teacher effectiveness,⁵³ the current requirements are not tied to any capacity with respect to adult learning or supporting novice educators.

In considering opportunities in Chapter 49, it is within the “approval of institutions” subsection (§49.14) that requirements surrounding the selection and training of cooperating teachers could be articulated and reinforced to prioritize movement across preparation programs toward more intentional and impactful interactions between cooperating teachers and teacher candidates. Currently, Chapter 49 states:

Institutions, in partnership with local education agencies, provide a school-based experience integrating the teacher candidates’ knowledge, skills and dispositions in professional practice. This experience shall be fully supported by institutional faculty, including frequent observation, consultation with supervising teachers and opportunities for formative and summative evaluation.

It is here that Pennsylvania has the opportunity to ensure cooperating teachers are not just equipped to model the types of teacher practices that support learners from diverse backgrounds, but that they are able to effectively develop these skills in a novice teacher.⁵⁴

In addition to an increased level of expertise and the additional time needed to improve the skills of cooperating teachers, Pennsylvania could also establish financial incentives, such as stipends, that compensate cooperating teachers for the important role they play in supporting the development and growth of teacher candidates and for the added responsibilities of supporting a candidate over the course of an expanded yearlong clinical experience.

Other states have moved to strengthen clinical training for candidates by investing in the quality of cooperating teachers, who are essential to ensuring a high-quality clinical placement. For example, the Kentucky Education Professional Standards Board (EPSB) currently operates a system that requires preparation programs to provide training to cooperating teachers that include the basic responsibilities of the cooperating teacher, best practices in supporting the student teacher, and effective assessment of the student teacher. This training is provided at no cost to the cooperating teacher and is joined with the Cooperating Teacher Payment Program, which provides compensation from the state to eligible teachers who supervise a student teacher enrolled in an in-state accredited college or university teacher preparation program.⁵⁵ Both the effort to ensure consistent training for all cooperating teachers and the compensation granted to teachers who take on the responsibility of supporting a student teacher provide a state with opportunities to reinforce particular skills and knowledge deemed vital to supporting high-quality learning for every child in every classroom.

By committing to an expanded vision for clinical training experiences—including length as well as quality—Pennsylvania can ensure that more candidates receive the type of comprehensive teacher preparation that boosts teacher retention and effectiveness.

Recommendation #2: Refine Preparation Standards

Refine preparation program standards to reflect the array of teaching skills needed to fully support the academic, social, and emotional development of a diverse student population.

Pennsylvania’s Chapter 49 regulations shape the content and format of teacher preparation and are intended to ensure that all new teachers entering the classroom have developed the knowledge and skills needed to support the academic, social and emotional development of Pennsylvania’s students. Current regulations indicate that institutions must demonstrate how programs provide teacher candidates “with the capacity to enable the achievement of all students, including diverse learners in an inclusive setting.”⁵⁶ However, the regulations could be strengthened by including reference to research-based teaching practices that help achieve this end. Throughout the stakeholder meetings, participants stressed the need for new teachers to more explicitly focus on multicultural and multilingual approaches to learning throughout preparation.

Additionally, current regulations, in §49.81, outline a set of standards that candidates must meet to be eligible for an instructional certificate. These same standards are also referenced in Chapter 354, outlining the preparing institution’s responsibilities for ensuring that candidates have met these standards upon completion of the program and recommendation for an instructional certificate.⁵⁷ Section 49.13 describes additional coursework requirements for preparation programs that focus on meeting the needs of different student populations, including students with disabilities, English language learners, and diverse learners in inclusive settings.⁵⁸ However, there is an opportunity within both §49.13 and §49.81 to make even more transparent the teaching skills needed to support the achievement of diverse learners and create an inclusive classroom.⁵⁹

Revising the set of standards set forth in Chapter 49 could help stress the pressing need to equip every new teacher with the skills to develop classroom activities based on how all children learn and develop socially, emotionally, and cognitively. Research points to a collection of teaching skills that could inform these revisions and are meant to support student development and welfare, and to build trust across students, teachers, families, and communities. Teaching practices and skills that help students feel value and belonging are particularly relevant to teachers working alongside a diverse student population.⁶⁰

Teachers who are successful with all learners must have tools and practices to learn about their students’ different ways of learning, prior experiences and knowledge, and cultural and linguistic capital. Teachers can learn about the strengths and needs of individual students through techniques such as regular check-ins and class meetings, conferencing, journaling, classroom surveys, and meeting with parents as authentic partners to learn about their students’ lives and learning strategies and to create more coherent, well-reinforced learning opportunities between home and school. These moves can help create environments in which students feel culturally respected as well as emotionally and intellectually safe. Many studies have documented the positive effects of practices such as these that foster developmentally informed,

meaningful relationships among students, parents, and staff on student outcomes as measured by state assessments, graduation rates, and persistence through college.⁶¹

Revisions to Chapter 49 present an important opportunity to incorporate the best practices of teaching into all preparation programs and prioritize the acquisition and demonstration of these practices by all new teachers.

In revising the regulations around expectations for teacher preparation, specifically §49.13 and §49.81, the state could emphasize equitable access to learning opportunities by articulating teaching practices that support the social, emotional, and academic learning needs of all students, including

- culturally and linguistically responsive teaching,⁶²
- trauma-informed practices,⁶³
- understanding implicit bias and how it manifests in schools and classrooms,
- connecting curriculum to students' prior knowledge and experiences,
- using heterogeneous grouping and complex instruction,
- restorative practices,⁶⁴ and
- partnering with parents and families to support student growth and learning.⁶⁵

Further attention to the social-emotional needs of students and the competencies that help promote communities of mutually supportive learners would go even further to support effective teaching. The expectations for preparation could be enhanced with more explicit detail on the types of competencies that would produce more learner-centered classrooms and reinforce the principles that help support more democratic and interactive learning environments. In this vein, the state recently approved a Social, Emotional, and Behavioral Wellness of PK–12 Students Endorsement Program, which supports educators in acquiring and developing skills to support the social, emotional, and behavioral wellness of students.⁶⁶ Given the importance of these skills for all teachers and school-based administrators, it seems important for the state to move toward ensuring that all teachers acquire these skills during preparation, rather than just a narrow subset of teachers through an additional endorsement route.

Recommendation #3: Address Shortages

Address teacher shortages in specific content areas and geographic locations in the state by

- creating targeted service scholarship or loan forgiveness programs to recruit individuals into high-need subjects and locations,
- providing appropriate flexibility around the content requirement for special education candidates and expanding the special education grade span to pre-k–12, and
- ensuring that individuals hired on emergency or substitute permits receive intensive support and training and are placed on an expeditious pathway to full state certification.

Pennsylvania has identified a pressing need to address teacher shortages. As described in Part I of this report, teacher shortages and high rates of teacher turnover disproportionately impact certain subjects, locations, and student subgroups. Addressing teacher shortages requires a multifaceted policy approach: from strategies to increase the supply of well-prepared teachers who are committed to staying in the highest need fields and locations to providing appropriate flexibility in licensing requirements to ensuring that individuals who are hired on an emergency basis to fill immediate vacancies are provided with intensive support and training. In this recommendation, we outline a set of policy strategies to address shortages. Some can be accomplished through Chapter 49 revisions, and others may require action from the legislature. Recognizing that revisions to Chapter 49 may take over 2 years to complete, it is important to recognize that other strategies must also be pursued at the same time.

Financial incentives to recruit individuals into high-need subjects and locations

A key barrier preventing candidates from accessing quality preparation is the cost of preparation. Research shows that the cost of preparation is increasingly difficult for candidates to afford. More than two thirds of individuals entering the field of education—most of whom are new teachers—borrow money to pay for their higher education, resulting in an average debt of about \$20,000 for those with a bachelor’s degree and \$50,000 for those with a master’s degree.⁶⁷ Unlike in other professions, such as law or medicine, in which future high professional salaries better justify large upfront training costs, teaching pays a relatively low salary. In this context, prospective teachers may rationally choose a pathway in which they can earn a salary while undergoing training rather than taking on debt, which they must repay on a low salary.⁶⁸

With the cost of preparation in mind, and recognizing the pressing hiring needs of districts, the state should seek to expand the number of individuals entering high-retention preparation pathways by funding service scholarships and loan forgiveness programs that seek to recruit and retain teachers in the fields and classrooms that need them most. For Pennsylvania, which has seen persistent shortages in many of the same subjects over the past decade and has shortages in both rural and urban locations, the development of programs to provide financial incentives to future teachers while requiring a period of service (e.g., 4 years) in these high-need classrooms could both tackle shortages and boost retention. Research also shows that the burden of student

debt is even greater for students of color and acts as a barrier to entry into teaching.⁶⁹ This suggests that strategies such as service scholarship and loan forgiveness programs are an important tool to increase the diversity of Pennsylvania’s teacher workforce.

Alongside a commitment to tackling shortages through incentives that recruit and retain teachers in high-need subjects and locations, there are steps the state can take in regard to certification changes that can help bridge the immediate needs of vacant classrooms in the coming school year, with the long-term goal of maintaining the quality of teaching in the state.

Providing appropriate flexibility for special education certification

In facing significant shortages across special education, the state has the option to provide greater flexibility in special education licensure requirements as outlined in §49.85.⁷⁰ The original rigid content requirements were a result of the U.S. Department of Education’s interpretation of the No Child Left Behind Act of 2001 (NCLB) and its “highly qualified teacher” requirements. Now that NCLB has been replaced by the Every Student Succeeds Act, states have the option to redefine these requirements to make them more reasonable. Providing appropriate flexibility in meeting the content requirement and expanding the special education grade span to pre-k–12 could help increase the immediate supply of special educators available to fill vacancies across the state. Stakeholders representing districts facing shortages expressed that such a change would provide them with the needed flexibility to ensure they can more immediately fill vacant special education positions.

At the same time, it is important that the state maintains current efforts toward greater inclusion for students with Individualized Education Programs (IEPs). An example of how potential changes to Chapter 49’s certification requirements for special education teachers could undermine efforts toward inclusion came from one stakeholder who pointed to possible unintended consequences under prior certification requirements. Before special education content requirements were put in place, individual special education teachers could be recruited to teach any needed subject to a school’s population of students with IEPs. In some contexts this flexibility might have been used to remove those students from the general education classrooms. Thus, any potential changes to Chapter 49 must not undo efforts toward greater inclusion nor work against the wider goal of ensuring access to quality teaching for this especially vulnerable student population.

An expeditious pathway to certification for teachers serving on emergency permits

Given the increase in the numbers of teachers and substitutes in Pennsylvania serving on emergency and other temporary permits⁷¹, the state could ensure that teachers serving on emergency permits as long-term substitutes are placed on an expeditious pathway to full state certification that includes intensive support and training. Research shows that individuals who enter the classroom on emergency-style permits are both less effective when they begin teaching and more likely to leave the classroom than those who have been fully prepared before entry.⁷² Yet Chapter 49 currently permits individuals to teach for as long as 6 years without having met the standards for educator certification in Pennsylvania.

Under §49.31 and §49.32, the state currently issues emergency permits to local districts that are unable to find a certified educator holding a valid and active certificate to fill a vacant position.⁷³ The initial application allows an individual who holds a bachelor’s degree to teach in a classroom for up to a year without having received any training to teach. An individual teaching on an emergency permit could have the permit reissued over the course of 5 or more years upon

submitting proof of completed credits (6 credits for the first year and 9 credits for each successive year) from an approved teacher preparation program.⁷⁴ Permits can even be reissued for an additional school year if an individual has attempted but failed to pass the required basic skills or subject-matter assessments. Ultimately, this level of flexibility presents a scenario in which individuals serving on emergency permits can continue to teach in a classroom for up to 6 years without completing preparation. It is also worth noting that even if an individual completes the required credits, these may not add up to a coherent set of courses providing the necessary knowledge base for effective teaching. In addition, because they are not required to complete student teaching, individuals on emergency permits may never see a good teacher teach, or get intensive support from an expert teacher in their own learning.

Given the 100% increase in emergency permits over the past three years, the state should ensure that teachers on emergency permits serving in long-term positions receive intensive support to enable them to be successful with students and are placed on an expeditious pathway to full teacher certification. The state could consider a requirement that employing districts provide differentiated and intensive support to teachers on emergency permits as they complete their teacher preparation, ensuring that all teachers serving long-term on emergency permits have adequate opportunities to observe and learn from expert teachers and receive feedback on their own teaching. Currently, the only support available to individuals working long-term under an emergency permit is the required first-year district induction program.⁷⁵ This is the same support provided to every first-year teacher, which, as discussed in Recommendation #6 below, could itself benefit from further strengthening. Ultimately, though, individuals teaching long-term on emergency permits—and the students they serve—deserve even greater support than the typical induction program. Furthermore, the state could also consider decreasing the number of years an individual may serve on an emergency permit, as other states have done.

Recommendation #4: Revise Testing Requirements

Expand methods for evaluating a candidate’s basic skills and readiness to enter a teacher preparation program, and implement a more authentic assessment of candidates’ readiness to teach upon completion of such a program.

In building out a more comprehensive vision for teaching through expanded clinical practice and standards for preparation, Pennsylvania could take the opportunity to reconsider the role of current assessment requirements in supporting the progress of teacher candidates and ensuring that newly licensed teachers are truly learner-ready. The state could also review assessment requirements that may act as unnecessary barriers to the profession for many qualified candidates of color.

Expanding methods for evaluating a candidate’s basic skills and readiness to enter teacher preparation

The current assessment requirements outlined in §49.18 include passing a basic skills assessment in mathematics, reading, and writing as a prerequisite for entry into an approved preparation program. Qualifying basic skills tests include the SAT, ACT, Pre-Service Academic Performance Assessment (PAPA), and CORE academic test.⁷⁶

As a step to help recruit greater numbers of teachers of color into high-retention preparation routes, the state could expand the methods by which a candidate’s basic skills are evaluated as a condition for entry into a preparation program. Research has shown that many traditional

multiple-choice exams, such as those currently used in Pennsylvania, produce racial disparities in pass rates and negatively impact access to quality teacher preparation for candidates of color.⁷⁷ In addition to the racial disparities these tests have shown, the exams have failed to serve as predictors of the quality of teacher a candidate will become.⁷⁸ This raises concerns about what exactly can be learned from the basic skills and subject-matter assessments and what role the assessments play in supporting quality teacher preparation. These same concerns were echoed by stakeholders during the three meetings in July 2018. A number of individuals expressed frustration with testing requirements that did not reveal much about a candidate’s potential teaching skill, and, when seen against the decline in preparation program enrollment, appeared to keep capable and committed people out of teaching.

In some states, basic skills requirements for teachers can be met through a wider range of assessments, such as achieving a certain score on the statewide standardized summative assessment that all high school students take, on AP exams, or passing a basic skills assessment in another state.⁷⁹ In other states that require candidates to take the Praxis I, the SAT, or some other standardized basic skills exam for admission to a teacher preparation program, conditional admission policies allow preparation programs to evaluate candidates on a holistic set of criteria, including applicant dispositions, values, and experiences, as well as their academic achievement. For example, in Rhode Island, teacher preparation programs may admit applicants who have not met GPA or test score requirements, as long as the preparation program also provides supports to help those candidates learn the content and skills they need to be effective educators.⁸⁰ This type of flexibility is a significant step in moving toward an assessment system that provides additional opportunities to gain access to comprehensive preparation, and supports programs in developing the skills that have been shown to produce high-quality teaching in a classroom.

Implement a more authentic assessment of candidates’ readiness to teach

As a condition of licensure, Chapter 49 also requires candidates to pass a subject-matter test.⁸¹ The Praxis II series of subject-matter tests serves as the main state-level testing requirement for teacher certification. However, while the Praxis II focuses on subject-matter knowledge, none of the state’s required tests contain authentic performance-based components that assess a candidate’s ability to teach. The new federal Every Student Succeeds Act, which replaces No Child Left Behind, eliminates the definition of “highly qualified teacher,” which established statutory requirements for demonstrating subject-matter competency through tests. Thus, in reviewing Chapter 49, the state could consider allowing candidates to demonstrate their subject-matter competence through the successful completion of a relevant degree program or coursework.

In addition to an assessment of basic skills and subject-matter knowledge, §49.18 also requires an assessment of candidates’ professional knowledge and practice. To meet this requirement, all teacher candidates are assessed using the Pennsylvania Statewide Evaluation Form for Student Professional Knowledge and Practice (PDE-430).⁸² This tool offers a type of performance assessment. However, stakeholders have raised concerns that the PDE-430 tool currently provides limited insight into a candidate’s ability to support student learning, due in part to a lack of consistency in scoring. Further, all additional assessments of candidates’ readiness to teach, outside of the state-required PDE-430 evaluation tool, are program specific and are only reported on during the state’s major program review process, which occurs every 7 years.⁸³ Thus, there is a need for more valid, reliable, and timely information about a candidate’s readiness to teach.

A move to implement a more authentic and comprehensive performance assessment—which typically requires a candidate to plan a lesson mapped to the state’s learning standards, teach it, assess students’ learning, differentiate for diverse students’ needs, and reflect on their teaching—would help address the state’s need to ensure candidates are meeting revised expectations for teaching practices that support diverse learners and demonstrating their competence through actual classroom practice. To this end, the PDE-430 form could be strengthened through more robust scoring requirements that include improved calibration across program faculty and cooperating teachers and the submission of scores to the state. If Pennsylvania intends for state licensure to indicate a candidate’s ability to teach, then the state could consider a requirement that holds greater predictive validity for future success in the classroom, as more comprehensive teacher performance assessments have been shown to do.⁸⁴

Currently, more than 20 states require a teacher performance assessment as a condition of licensure or accreditation.⁸⁵ Eighteen of these states use the edTPA, modeled after the portfolio assessment used by the National Board for Professional Teaching Standards, a performance-based assessment of teachers’ abilities to plan, teach, and assess student learning within the disciplines they teach. A number of states have also created their own state-specific performance assessments. Massachusetts is currently implementing both the Candidate Assessment of Performance (CAP) and the Performance Assessment for Leaders (PAL). All teacher and principal candidates are required to pass the appropriate assessment prior to earning the state teaching license. West Virginia also recently moved to require a teacher performance assessment for teacher candidates.

Some states allow a choice of assessments. For example, since 2008, California has required all candidates to pass a teacher performance assessment as a condition of licensure but allows programs to choose from among state-approved models to administer to their candidates. California’s teacher performance assessments—which currently include the CalTPA, the Performance Assessment for California Teachers (PACT), and the edTPA—allow for both local and centralized scoring.⁸⁶ Having a choice of performance assessments—perhaps including one developed based on the PDE-430 assessment—is an option for Pennsylvania to consider and one supported by a number of participants in the stakeholder meetings.

Research suggests that performance assessments may reduce barriers to entry into the profession for teachers of color and result in fewer and smaller disparities between racial and ethnic subgroups.⁸⁷ As it considers options, the state should examine the degree to which the existing PDE-430 requirement and any other assessments considered result in racial disparities not associated with the ability to teach effectively. In considering either updates to the existing PDE-430 requirement or the implementation of a new statewide performance assessment, the state can impact not just the quality of graduating teachers but the overall racial diversity of the state’s future teacher workforce.

From a state perspective, the movement toward an authentic performance assessment that can measure a candidate’s ability to support the learning of students from diverse backgrounds holds great promise in improving the quality of newly licensed teachers. It can also serve to promote continuous improvement conversations across programs as faculty and program leadership gain access to higher quality data on candidate progress and areas for growth.

Recommendation #5: Use Data to Guide Improvement

Increase access to data about candidates' and graduates' characteristics, hiring, retention, and preparedness to support continuous improvement.

As highlighted in Part II, one consistent theme from each of the stakeholder meetings was a desire to see the state and programs better utilize data in the service of creating policy and to improve outcomes for students. However, current policy and related data systems yield limited data for use by the states and individual programs in their continuous improvement efforts. For example, current regulations do not require regular reporting on the diversity of teacher candidates or program graduates. Program completer and employer surveys—which can yield important information about graduates' level of preparedness for the classroom—are currently left optional, and, if collected, these survey data are only seen by the state every 7 years during the major program review.

Revisions to Chapter 49 provide an opportunity to expand state and program access to data that supports continuous improvement efforts and to shine a spotlight on key priority areas for the state, such as increasing the diversity of the teacher workforce. Below we identify three areas in which additional information can advance state and program efforts to strengthen teacher preparation and the overall teacher workforce in Pennsylvania, providing a foundation for more frequent, data-based conversations around continuous improvement.

Information about program graduates' hiring, retention, and preparedness

Under §354.22, PDE currently collects annual program evaluation data that includes pass rates on licensure exams and biannual data on program enrollee retention and program completers.⁸⁸ Under the state's preparation program accreditation cycle, the state collects hours of student teaching, hours of field experience, and the percentage of supervisors with at least 3 years of k–12 classroom experience.⁸⁹ While data on enrollee retention and completion can prove valuable in understanding a program's ability to support candidates through to program completion, there isn't a clear and reliable system by which programs can learn about their candidates once they graduate. This inhibits an institution's ability to engage in regular and meaningful continuous improvement conversations.

The revision of Chapter 49 presents an opportunity to encourage more focused program improvement through state-level data collection and reporting. Like most states, Pennsylvania collects data about its teachers' credentialing and about their employment. If connected with a common identifier, these data can allow the state to examine the hiring and retention of teacher candidates once they complete their preparation program. These can help initiate conversations within and across institutions and districts that can help meet the state's need to retain teachers long term.

The state currently encourages the use of new teacher surveys as a tool for program improvement, but it could go further by requiring the use of these surveys and designing a common survey instrument that includes survey items related to how well candidates were prepared to support the learning of students from diverse backgrounds. California currently uses surveys of all program graduates about their opportunities to learn, their student teaching experience, and how well their program prepared them in many areas of teaching. Candidates complete these after they have finished their training, as they apply for their initial credential. Two years later, they complete another survey about both their preparation and their induction

experience as they apply for their clear credential. California also surveys mentor teachers and employers about the quality of candidates and programs, using all of these data in its program accreditation process. It has ensured high survey response rates (more than 90%) by requesting program graduates to complete the survey online as they submit their online application for their teaching credential.⁹⁰

Information about candidate and completer diversity

Currently, §49.14 requires that teacher preparation programs “have clearly expressed standards for admission to, retention in and graduation from approved programs and actively encourage the participation of students from historically underrepresented groups.” However, there are no consistent expectations for developing or self-reporting on these institutional standards despite their focus on supporting candidates of color in their admission to, retention in, and graduation from approved programs.

As emphasized in Pennsylvania’s ESSA state plan and broadly reflected in the feedback from stakeholders, a key goal for the state is improving the racial diversity of the teacher workforce to better reflect the student populations served in Pennsylvania schools. To jump-start movement on preparing a greater number of candidates of color, the state could consider revising the existing Chapter 49 requirement to include annual reporting on candidate enrollment and completion rates that are disaggregated by subgroups. Additional consideration of the data reporting requirements contained in §354.22 may also be warranted, as §354.22 outlines annual and biennial data reporting requirements for all programs.⁹¹ Reporting data annually on the racial and ethnic diversity of candidates and completers would highlight important trends across programs as a means to prioritize the recruitment and retention of a diverse teacher workforce at both the state and the program level.

Oregon and Tennessee have taken similar steps to prioritize the recruitment and preparation of a diverse teacher workforce. Oregon requires all teacher preparation programs to develop plans to promote the recruitment and preparation of diverse educators. Tennessee requires each teacher preparation program to report not only on the racial and ethnic diversity of teacher preparation enrollees in the annual Teacher Preparation Report Card, but also on the demographics of program completers. These data are better indicators of the supply of teachers of color than enrollment data, and would allow the state to better identify the areas in which programs are successfully supporting candidates of color through to program completion, and which areas require further attention.

Many states are moving toward indicators and data dashboards on preparation programs that provide Pennsylvania with a range of potential models for building a statewide teacher preparation data system that can complement the potential changes to regulations in Chapter 49. California and Louisiana are among the states using such dashboards readily available for consumers of teacher education to examine and for the accrediting body to incorporate into its investigations of programs. Washington and Missouri also collect a range of data and set performance benchmarks for their system of indicators.⁹² If a program falls below the benchmark, the state then steps in for further investigation and review. Missouri’s indicators include program completers’ evaluation of their program at completion and in the first year of teaching. There is an additional indicator that looks at supervisors’ evaluations of new teachers’ pre-service preparation.⁹³

Given the desire across all stakeholder groups to ensure decisions made about teacher preparation and licensure are informed by both research and relevant data, it is important that the state take steps to strengthen existing data systems to provide this information. Specifically, leveraging Chapter 49 to support more robust data collection and reporting on indicators aligned to the state’s priorities can help drive improvement in the teacher preparation system over time.

Recommendation #6: Support Beginning Teacher Induction

Provide all new teachers with induction that includes mentoring, common planning time, and regularly scheduled collaboration with other teachers.

Strategies that specifically target improvements in teacher retention for novice teachers can help mitigate teacher shortages. Evidence suggests that strong induction and support for early-career or newly arriving teachers can be an effective policy to ensure that well-prepared individuals remain in the classroom. The first few years of every teacher’s career require a leap from preparation to practice. Even teachers who have undergone excellent preparation can struggle as they adjust to a new school, learn the complex nuances of classroom management, grow from their mistakes, and implement new curriculum and instruction, all while ensuring their students are learning.

Research points to several key elements of high-quality induction that are most strongly associated with reduced levels of turnover. These include having a mentor from the same field, having common planning time with other teachers in the same subject, having regularly scheduled collaboration with other teachers, and being part of an external network of teachers.⁹⁴

A study of induction based on national data found that beginning teachers who receive a comprehensive set of induction supports—including the elements above—stay in teaching at rates more than twice that of those teachers who lack these supports.⁹⁵ An analysis of the Texas Beginning Educator Support System (TxBESS) found that participants left teaching at significantly lower rates than did nonparticipating novice teachers in the state. The analysis also found improved retention rates among participants teaching in schools serving students of color and students from low-income families, where attrition rates tended to be quite high and where teachers of color are most likely to teach.⁹⁶ The finding suggests that teachers of color and those teaching in high-poverty schools, in particular, could benefit from participating in strong induction programs.

Currently in Pennsylvania, all new teachers, education specialists, and long-term substitutes who are employed in a position for 45 days or more must participate in a PDE-approved induction program during their first year in the classroom. The completion of an induction program is also a requirement for earning the state’s instructional II certification.⁹⁷ Under §49.16, school districts, charter schools, intermediate units, and area vocational technical schools are all required to submit induction program plans to PDE every 6 years. Chapter 49 requires that plans be developed by a committee representing teachers, education specialists, and administrative personnel, and adhere to guidelines developed by PDE. The code requires that plans include explicit criteria for “a mentor relationship between the first-year teacher, long-term substitute or educational specialist, teacher educator and the induction committee,” and the inclusion of activities that “focus on teaching diverse learners in inclusive settings.”⁹⁸ Induction program

support is also referenced in §49.14 as services approved preparation programs programs “may provide ... in partnership with local education agencies.”⁹⁹

In addition to the criteria established in Chapter 49, PDE has issued guidelines meant to support the development of district induction plans.¹⁰⁰ The *September 2013 Educator Induction Plan Guidelines* allow school entities to determine their mentor selection criteria, though the guidelines recommend considerations in mentor selection. These recommendations include training or previous experience, compatible schedules so the mentor and inductee can meet regularly, and the ability to demonstrate high-quality teaching practices. The guidelines also state that school principals are to provide support to new teachers, including designing appropriate schedules to develop professional skills; providing appropriate resources, such as time, scheduling, and space to support induction activities; and facilitating activities to enhance the relationship between mentors and beginning teachers. Beyond these guidelines and recommendations, the state does not require specific induction program elements to ensure consistency and quality.

Despite the guidelines and requirements for induction plans, Pennsylvania does not provide any dedicated funding to support these programs.¹⁰¹ With this fact in mind, the state could strengthen the program both by further articulating requirements for quality programs and, ultimately, by contributing matching funds for mentoring as some other states do. Stakeholders across Pennsylvania consistently voiced a need for greater induction support in order to retain educators long term and help new teachers rapidly improve their effectiveness. Further specificity around induction in Chapter 49 could draw on the guidelines previously outlined by PDE and help ensure more consistent access to high-quality induction for new teachers across the state. Consistent with the research, key elements of high-quality induction that could be added to Chapter 49 include having a mentor from the same field, having common planning time with other teachers in the same subject, having regularly scheduled collaboration with other teachers, and being part of an external network of teachers.¹⁰²

Chapter 49 could also include greater specificity regarding “induction activities that focus on teaching diverse learners in inclusive settings.” Specifically, the language in §49.16 could include specific reference to the teaching practices highlighted in Recommendation #2 that support the social and emotional development of students and have been shown to support the learning of all students.

Pennsylvania could also consider expanding the required induction program beyond a single year. Many states require 2 years of mentoring and induction. This is important for all teachers, but may be particularly important for teachers serving on emergency permits, who, as described above, can teach for up to 6 years as they complete their teacher training. Teachers on emergency and other substandard permits require more intensive and differentiated support than other novice teachers who have already completed teacher preparation and met Pennsylvania’s requirements for teacher certification.

As a relevant state example, Iowa currently outlines minimum requirements for 2-year induction programs and commits financial support to help with implementation across the state. In 2001, the state enacted the Teacher Quality Act, expanding teacher induction statewide and making it a requirement for second-tier teacher licensure.¹⁰³ The Iowa Mentoring and Induction program annually involves approximately 3,000 first- and second-year educators across the state and was allocated \$4 million for fiscal year 2016–17. These funds provided \$1,300 to districts and Area

Education Agencies (AEAs) for each first- and second-year educator, with \$1,000 of each payment going toward mentor stipends and the remainder toward program costs.¹⁰⁴ In addition to general guidance on how districts can structure their induction programs, the state stipulates minimum levels of beginning teacher support, including release time to design lessons and plan with a mentor, opportunities to observe experienced teachers, and constructive feedback on instruction.¹⁰⁵ Beyond these minimum requirements set by the state, it is the responsibility of districts to design programs that engage teachers in meaningful activities that support the Iowa teaching standards and meet the needs of beginning educators working in their schools.

Pennsylvania could seek to articulate a similar vision for induction that can be adopted and contextualized by districts, but that sets out a consistent set of expectations for new teachers and their development through the induction program. These expectations should be aligned to the competencies outlined for teacher preparation programs and can help ensure that in-service supports help mitigate the turnover of novice teachers and equip them with the skills needed to support the learning of all students.

Conclusion

In its ESSA state plan, Pennsylvania has established an important set of priorities for building a strong, stable, and diverse educator workforce. These include (1) tackling persistent teacher shortages in specific content areas and geographic locations, (2) ensuring equitable access to quality teachers and leaders for all students, and (3) improving the racial diversity of the teacher workforce to better reflect the student populations served in Pennsylvania schools. Stakeholders across the state expressed in July 2018 that these remain pressing priorities for the field.

The major review of Chapter 49 presents an opportunity to advance the state's priorities for the future and ensure that Pennsylvania's system of teacher licensure and preparation supports a diverse teacher workforce, promotes equitable access to quality teaching for all students, and helps districts tackle persistent shortages that undermine teacher quality and student achievement. In this report, we have provided six recommendations for strengthening Chapter 49 that are grounded in research and informed by the extensive input provided by stakeholders. Together, the proposed recommendations outline steps that Pennsylvania can take to ensure that Chapter 49 revisions will help positively shape preparation in Pennsylvania for the foreseeable future and solidify the commonwealth as a model of improved teaching and learning for the rest of the nation.

Appendix A

List of Stakeholder Engagement Meeting Attendees

Acri	Diane	Senate of Pennsylvania
Alfonso	Susanne	Abington School District
Allen	Bonita	Pennsylvania Parent Teacher Association
Allison	Jean	Delaware County Community College
Angelaccio	Alison	Bucks County Community College
Angelini	Anthony	Conewago Valley School District
Avery	Marian	Pennsylvania Council of Teachers of Mathematics (PCTM)
Aylesworth	Marnie	The Pennsylvania Key
Baker	Matt	Thomas Jefferson University
Barber	Diane	Pennsylvania Child Care Association
Barnette	Andrew	Westmoreland County Community College
Barry	Terry	East Stroudsburg University
Bastow	Kathleen	Barber National Institute
Baynum	Lynn	Shippensburg University
Beers	Rachel	Pittsburgh Public Schools
Behnke	Ginger	University of Valley Forge
Benared	Phyllis	Grove City College Education Department
Benton	Wendy	DuBois Area School District
Bergia	Michelle	Allegheny Intermediate Unit
Bestwick	M. Angel	Bloomsburg University of Pennsylvania
Bhukhanwala	Foram	Arcadia University
Billman	Bobbi	Central York School District
Bisignani	Ann	Carlow University

Blamey	Katrin	DeSales University
Blumenstein	Robert	DeSales University
Bolton	Marcia	Millersville University
Boston	Melissa	Duquesne University
Brady	Edd	DuBois Area School District
Brague	Michele	Misericordia University
Brenner	Patricia	Kutztown University
Britten	Richard	Punxsutawney Area School District
Brown	Dave	Pennsylvania Association for Middle Level Education Executive Board
Brown	Shante	City of Philadelphia, Mayor's Office of Education
Bufalino	Janet	Shippensburg University of Pennsylvania
Bustraan	Leah	Immaculata University
Callahan	John	Pennsylvania School Boards Association
Casciano	Cindy	All-State Career School
Cellini	Deena	Pottstown School District
Cifelli	Joseph	St. Joseph's University
Cindric	Paul	Allegheny Intermediate Unit
Claycomb	Carla	Pennsylvania State Education Association
Clemens	Tracie	Cornwall-Lebanon School District
Cole-Malott	Donna-Marie	Lebanon Valley College
Collins	Lisa	Lehigh University
Collins Bloomquist	Jennifer	Gettysburg College
Conboy	Robin	St. Isidore School-Archdiocese of Philadelphia
Coonradt	Andrew	Delaware County Intermediate Unit
Cooper	Lori	Wilkes University

Correll	Doris	Moravian College
Cotterill	Maureen	Graduate School of Education, University of Pennsylvania
Crum	Judith	School District of Philadelphia
Cruz	Karina	ASPIRA Inc. of Pennsylvania
Cunningham	Heather	Chatham University
Davis	Sharon	Lebanon Valley College
Dean	Kimberly	Arcadia University School of Education
DeMarco Wall	Gina	Allegheny Intermediate Unit
DeSantis	Joshua	York College of Pennsylvania
Devine	Katie	Mt. Lebanon
Dils	Keith	Slippery Rock University
DiRocco	Mark	Pennsylvania Association of School Administrators
Donnelly	Michael	Palisades School District
Donohue	Jennifer	Humanus
Dougherty	Kelly	Pennsylvania Teacher Advisory Committee
Dougherty	Margaret	Alvernia University
Drake	George	Millersville University
Drogan	Robin	Bloomsburg University of Pennsylvania
Duarte	Tracy	Pennsylvania Head Start State Collaboration Office
Duda	Caroline	Delaware County Intermediate Unit
Duffy	Colleen	Misericordia University
Duffy	Nichole	Pennsylvania House of Representatives
Dungee Glenn	Sandra	Pennsylvania State Board of Education
Edgar-Smith	Susan	Eastern University
Evans	Lee	King's College
Finch	Jeffrey	Grove City Area School District

Finley-Bowman	Rachel	Elizabethtown College
Fisler	Jennifer	Messiah College
Fogarty	James	A+ Schools
Foley	Tom	Association of Independent Colleges and Universities of Pennsylvania
Foultz	Jacquelin	Pennsylvania Keys
Franz	Nancy	Villanova University
Friedlander	Amy	Amy Friedlander Consulting
Fuller	Richard	Robert Morris University
Garrison	Michael	Oxford Area School District
Gates	Gretchen	Gettysburg College
Geary	Joel	The Pennsylvania State University of Harrisburg
Geiger Shulman	Lissa	Trying Together
Gibson	Diane	Ephrata Area School District
Golden	Charlotte	Carbon Lehigh Intermediate Unit #21
Grimes	Sterling	The Fellowship: Black Male Educators for Social Justice
Grubb	Debbie	California University of Pennsylvania
Guckes	Donna	Pennsylvania Key
Gusick	Richard	Tredyffrin/Easttown School District
Gutkind	Richard	Point Park University
Haggard	Cynthia	West Chester University
Hahn	Brad	Carbon Lehigh Intermediate Unit #21
Haley-Brinen	Christine	First Up
Hanes	Barbara	Neumann University
Harold	Philip	Robert Morris University
Harty	Kristin	Chatham University

Heller	Michele	Carbon Lehigh Intermediate Unit #21
Hershey	Julia	Lancaster Bible College
Higgins	Cindy	Mt. Lebanon School District
Hoover	Todd	Bloomsburg University of Pennsylvania
Houser	Valerie	Pennsylvania School for the Deaf
Hultz	Darla	Oxford Area School District
Jeter-Iles	Priscilla	Arcadia University
Johns	Linda	Temple University
Johnson	Shirley	Indiana University of Pennsylvania
Jones	Sara	Pennsylvania Teachers Advisory Committee
Kaemmer	Marianne	Gwynedd Mercy University
Kanupka	Jennifer	Lebanon Valley College
Kehr	Emily	School District of Springfield Township
Kempin	Arlene	Philadelphia Federation of Teachers
Kern	Joan	Cedar Crest College
Kerr	Tracey	Southern York County School District
Killian	Karey	Pennsylvania Teachers Advisory Committee
Kim	Cathy	Muhlenberg College
King	Diane	Kutztown University
King	Sue	Hatboro-Horsham School District
Kolbert	Jered	Duquesne University
Koslo-Stahl	Robin	Pennsylvania Association of School Personnel Administrators
Lacock	Jennifer	Marple Newtown School District
LaMendola	Stephen	King's College
Lattanzi	Beth	Montgomery County Community College

Lewis	Christie	Chatham University
Lightner	Amy	Pennsylvania State Education Association/Central Dauphin School District
Lindsay	Annie	Butler County Community College
Luetkehans	Lara	Indiana University of Pennsylvania
Mahan	Christine	Eastern University
Mahoney	Tim	Millersville University
Mahoney-Ferster	Mary	Pennsylvania State University at University Park
Maloney	Melissa	Coatesville Area School District
Marks	Melissa	University of Pittsburgh at Greensburg
Martin	David	Eastern Mennonite University at Lancaster
Mason	Gregory	Pennsylvania State University at University Park
McAler	Sean	Pennsylvania Catholic Conference
McCluskey	Liz	Community Academy of Philadelphia
McGeehan	Catherine	Kutztown University
McHale-Small	Monica	Pennsylvania Branch International Dyslexia Association / Temple University
McMahan	Aaron	Pennsylvania Partnerships for Children
McNelly	Tracy	Saint Vincent College
Mecca	Kim	School District of Philadelphia
Merritt	Jill	Gannon University
Miller	Jake	Pennsylvania Teachers Advisory Committee
Miller	Mark B.	Centennial School District / Pennsylvania School Boards Association
Modica	Marianne	University of Valley Forge
Morales	Marisol	ASPIRA Inc. of Pennsylvania
Morgitan	Judith	Pennsylvania Association School Nurses & Practitioners

Murphy	Cindy	Seneca Highlands Intermediate University #9
Murray	Joseph	Bucknell University
Muscarella	Ashley	Pennsylvania State Education Association
Newman	Patricia	Widener University
Nientimp	Mary	Edinboro University
Ordonez	Bonnie	Seton Hill University
Osborne	James	Saint Joseph's University
Partridge	Janeen	Marple Newtown School District
Patron	Michael	Mastery Charter Schools
Pedersen	Jason	Association of School Psychologists of Pennsylvania
Pelepko-Filak	George	Career Technology Center of Lackawanna County
Pfister	Lindsay	West Jefferson Hills School District
Pfleger	Heather	Gwynedd Mercy University
Pletcher	Karen	Juniata College
Pocalyko	Jeanne	Tredyffrin/Easttown School District
Poehner	Priya	Lock Haven University
Prall	Jeanie	Keystone College
Price	Gwyneth	Clarion University of Pennsylvania
Rance-Roney	Judith	DeSales University
Reed	Melissa	Immaculata University
Reljac	Mary Catherine	Franklin Regional School District
Rhen	Linda	Penn State Harrisburg
Rickard	Bill	Red Lion Area School District
Rieg	Sue	Indiana University of Pennsylvania
Rita	Terri	School District of Philadelphia

Ritter	Martha	Cabrini University
Riviere	Kimberly	Pennsylvania Teachers Advisory Committee
Rohrbach	Kim	Muhlenberg College
Roseman	Marilyn	Mount Aloysius
Rosendale	Eric	Beaver Valley Intermediate Unit #27
Rowe	Ashley	West Chester University
Roy	Laura	La Salle University Education Department
Ruth	Annette	Lancaster-Lebanon Intermediate Unit #13
Sabousky	Richard	Clarion University of Pennsylvania
Sapotichne	Jan	Trying Together
Schadler	Deborah	Gwynedd Mercy University
Schoeninger	Danielle	Chester County Intermediate Unit
Shaud	Stephen	Elwyn
Silvis	Kate	La Roche College
Slattery	Cheryl	Shippensburg University
Sloand	Janet	Drexel University
Smargiassi	Charles	Wilkes University
Smith	Lindsey	Propel Schools
Smith	Kathleen	Pocono Mountain School District
Smulyan	Lisa	Swarthmore College
Sobolak	Michelle	University of Pittsburgh
Srsic	Amy	University of Pittsburgh
Stanfa	Kathleen	Kutztown University
Sterner-Hine	Rita	Waynesboro Area School District
Stratton	Mary	Chestnut Hill College

Styers	Jodie	Pennsylvania State University at Behrend
Supinka	Barbara	American Federation of Teachers Pennsylvania
Tiday	Christine	Susquehanna University
Timony	David	Delaware Valley University
Trainor	Kathy	Arcadia University
Tucho	Admasu	Lincoln University of Pennsylvania
Tuleya-Payne	Helena	School Board of the Pennsylvania Psychological Association
Tyson	Denise	Lock Haven University
Unti	Evangeline	Northern York County School District
Uroda	Ron	Association of Independent Colleges and Universities of Pennsylvania
Vanderpool	Dawna	Pennsylvania State Education Association
Vitale	Molly	Misericordia University
Walsh	James	Burgettstown Area School District
Ward	John	Kutztown University
Warfield	Rodney	Albright College
Warner	William	Gwynedd Mercy University
Watson	Carol	Kutztown University
Weaver	Yvonne	Waynesburg University
Weekley	Brandi	Westmoreland County Community College
Wennerholt	Donna	Pennsylvania Key
Wenrich	Sara	Susquehanna University
Whitehead	Le Roy	Phoenixville Area School District
Whitehead	Stephen	California University of Pennsylvania
Whiteman	Janice	Gannon University
Wichowski	Chet	Temple University

Wildermuth	Diana	Temple University
Williams	Mary	La Salle University
Winterton	Sally	Pennsylvania Association of Colleges and Teacher Educators
Wise	Deborah	Pennsylvania Office of Child Development and Early Learning
Wisniewski	Sean	Pennsylvania Cyber Charter School
Witmer	Judith	Pennsylvania Association for the Education of Young Children
Witmer	Kenneth	West Chester University
York	Kamryn	Point Park University
Zimmerman	Pam	Carlow University
Zook	Kevin	Holy Family University
Zupsic	David	Midwestern Intermediate Unit #4

Endnotes

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