



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF EDUCATION

**House Education Committee**  
**Public Hearing on the Teacher Shortage Crisis**  
**April 12, 2023**

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Good morning, Chairman Schweyer, Minority Chair Topper, and distinguished members of the House Education Committee.

Thank you for the opportunity to talk about Pennsylvania's educator shortage. My name is Dr. Kate Shaw, and I am the Deputy Secretary and Commissioner for Postsecondary and Higher Education at the Pennsylvania Department of Education (PDE). With me is Dr. Carissa Pokorny-Golden, the Bureau Director for School Leadership and Teacher Quality.

The prosperous future of Pennsylvania – from healthy children and families to a thriving economy with vibrant and civically engaged neighborhoods and communities – depends on a healthy and robust educator workforce. The Department defines educators broadly to include early childhood professionals, teachers, school and district leaders, and other school support staff professionals like school counselors, school social workers, school psychologists, mental health professionals, speech pathologists, health professionals, librarians, and others.

Yet, over the past 10 years, Pennsylvania's educator workforce has been shrinking, especially in rural and urban districts and hard-to-fill areas like elementary education, special education, career and technical education, English language instruction, foreign languages, and STEM.<sup>1</sup> This is due, in part, to fewer high school students entering college after high school and even fewer students pursuing education careers. Currently, 55% of Pennsylvania's high school graduates enroll in postsecondary education within one year of earning their high school diploma.<sup>2</sup> In 2020-21, PA colleges enrolled more than 650,000 students; only 20,000 of those students were enrolled in educator preparation programs (Figure 1).<sup>3</sup>

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<sup>1</sup> PA Department of Education, Teacher Information Management System (TIMS) 2021-22 data, Pennsylvania Information Management System (PIMS) 2021-22 data, and Pennsylvania Course Certification Requirements (PCCR) 2021-22 data

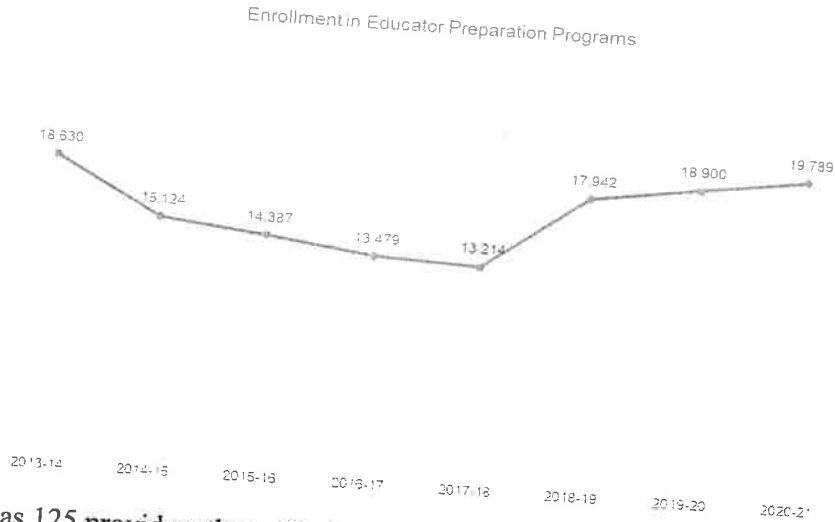
<sup>2</sup> National Student Clearinghouse, Student Tracker for High Schools, Pennsylvania data, 4/21/2022.

<sup>3</sup> U.S. Department of Education, Title 2 Public Report, [State User Home Page \(ed.gov\)](https://www.ed.gov/state-user-home-page).



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**Figure 1. Enrollment in Educator Preparation Programs Has Slightly Increased Since 2017-18**



Pennsylvania has 125 providers that offer 3,272 educator preparation programs<sup>4</sup> and the state's certification requirements are recognized as among the most rigorous and comprehensive in the nation. As such, Pennsylvania has long been regarded as an epicenter of US educational preparation and has a long history of exporting its former excess of newly certified educators to teach in neighboring states.

In 2010-11, the Department issued Instructional I certificates to more than 21,000 new educators; these are the certificates that are typically awarded to individuals entering the educator workforce for the first time. In 2021-22, the Department issued only 6,153 Instructional I certificates – a 71% decline.<sup>5</sup> While the number of Instructional I (provisional) and II (permanent) certifications has risen slightly in the past five years (Figure 2), the number of newly certified educators each year may not be sufficient to replace the thousands of educators who leave the profession each year.

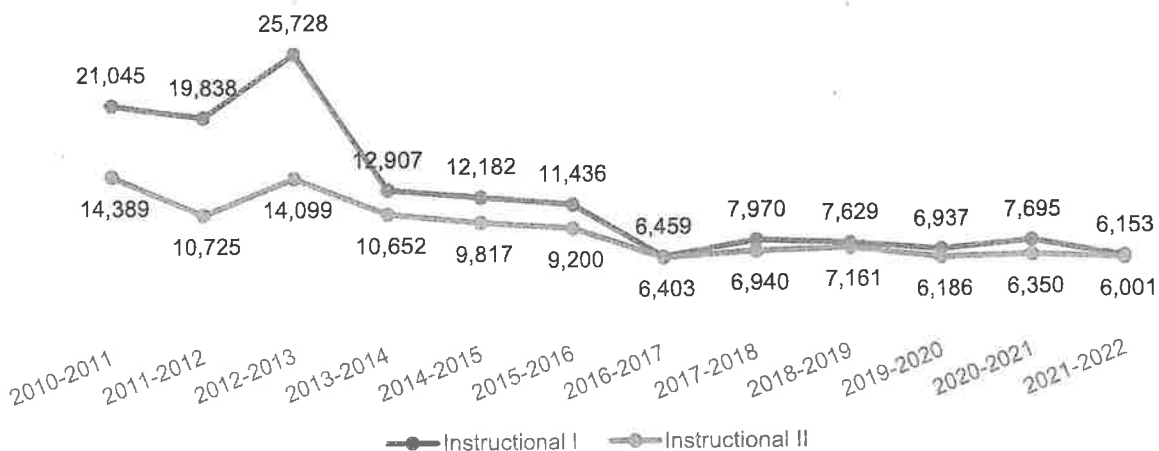
<sup>4</sup> PA Department of Education, Teacher Information Management System (TIMS) 2021-22 data.

<sup>5</sup> PA Department of Education. 2022. *Act 82 of 2018: Report on Educator Preparation and Certification* (forthcoming).



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Figure 2. Instructional I and II Certifications Issued in Pennsylvania, 2010-2022<sup>6</sup>



Recent analyses and research from Teach Plus PA and the National Center on Education and the Economy, Research for Action, and the Penn State College of Education has drawn attention to reasons that educators are leaving the teaching profession, a trend that predates the COVID-19 pandemic and continues today. You will hear more about the findings from education leaders later this morning; the Department is appreciative of and applauds their efforts.<sup>7</sup>

**Various Educator Shortage Solutions to Date**

To address the decline in supply and growing shortages, schools have become increasingly reliant on substitute teachers. In December 2021, the General Assembly passed **Act 91 of 2021** to increase the pool of substitute teachers and provide temporary relief during the pandemic. Act 91 enabled public schools to employ annuitants, day-to-day substitutes, educators with inactive certification, graduates of educator preparation programs, and a subset of those serving as student teachers to be employed as substitutes. Together with the waivers provided under Acts 13 and 136 of 2020, these legislative actions have eased the pressure on schools and educators by

<sup>6</sup> In September 2007, the State Board of Education amended the Chapter 49 regulations related to certification of education professionals. Educators certified after January 1, 2013 began receiving the new certificates. As such, in 2012-13, a significant number of students accelerated their studies to complete their current certification programs rather than switch to the new programs.

<sup>7</sup> Teach Plus PA and the National Center on Education and the Economy. February 2023. *#PANeedsTeachers: Addressing Pennsylvania's Teacher Shortage Crisis Through Systemic Solutions*; Research for Action. November 2022. *"Worn & Weary" Black Teachers' Storied Experiences and Recommendations around their Attrition and Retention in Philadelphia Schools*. Center for Evaluation and Education Policy Analysis. Fall 2022. *Pennsylvania Teacher Staffing Challenges*. The Pennsylvania State University College of Education.



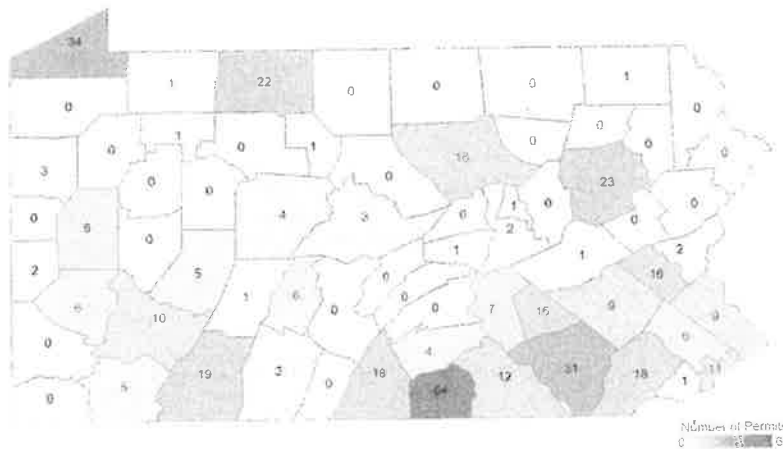
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providing short-term solutions to substitute teacher shortages and providing additional time for educators to meet certain professional development requirements.

Act 91 also created a new Classroom Monitor Permit that allowed individuals to deliver assignments preplanned by certified educators in the school.<sup>8</sup> While not considered substitute teachers because they do not plan or create lessons or grade work, classroom monitors are another way schools can staff classrooms and provide future educators the field experience they need to be successful. The Department is now collecting data to make a recommendation to the General Assembly on whether to extend the availability of these permits beyond their expiration on June 30, 2023. To support this effort, the Department has developed a survey for schools to get their input on the utility of Classroom Monitor permits. Figures 3 and 4 show the number of Classroom Monitor permits requested in the 2021-22 and to date in the 2022-23 school years, respectively.

**Figure 3. Classroom Monitor Permits Requested During SY2021-22**

Type 9 Classroom Monitor Permits Issued. 2021-22



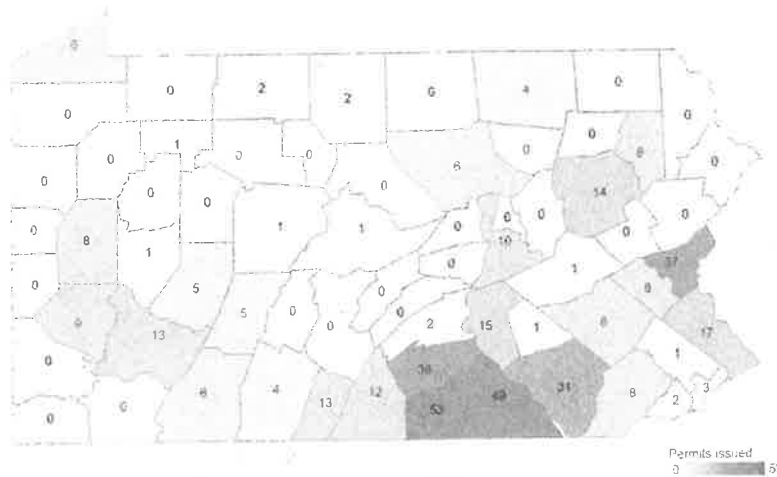
<sup>8</sup> Please reference the Act 91 of 2021 Guidance on the Department's [website](#).



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**Figure 4. Classroom Monitor Permits Requested During SY2022-23 (as of February 2023)**

Type 9 Classroom Monitor Permits Issued, 2022-23\*



**Act 55 of 2022** also included several provisions aimed at addressing Pennsylvania’s educator workforce shortage:

- Pathways to Pennsylvania certification for out-of-state teachers, including career and technical education teachers;
- An additional year for professional educators, administrators and paraprofessionals to complete their professional development requirements;
- A grant program within PHEAA to support Pennsylvania students completing their field internships to be a certified as a school nurse, school counselor, school social worker or school psychologist; and
- Waiving the Basic Skills assessment for undergraduate education candidates until July 2025.

In addition, Act 55 charged the Department with developing a career and technical education (CTE) Program of Study (POS) in Education to engage and prepare secondary students to pursue education careers. The Department’s Bureau of Career and Technical Education (BCTE), in collaboration with the new Committee on Education Talent Recruitment, finalized the blended competency task list for the program in November 2022 and is now developing the end-of-



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program assessment, which will signal to schools and early childhood centers that high school graduates are “on their way” to becoming teachers across the commonwealth. School districts, charter schools, and career and technical centers approved by the Department to offer the new POS in Education will be eligible to receive federal Perkins funding for the program beginning in the 2024-25 school year.

Last but not least, this year the Department awarded nearly \$5 million in state and federal grant funding to strengthen partnerships between schools and educator preparation programs across the Commonwealth through three grant programs.<sup>9</sup> **Aspiring to Educate: STEM/Computer Science** (A2E STEM/CS) grants are intended to make simultaneous progress to diversify the teacher workforce and increase the number, diversity, and cultural awareness of STEM-CS teachers. **Innovative Teacher Preparation to Practice** (Prep2Practice) grants incentivized the creation of highly cohesive and innovative clinical experiences for teachers that make explicit connections across the three stages of clinical experience: as first-year candidates, during their capstone clinicals, and induction. **Innovative Principal Prep2Practice** grants focus on the development of highly cohesive and innovative clinical experiences for principals. A total of 7 partnerships received A2E STEM-CS grants, 23 partnerships received Innovative Teacher Prep2Practice grants, and 9 partnerships received Innovative Principal Prep2Practice grants.

We appreciate the House Education Committee providing the Department with the opportunity to provide these educator workforce updates. We welcome further collaborations to ensure a robust educator workforce across the Commonwealth.

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<sup>9</sup> <https://www.education.pa.gov/Postsecondary-Adult/A2E/Grants/Pages/default.aspx>

**House Education Committee**  
**Hearing on the Teacher Shortages in Pennsylvania**  
**Testimony of Dr. Elizabeth Meade**  
**President, Cedar Crest College, Board Member, Association of Independent Colleges and Universities of**  
**Pennsylvania (AICUP)**  
**April 12, 2023**

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Mr. Chairman and Members of the Committee, I am here today on behalf of the 90+ independent nonprofit colleges and universities that the Association of Independent Colleges and Universities of Pennsylvania (AICUP) represents. We thank you for all you have done and continue to do in support of our institutions and students.

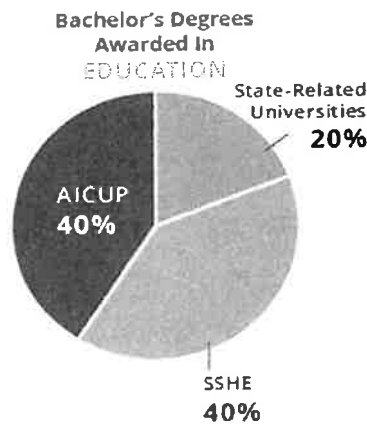
First, our schools train the workforce of tomorrow, educating right now over 285,000 students. In order to get the economy back on track and fill the gaps in Pennsylvania's workforce needs, these agile schools are continually pivoting so they can best educate:

- 51% of all four-year college degree-seeking students in PA
- 54% of all minority students seeking bachelor degrees
- 49% of all non-traditional "adult" students
- 48% of underrepresented minorities seeking bachelor's degrees
- 45% of all bachelor degree-seeking STEM students
- 44% of all low-income students seeking bachelor degrees
- 40% of all four-year education degree seeking students
- 67% of all four-year nursing degree seeking students

***(All data from IPEDS)***

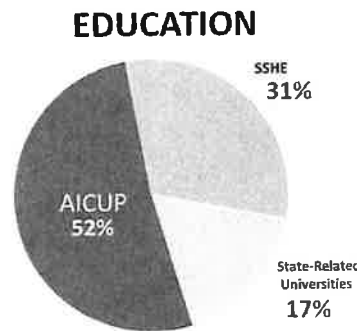
They do all this while maintaining net tuition rates--what families actually pay--that are virtually unchanged since the Great Recession in 2007-08, and in fact significantly less in inflation adjusted dollars—at just over \$13,000 per student. These independent nonprofit schools are vital to the future economy of the state and nation as they provide employment to current workers (over 195,000 of them), train the future workforce, help drive 60 different local economies (with \$24B in annual GNP contributions) and provide millions of volunteer hours at events in their communities—communities in which they have been embedded for an average 137 years.

Of the students that AICUP schools educate - 68% are pursuing majors in career-directed fields, training that leads directly to careers in business, IT, education, health care and many more. 54 of our schools have health science programs, and produce a high percentage of all the people who work in health care in this state, including 67% of all the nurses. Most importantly for today, over 60 of our schools offer degrees leading to teacher certification.



In addition to producing a significant number of teachers – these schools also educate by far the highest percentage of underrepresented minority candidates in the field.

Percentage of Bachelor's Degrees Awarded to Under-Represented Minority Students by Higher Education Sector



This information is imperative as we look to fill shortage areas in the field. As policy makers look to institute programs, policies, and laws – and all higher education sectors need to be involved.

At Cedar Crest College, education is a small major—about 5% of our students major in education. But they comprise about half traditional aged students and half adult learners. Our student body is diverse and local: 38% students of color, 39% first generation, 40% Pell-eligible, and 77% from Pennsylvania, 43% from the Lehigh Valley. They tend to stay in Pennsylvania and or graduates are teaching in all of the local school districts. We are also bucking the trend and seeing roughly the same number of students in our teacher education program as we saw prior to the pandemic.

### Strategies

In order to fill these needed positions, the approach must be multi-faceted and include not only getting more students into the profession, but also keeping current teachers, and re-skilling post baccalaureate degree holders. Institutions of higher education are imperative partners in these approaches and our schools have been looking to implement innovative ways to assist.



These schools offer everything from summer programs targeting underrepresented populations of high school students who have an interest in teaching to flexibility in all programs, including graduate level that include online options to help reduce barriers and cost to certification.

As we look to other states for programs showing promise, high school education tracks, scholarship opportunities, paid student teaching experiences, and emphasis on reskilling working adults into the profession should all be considered.

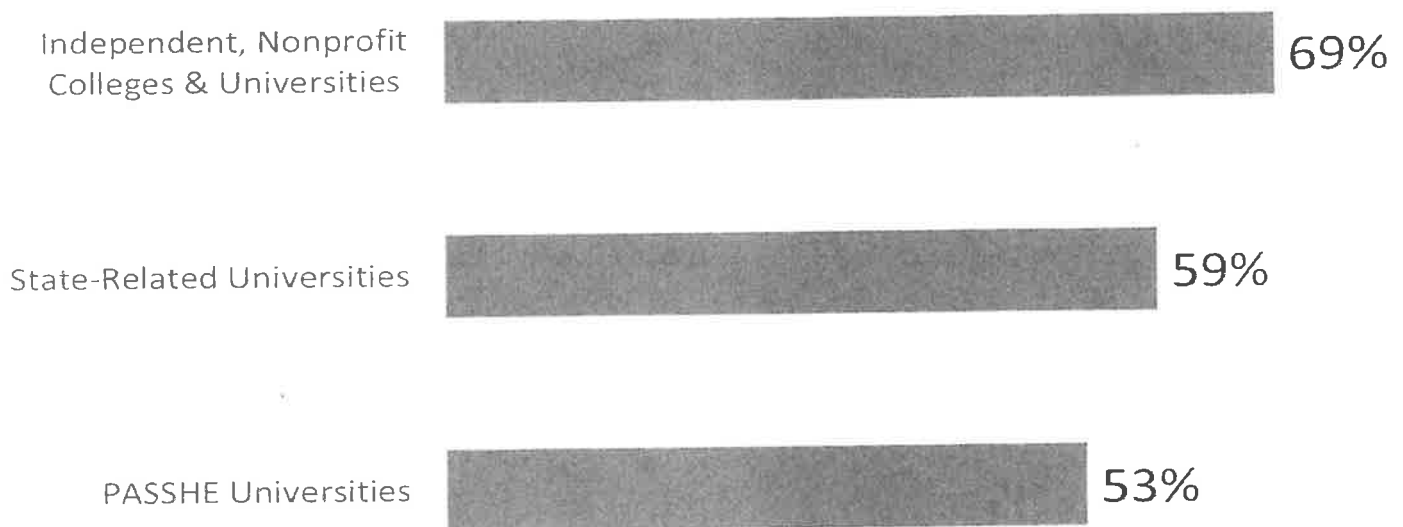
### Proposed Legislation

Currently, there are numerous proposals before this legislature. For today we are concentrating on two of those concepts – the PA Teach Scholarship Program and Grow Your Own Educators.

The first, introduced as HB 688, establishes the **PA Teacher Scholarship Program** and would provide up to \$8,000 for an eligible candidate in a Pennsylvania teacher preparation program. The current version of the bill would allow only students attending PASSHE schools to receive the funding. Targeting students pursuing education degrees, this bill attempts to relieve some of the burden of college costs. While it takes a step towards that goal, ***the students should not be limited to attending only a PASSHE institution.*** By limiting it to one system, it excludes 60% of the teacher candidates--with 40% attending AICUP schools and the other 20% attending the state-related institutions. It also excludes almost 70% of the underrepresented minorities pursuing careers in education, 52% of them in PA's independent nonprofit schools.

	4-Year Graduation Rate	6-Year Graduation Rate
AICUP	64%	75%
State-Related Universities	55%	73%
SSHE	42%	58%

## Six-Year Graduation Rate for Full-Time Students Receiving a PHEAA Grant By Higher Education Sector in Pennsylvania



In addition to educating 40% of current candidates and the 52% of those candidates identified as underrepresented minorities, the independent, nonprofit schools graduate students faster and with lower debt in 6 of the last 9 years ((all the TICAS data currently available). This is true even though they receive none of the \$1.4B in annual direct institutional aid from the State of Pennsylvania.

Let me make two final suggestions, on re-skilling adult students and on existing student aid.

First, on re-skilling. You may want to emphasize the inclusion of working-age adult students who already have a bachelor's degree and want to return to obtain their teaching credential—re-skilling. These dollars may alleviate some of the barriers those students face, especially with the expanded definition of the cost of attendance. This bill already allows for the inclusion of childcare costs. Importantly, 49% of all adult students are in independent, nonprofit AICUP schools (IPEDs).

Second, on other student aid programs. There are other state and federal student aid grant programs that should perhaps be included prior to determining the amount of this scholarship award. This will help to reduce the need for some funding and allow for these scholarship dollars to be spread even further, and among additional students. PHEAA can be a partner in this process: to work through these more technical aspects of the program. The functionality makes sense—it is what PHEAA does—target dollars to those with need.

In conclusion on this bill, one higher education sector alone is not going to be able to close the gap in teacher needs, especially when 60% of our potential teachers are being educated in other sectors. If the intention is to give more money to one sector of schools, please don't do it in a way that penalizes future teachers and puts another impediment in the way of solving this shortage.

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Legislation soon to be introduced by Representative Schlossberg would create a **Grow Your Own Educators Program** which would incentivize high school age through adult students interested in the profession to seek certification through partnerships between schools, nonprofits, and institutions of higher education.

These programs could target areas that have the most need in order to recruit and retain teachers to then teach in those schools. Reducing the costs for these students to attain their certification and providing wraparound services gives them their best chance for success. These programs also include nonprofit organizations which can reduce other barriers such as childcare needs.

We look forward to working with the Prime sponsors of both of these initiatives to ensure program success.

### **Closing**

Astronaut and teacher Christa McAuliffe once said that “I touch the future. I teach.” As a teacher myself, I believe strongly that she was right. And that is one reason I am so grateful that you included me and my colleagues at 90 Pennsylvania independent nonprofit colleges and universities in this important hearing, I applaud you for recognizing just how very important teachers are—to their students and to the future.

We look forward to working with you, your staff, and all the stakeholders to ensure that our Commonwealth is able to produce successful teachers to educate our students.

Good Afternoon Chairman Schweyer, Chairman Topper, and Honorable members of the House Education Committee. Thank you for allowing me the opportunity to talk with you today about the teacher shortage crisis in Pennsylvania. My name is Tom Butler, and I currently serve as the Executive Director of Appalachia Intermediate Unit 8, which serves 35 school districts in Bedford, Blair, Cambria, and Somerset counties. Before my time at IU8, I was a superintendent, high school principal, school counselor, and teacher in schools in Tioga, Elk, and Westmoreland counties.

We are here talking about the teacher shortage in Pennsylvania because we are all aware of the problem. I will not rehash the statistics you already know regarding the diminishing number of teachers entering the teaching profession. The simple fact is that in order for our schools to provide quality learning opportunities for the children of Pennsylvania, we must develop short-term and long-term solutions to solve the teacher shortage crisis in Pennsylvania.

The importance of solving this crisis demands that we focus our attention on actions that will solve the problem. The time for admiring the problem is over. I am entering my 31<sup>st</sup> year serving the students of Pennsylvania as an educator. I heard about the impending teacher shortage in my first year of teaching in 1992. Yet, here we are, still talking about it in 2023! It is time to take action.

The suggestions for short-term and long-term solutions follow the “KISS IT” (Keep It Simple, Stupid) philosophy. Let’s not overcomplicate the necessary solutions to this problem, and let’s actually do something!

### **Short-term Solutions (Certification)**

We must “move upstream” and look at solutions to the problem of the teacher shortage crisis beyond what we see in front of us. Pennsylvania must allow for more flexibility in the definition of passing the Basic Skills and Praxis tests. The Basic Skills test is taken after the sophomore year in college as part of the teacher prep program, and the Praxis is taken after completion of the teacher prep program.

Students not passing these tests are immediately disqualified from becoming a teacher. I know of caring, skilled educators who just do not take tests well, and I know from my experience in education that they would be outstanding teachers if given a chance. (My own children have been taught by these people in private school settings).

We must allow schools to tap into the resources of their local communities by allowing alternative pathways to certification for those who want to make a career change from industry to education. Finally, we must create flexible pathways for staff already working in the schools to earn their teacher certification.

**1. Allow for alternative ways to pass the Basic Skills and Praxis tests for potential teachers.**

Simply allowing students the option (after missing the required score the first time) to go in front of a panel of teachers and administrators to show what they know in a different format than just a test is a simple solution. We do this for our students in schools, and we should do this for potential teachers as well.

**2. Combine two factors when looking at a potential teacher's test score on the Basic Skills or Praxis test.**

Let's say a prospective teacher misses getting the necessary Basic Skills or Praxis test score by one standard deviation. Instead of the prospective teacher retaking the test or giving up on their dream of teaching entirely, they can still "pass" if their GPA in college was 2.75 or above. In schools where finding teachers is difficult, this simple solution can add to the pool of teacher candidates.

**3. Create a pathway for "adjunct teachers."**

Communities across the Commonwealth are filled with experts in specific fields of study. Whether it's an accountant, chemist, biologist, or historian, there must be a pathway for these people to be allowed to teach courses in our schools. I know from working with 35 rural school districts that finding teachers in the sciences is a desperate challenge. Allowing an outside expert to teach a class will lift a significant burden on school districts. This pathway can be accomplished with simple online learning and mentoring.

We already do this for our CTC community to get industry-specific experts certified. Let's extend the same opportunity to other disciplines.

4. **Bring back the K-6 certification.** The flexibility for school districts, especially rural ones like in IU8, of the K-6 certification cannot be understated. We do not have to do away with the Prk-4 certification, but we need the K-6 certification to return.
5. **Create a more accessible pathway for Para-educators to become teachers.** This solution is low-hanging fruit. We have professionals who know how to work with students already involved in the day-to-day operations of education. We need to create a system where their experience in the classroom can count toward their degree and/or teacher certification

**Long-Term Solutions—"Grow Your Own"**

Long-term, sustainable solutions require grassroots efforts that address local solutions to local needs. Grassroots solutions are not "top-down" initiatives. Instead, grassroots solutions are created to meet the local context, with shared responsibility of local stakeholders. These solutions can be based on models that have been successful in similar contexts, but there must be flexibility in their implementation to meet local needs. Specifically, in rural communities, it is imperative to recruit teachers that are either from the community or are familiar with living in rural communities.

This figure represents the grassroots transformational model



**Capacity-Building Transformation Model**

1. **Early College Aspiring Teacher Pathway Model.** IU8 has created a model for rural schools to adopt where high school students can earn credit for college courses that are part of the approved teacher preparation curriculum. Students need to know there is a viable, middle-class income available in their communities upon graduation from high school and college in the education field. An early college teacher pathway is a form of community economic development. (See Appendix A for more information on this rural “grow your own” model).
2. **“Learn and Earn” Apprenticeship Model.** A Pennsylvania Teacher Apprenticeship program would offer paraprofessionals working in public schools a path to earn a degree in education while continuing in their role assisting in the classroom. These homegrown teachers already know the culture of their school. They already know the children, they are committed, and in many cases, they’d make great teachers. They just don’t have the financial resources to earn a degree.

Teacher apprenticeship is a LEARN AND EARN model. Paraprofessionals, many with associate’s degrees or bachelor’s degrees in a field other than teaching, want to become teachers. But they see no clear path to get there.

Through apprenticeship, they are able to stay in their current roles, complete coursework, and be mentored by expert teachers throughout the process. They will be paid to student teach in the schools where they work and will be well prepared to fill vacancies as teachers retire.

Thank you for the opportunity to discuss this important topic with the Committee today. I look forward to answering your questions today and am available anytime to answer your questions. My email is [tbutler@iu08.org](mailto:tbutler@iu08.org).



#PANeedsTeachers  
THE FUTURE CAN'T WAIT

TEACH  
+PLUS

TESTIMONY OF ROBYN QUEEN, AMY MORTON, & LAURA BOYCE  
ON BEHALF OF TEACH PLUS & THE NATIONAL CENTER ON EDUCATION & THE ECONOMY  
BEFORE THE PENNSYLVANIA HOUSE EDUCATION COMMITTEE

Wednesday, April 12, 2023  
Harrisburg, PA

Introduction

On behalf of Teach Plus and the National Center on Education and the Economy, who co-lead the #PANeedsTeachers campaign, thank you to Chair Schweyer, Chair Topper, and the members of the House Education Committee for the opportunity to testify on this critical topic.

Pennsylvania is experiencing a dire and worsening teacher shortage, whose roots go back long before the pandemic. The supply of teachers has plummeted by two-thirds over the past decade, and a wide range of data points indicate that educator shortages and vacancies are at record-high levels, with low-income, urban, and rural schools impacted the most, and particularly acute shortages in certain subject areas and among teachers of color. According to the College Board, the percentage of seniors interested in majoring in education has decreased more than any other profession.

A Tale of Two Teachers

To understand the reasons for these declines, we have to understand the reality Pennsylvania teachers face today. Consider the experiences of Brielle - a composite of many real Pennsylvania teachers whose experience, data and research tell us, is typical.

Brielle decides to become a teacher in college. She comes from a long line of teachers in her family, enjoyed school herself, and benefited from having many teachers who shared her experience. Many of her peers questioned why she would enter teaching, telling her, "You could make so much more money as a nurse or accountant," but she goes forward with her plan.

Brielle has to take out over \$50,000 in student loans to attend a PASSHE school, where she majors in elementary education. Her mother, who was also a teacher and attended a PASSHE school 30 years earlier, describes how she'd been able to work her way through college with part-time jobs and graduate with no debt. But for Brielle, that path is no longer an option, given how steeply college costs have risen in recent years.

In Brielle's teacher preparation program, she has the opportunity to student teach and meets all the requirements to become certified. However, she notices that the courses she takes seem piecemeal and disjointed, not like they are building toward something purposeful. She struggled in math as a student herself, and by graduation, she still doesn't feel prepared to teach it to others.

Brielle's student teaching experience is challenging. Even though she is placed in an affluent school near her college campus, she has to quit a part-time job she really needed in order to make the schedule work, making it harder to pay for tuition and rent. Many of her college classmates have paid internships, but Brielle has to pay tuition and give up her other job to student teach, which doesn't seem fair. The twelve weeks fly by: Brielle's student teaching starts in late September, over a month after the K-12 school year started, and she feels like she's missed key parts of the year. At the end of the twelve weeks, she still isn't confident in her classroom management or her ability to lead a class independently. Her mentor teacher isn't very engaged and isn't one of the stronger teachers in the grade; Brielle wishes she'd been placed with the stronger teacher in the classroom next door.

After graduation, Brielle easily finds a job teaching fourth grade in an under resourced rural district near where she grew up. It's only when she compares notes with classmates who went through her education program with her that she realizes



that her starting salary is significantly lower than what many of her peers are making in wealthier districts, while her class sizes are larger, her school building older, and her instructional resources fewer.

During her first year of teaching fourth grade, Brielle realizes just how unprepared she is to lead her own classroom. She struggles to teach grade-level content to mastery, especially math; the curriculum is different from where she student taught, and there are certain standards and topics she never covered in her program. She notices that her students are falling further behind and becoming more and more disengaged, which is making it challenging to manage student behavior. Brielle assumed she'd have time every day to collaborate with her colleagues and get their advice on how to best teach the curriculum and help students who are struggling. But she is lucky if she gets the allotted 45 minutes per week of common planning time; many of her daily prep periods are spent covering classes as a result of the increasing number of vacancies at her school. Her assigned mentor teacher doesn't check in on her regularly, and her principal is unsupportive and disengaged, making decisions without teacher input and frequently failing to consider the consequences of those decisions for students and teachers. Brielle's college classmates who went into computer science, sales, and engineering are quickly rising in the ranks at their jobs and getting promotions for their performance, but in her district, her only path to more pay is building up seniority or paying for more graduate credits. She sees some of the most effective young teachers in her building leaving, frustrated about the lack of opportunities to step into teacher leader roles that are reserved for the veteran teachers.

Meanwhile, every time Brielle's student loan bill comes in the mail, she is overcome by anxiety; the monthly payment consumes a big chunk of her paycheck, and after paying rent and other basic costs, she's not able to save up for a house or plan for a family like she'd like to. She turns on the news and sees politicians accusing her and her colleagues of indoctrinating and grooming students, and she looks on TikTok and sees memes about how terrible teaching is. When her students ask her why she became a teacher, she tells them she doesn't know and tells them not to make the same mistake. She isn't sure she'll make it to the end of this school year, much less stay in teaching for the rest of her career.

Brielle's experience illustrates many of the systemic and interconnected root causes of teacher shortages, which are discussed in detail in the recent report from Teach Plus and NCEE, [\*#PANeedsTeachers: Addressing Pennsylvania's Teacher Shortage Crisis Through Systemic Solutions\*](#).

First, the financial value proposition for becoming a teacher in Pennsylvania continues to worsen as the cost of college and other expenses to enter the profession rise and teacher compensation remains low. Over the past 30 years, the cost of public in-state college has more than tripled from \$8,000 per year to over \$26,000. Meanwhile, inflation-adjusted average weekly wages of teachers have been relatively flat since 1996, while weekly wages of other college graduates rose 28% over the same period, leading to a wage penalty of 15.2% for Pennsylvania teachers. The cost-benefit equation doesn't make sense for many prospective teachers, particularly those from low-income backgrounds or those considering working in underfunded schools, where salaries are lower.

Second, interest in teaching and the status of the profession continue to decline, particularly among younger generations, making recruitment into the profession more and more difficult. National surveys have shown all-time lows for interest in teaching among high school seniors in recent years, and only 37% of parents want their children to become a teacher, down from 65%. Surveys of members of the Gen X, Millennial, and Gen Z generations suggest that those who make up the bulk of potential teachers in the workforce are looking for working conditions that the current teaching profession doesn't typically provide, including opportunities for advancement based on competence, a team environment with shared responsibility for success, and work-life balance. Even teachers themselves are discouraging students from entering the profession, with over half saying they wouldn't advise their younger self to become a teacher.

Third, in Pennsylvania, preparation and induction experiences can be of varying quality and consistency, sometimes lacking in exposure to rigorous subject area content, sufficient pre-service clinical experience, effective support from highly skilled and experienced mentor teachers, and alignment between educator preparation programs and districts. As a result of the inconsistencies in the teacher preparation experience across coursework and clinical experience, many rookie teachers in Pennsylvania, even those who have completed a traditional certification program, report feeling unprepared for the challenges of leading their own classroom. Half of new teachers in Pennsylvania leave their first school placement within five years.

Finally, many Pennsylvania teachers experience stressful and isolating workplace conditions, without opportunities for career progression or input into school-wide decision-making. Pennsylvania teachers have far less time built into the school day for planning and collaboration than their peers in higher-performing countries, and opportunities for advancement are based on seniority and credit accumulation rather than on demonstrated competence and the ability to build the capacity of others. Teachers often have little to no say in school decision-making, and many teachers leave due to lack of administrative support. Teachers of color also face additional challenges that contribute to their higher attrition rates.

As long as these root causes remain unaddressed, we will continue to see declining numbers of highly qualified and diverse teachers entering the profession, with catastrophic consequences for our future students, workforce, and economy. But it doesn't have to be this way. NCEE's international research on the highest-performing educational jurisdictions in the world, along with our understanding of the research on factors that improve teacher recruitment and retention of teachers, help us imagine a different reality that could become possible in Pennsylvania, which we'll illustrate through the experience of a future teacher named Jamal.

Jamal decides to become a teacher in third grade when his favorite teacher, Mr. Hamilton, tells him that he has a lot of leadership potential and would make a great educator someday. Jamal makes good grades throughout high school and through high school's participation in the career and technical education program of study for teaching, he is able to both earn college credits toward becoming a teacher and get hands-on experience working with younger students in his district before he even graduates from high school.

Due to Pennsylvania's commitment to recruiting and retaining the next generation of outstanding teachers, Jamal is able to attend a PASSHE school for free in exchange for a commitment to teach in a high-need school or subject for four years after graduation. During his time in college, Jamal progresses through a systematic and interconnected pathway of courses that intentionally build his content knowledge and pedagogy; because of his school's partnership with the local intermediate unit, he knows that the content he's being trained on is aligned with the content he'll later teach his students.

When it's time to student teach, Jamal is placed in the district he plans to teach in after graduation, which has a partnership with his college. His residency is paid and runs concurrently with the K-12 academic year, so he experiences the full year with his students and mentor teacher. His mentor teacher, who is relatively young but one of the strongest teachers in the school, receives special training and compensation to mentor rookie teachers as part of the district's career ladder program, and she is invaluable in teaching him the ropes and building his confidence.

After graduation, Jamal returns to teach in the same school he did his residency in, and he feels prepared and supported from day one. His schedule and teaching assignments are intentionally designed so that he has a lighter load than his more experienced colleagues, and he not only collaborates in the planning of lessons but often receives support from his grade-level lead teacher in his classroom. His principal is supportive and solicits the input of teachers into major school decisions, and every day Jamal has protected time to work with his colleagues on planning, student work review, and improvement of their teaching. Since he has no college debt, Jamal is able to start saving for a home and family right away, and he also receives a salary supplement for teaching in a high-need school. After a few years on the job, Jamal's gifts as a teacher really start to shine, and his principal approaches him to encourage him to apply to become a mentor teacher himself. Now, Jamal is receiving extra compensation and support as he learns how to support the growth of rookie teachers and other colleagues, and there's no place he'd rather be.

#### #PANeedsTeachers Policy Principles and Strategies

Jamal's experience couldn't be more different from Brielle's, but it is entirely possible in Pennsylvania if we are willing to take bold action to reimagine the status quo. In the #PANeedsTeachers report, we outline six policy principles that any potential policy solutions should adhere to:

1. **In order to make teaching more attractive as a career, the job of the teacher must fundamentally change.** To make teaching more attractive, schools must be organized in a manner more consistent with the characteristics of professional work environments, such as law firms and hospitals, which foster high levels of collaboration, value professionals' expertise, provide competitive compensation, and offer opportunities for advancement based on competence.

2. **Teacher shortages cannot be solved in the long term by lowering the bar to become a teacher.** Although eliminating requirements to become a teacher may seem like an attractive and low-cost short-term solution to addressing shortages, in the long term this will make the profession less attractive to high-performing students and perpetuate the undesirable pay and working conditions that currently plague the profession. While *unnecessary* barriers to entry that are *not* predictive of teacher quality or success—particularly those that lead to racial disparities—should be eliminated, rigor and quality must remain goals for Pennsylvania’s educator preparation programs and schools.
3. **Any policy solutions that involve investment of additional public funds should improve both the quality and quantity of the educator workforce.** Public funds should be used not only to subsidize the costs of recruiting and retaining more educators, but also to incentivize needed structural changes that will address systemic root causes to teacher shortages, resulting in more qualified, better prepared, and more diverse teachers entering and staying in the system.
4. **Policy solutions should function primarily as incentives rather than requirements in order to reduce compliance mentality.** Institutions such as educator preparation programs and local education agencies (LEAs) should be encouraged to make needed structural changes through the use of incentives, such as competitive grant funds, rather than forced to make changes through across-the-board mandates. This will reduce compliance mentality in favor of an opportunity mentality, encourage innovation among the willing, and allow for proof points that build buy-in across the system.
5. **Policy solutions should be systemic and address root causes.** Policy solutions should address root causes of teacher shortages rather than the symptoms. Ideally, policy solutions should be designed to simultaneously impact multiple root cause problems given the interconnectedness of our educational system. However, policy recommendations may be introduced separately, provided they contribute to and do not diminish a larger, long-term systemic solution.
6. **Policy solutions should drive both excellence and equity.** While all communities in Pennsylvania are impacted by teacher shortages, certain communities—particularly urban and rural communities, low-wealth and low-income communities, and communities of color—suffer disproportionately. Ideal policy solutions will not only increase the supply of high-quality and diverse teachers across the board but also identify ways to accelerate the supply of such teachers to high-need districts and schools.

The following strategies for state-level policy action, informed by existing research, national and international comparisons, and recommendations from participants in the summit, have been identified by NCEE and Teach Plus as priorities moving into 2023 and beyond:

1. **Incentivize high-quality teacher preparation, characterized by rigorous coursework and intentionally designed clinical experiences developed in partnership with local education agencies.** Pennsylvania should invest funds to incentivize close collaboration between educator preparation programs and local education agencies to redesign pre-service teachers’ preparation experiences in a way that ensures teachers are prepared to meet LEAs’ staffing needs and succeed in the classroom from day one. Specifically, to qualify for funding, these partnerships must demonstrate intentional shifts that will ensure teacher candidates:
  - Are diverse and reflective of the communities they serve;
  - Are prepared to teach high-need subjects and/or in high-need schools;
  - Are able to obtain their degrees free of cost in exchange for a commitment to teaching in the partner LEA for at least four years;
  - Develop deep subject-area and pedagogical content knowledge through rigorous, cohesive coursework that aligns with the LEA’s curricular approach;
  - Participate in a year-long clinical residency under the mentorship of an effective, trained mentor teacher, with additional aligned mentoring during induction;

Preference could be given to high-need districts, educator preparation programs with a track record of success, partnerships with strong working agreements and plans for collaboration, and programs that commit to pursue registering their program as an apprenticeship to unlock other sustainable funding sources.

2. **Invest in teacher retention through well-defined career ladders.** Pennsylvania should incentivize LEAs to develop innovative staffing models that incorporate teacher leadership development, career ladders, and a more flexible approach to scheduling and staffing to allow for increased collaboration and professionalization. To qualify for additional funding, which could be used for teacher leader compensation and training as well as technical assistance and capacity building, LEAs would have to create teacher leadership roles such as lead teacher and mentor teacher, clearly defined within a career ladder or leadership capacity development system, that allow teacher leaders to take on progressively more responsibility for impacting student achievement and leading the learning of their colleagues based on demonstrated competence. These adjustments would likely involve changes to salary schedules, master schedules, staffing structures, collective bargaining agreements, and other district policies and practices. Priority would be given to high-poverty LEAs facing the greatest staffing challenges, and this strategy should be connected to the previously discussed strategy to target the same LEAs building new pipelines of highly qualified teachers.
3. **Expand pathways into teaching for youth and paraprofessionals.** Pennsylvania should continue to expand youth pathways into teaching—both through the new high school career-and-technical education (CTE) teaching pathway as well as through dual enrollment opportunities. In addition to providing funding to further expand these pathways, the state should provide support and incentives to LEAs and educator preparation programs to ensure program quality, public awareness of these pathways, clear articulation agreements to allow for transfer of credits, and expansion of these opportunities to students in every district in Pennsylvania. Pennsylvania should also invest in the development, expansion, and funding of programs and apprenticeships that provide pathways for paraprofessionals into teaching.
4. **Improve the financial value proposition for becoming a teacher.** Pennsylvania should explore multiple avenues and funding sources, including the teacher apprenticeship model and service scholarship programs, to move toward the goal of making it free to become a teacher in Pennsylvania. Efforts should also be made to eliminate other financial barriers by encouraging or funding stipends for teacher candidates during clinical experiences, subsidizing the costs of certification exams, and investing in loan forgiveness for teachers, especially in high-need subjects and schools. Finally, teacher pay must become more competitive with other fields that require a bachelor’s degree, both through increased and equitable state funding of education to support local pay increases as well as through targeted financial incentives for teachers in high-need subjects and schools.
5. **Improve data collection to allow for targeted investments in the teacher pipeline.** There are many gaps in Pennsylvania’s current data collection efforts that make it difficult to identify and anticipate teacher shortages, measure the effectiveness of different programs and initiatives, and understand root causes of teacher dissatisfaction. With improved data collection and visualization systems, we can better understand and address root causes of teacher shortages, identify and address pain points, identify and learn from bright spots, target resources where they’re most needed and to programs best equipped to prepare high-quality teachers, and incentivize behaviors that will support recruitment and retention. Specifically, Pennsylvania should begin collecting data on demand for teachers (as measured by vacancy numbers and rates), begin tracking teacher candidates longitudinally from their educator preparation programs into the workforce, establish a statewide teacher working conditions survey and teacher exit survey, and create publicly accessible dashboards for many other existing measures of teacher supply, demand, retention, and satisfaction, as well as educator preparation program success.

### Feedback on Legislative Proposals

We are grateful for the opportunity to share feedback on specific proposals under consideration by the House Education Committee. While some of these proposals are not yet final, we have reviewed co-sponsorship memos, bill drafts, news articles, and legislative text when available to evaluate the proposals against the policy principles laid out above. While we believe each proposal addresses a root cause named in the #PANeedsTeachers report in some way, we also have some suggestions for further strengthening each proposal as we understand it.

### Teacher Scholarship proposal

The teacher scholarship proposal from Representative Rozzi connects to our fourth policy strategy of improving the financial value proposition of becoming a teacher by significantly reducing the cost of becoming a teacher. We believe the proposal could be further strengthened by connecting to our first policy strategy and using these

additional resources from the state to incentivize high-quality educator preparation. Specifically, we suggest that rather than limiting scholarships to candidates attending PASSHE schools, that instead any postsecondary institution with an approved educator preparation program be permitted to apply to host scholarship recipients, provided that they commit to meeting certain quality standards including extensive clinical training under the mentorship of a highly qualified mentor teacher, preparing candidates in high-need subject areas, and preparing candidates at a capped cost based on the in-state public tuition and fees rate using scholarship funds without passing any costs on to candidates. We also propose that the service requirement be differentiated, with a shorter service requirement of one year of service per year of scholarship support for candidates who go on to teach in high-need subjects and schools, and two years of service per year of scholarship support for all other kinds of schools. Finally, we recommend clarifying the terms of repayment of the scholarship in the event that the education or service requirement is not met, and providing for technical assistance and a community of practice for educator preparation programs that are part of the program to continuously and collaboratively improve their preparation of teacher candidates. We will be sharing with Chair Schweyer and Representative Rozzi language that details these suggested changes and additions.

#### Grow Your Own Educators proposal

The Grow Your Own Educators proposal, led by Representative Schlossberg, is most directly connected to our third strategy of expanding pathways into teaching for youth and paraprofessionals, and we applaud its goals of accelerating the supply of high-quality and diverse educators to schools experiencing the worst teacher shortages. In order to ensure that this proposal improves not only educator quantity but also quality, we recommend adding additional criteria for assessing and prioritizing proposals based on the quality of the preparation experience, including the inclusion of year-long residency models, explicit plans to recruit a diverse candidate pool, and proposals that are more cost-effective. We also recommend explicitly allocating a percentage of total funds to support the design and administration of the grant program and technical assistance to applicants and grantees, and specifying that the department of education may contract with a third party such as the National Center for Grow Your Own for this support and capacity. We recommend further detail on allowable costs; the respective responsibilities of school entities, educator preparation programs, and teacher candidates; and data reporting expectations for grantees. Finally, we believe further attention is needed to the aspiring-to-enacting educator pathway, to make clear how it would differ from existing educator preparation pathways, and to the community member-to-education support professional pathway, to specify what credentials would be required for this pathway and whether candidates would be able to work in schools while in this pathway. It might be beneficial to narrow the scope to the other two pathways, for high school students and paraprofessionals, where there is already momentum across Pennsylvania due to the new CTE program of study in education, the development of local paraprofessional pathway programs across the commonwealth, and the early steps toward a registered paraprofessional-to-teacher apprenticeship pathway. We have shared detailed feedback with Chair Schweyer and Representative Schlossberg.

#### Teacher Salary proposal

The teacher salary proposal from Representative Kim addresses our fourth policy strategy of improving the financial value proposition for becoming a teacher, and an increase of the minimum starting teacher salary to \$60,000 per year and the minimum hourly wage for support staff to \$20 per hour would make educator pay significantly more competitive, particularly in urban, rural, and high-poverty districts that currently pay significantly less. However, we have not had the opportunity to review the legislative language and recognize the challenges of addressing educator pay in an effective and equitable way at the state level due to locally determined pay scales that are driven both by regional labor market conditions and local collective bargaining agreements. We would encourage any proposals related to educator pay to ensure there are adequate resources devoted to ensure equity for underresourced districts, which will be unable to raise pay or compete with more affluent districts for educators without additional state resources. We believe the best way to support educator pay raises is to make our school funding system more equitable and ensure that poor districts receive adequate resources that allow them to pay competitively; in the short term, Level Up is the best way to target these resources to the highest-need districts while the legislature determines a more systemic remedy to make our school funding system constitutional. We also support targeted financial incentives such as salary supplements for teachers in high-need subjects and schools. It is also important to note that while financial considerations are important for teacher recruitment and retention, we must also address the working conditions and professional environments of teachers if we hope to retain high-performing teachers, particularly in our most challenging



school settings. We are working on a proposal focused on incentivizing career ladders that would make the profession more attractive to teachers and look forward to getting your input and feedback on that in the second half of this year.

#### Data Collection and Reporting proposal

Finally, as we point out in the report, a lack of actionable data on the teacher workforce in Pennsylvania is a significant barrier to the development of targeted policy solutions. We have developed a proposal to improve collection and reporting of data that will improve our ability to understand and address teacher shortages. Our proposal would require the Pennsylvania Department of Education to begin collecting data on demand for teachers (as measured by vacancy numbers and rates), begin tracking teacher candidates longitudinally from their educator preparation programs into the workforce, establish a statewide teacher working conditions survey and teacher exit survey, and create publicly accessible dashboards for many other existing measures of teacher supply, demand, retention, and satisfaction, as well as educator preparation program success. We would welcome the opportunity to share that proposal with members of the committee and hope that it will be considered in conjunction with the other proposals under consideration today.

#### Conclusion

Addressing Pennsylvania's teacher shortage crisis will not be easy. It will require broad public support, political will, investment of public resources, and a willingness to disrupt "the way things have always been done." But the stakes couldn't be higher: our children's futures, our commonwealth's economy, and our shared prosperity and security are on the line. With vision, leadership, and courage, Pennsylvania can not only respond proactively to this growing crisis but seize an opportunity to become an innovative leader by reimagining the teaching profession to recruit and retain the highest-performing teacher workforce in the world. NCEE and Teach Plus stand ready to partner with policymakers, K-12 leaders, educator preparation program leaders, statewide associations, and non-profit and advocacy organizations to advance this vision and take bold action. Our children can't wait: together, we can address the root causes of teacher shortages in our commonwealth and build the excellent and diverse teacher workforce that every Pennsylvania student deserves.

#### About Teach Plus

The mission of Teach Plus is to empower excellent, experienced, and diverse teachers to take leadership over key policy and practice issues that advance equity, opportunity, and student success. In pursuing their mission, Teach Plus is guided by their Student Opportunity Mandate: All students should have the opportunity to achieve their potential in an education system defined by its commitment to equity, its responsiveness to individual needs, and its ability to prepare students for postsecondary success. [www.teachplus.org/pa](http://www.teachplus.org/pa)

#### About NCEE

The National Center on Education and the Economy is dedicated to building broadly shared prosperity in the United States. We do this by supporting education leaders and practitioners, policymakers, researchers and community stakeholders to study, design and build equitable, high-performing, and cost-effective education and workforce development systems. The students these systems educate will be prepared to contribute to our democratic society and compete in the global economy. [www.ncee.org](http://www.ncee.org)

#### About the Testifiers

Robyn Queen is a 2022-2023 Teach Plus Pennsylvania Policy Fellow and a Literacy Academic Coach who focuses on developing teacher and student academic growth in literacy and instructional practices that foster self and collective efficacy. Robyn has taught various subjects to students in grades Kindergarten to 8th grade and coached teachers throughout her district for the last eight years. Robyn was named Pittsburgh Public School District's Employee of the Month and Employee of the Year in 2018-2019. She was also awarded for her transformational work as a Teacher Envoy in 2019-2020. Robyn is the CEO and Lead Educational Consultant for Everybody Educate LLC and co-founder of Soul Xpressions, providing SEL and academic development to historically marginalized students. She earned her BS and MED from Edinboro University of Pennsylvania with an Elementary and Special Education certification.

Amy C. Morton has served in local, state and national education roles over the past 39 years. Amy works with Pennsylvania educators and policymakers as a System Design Specialist for the National Center on Education and the Economy (NCEE) and serves as one of their national facilitators. In addition, she serves as the Executive Director of

Pennsylvania's Education Policy and Leadership Center. Amy spent several years working for the PA Department of Education, including Executive Deputy Secretary under Governor Corbett, Deputy Secretary for K-12 Education under Governor Rendell, and Bureau Director for Curriculum under Governor Ridge. Amy led the Capital Area Intermediate Unit as Executive Director after serving as Curriculum Specialist, Director of Education Services, and Assistant Executive Director. Her career began as a high school social studies teacher after graduating from Dickinson College in Carlisle. She earned her M.S.Ed. from McDaniel College and her Superintendent Letter of Eligibility from Shippensburg University. Amy has taught curriculum courses for Penn State York, York College, Wilkes University and Wilson College as an adjunct professor.

Laura Boyce is the Pennsylvania Executive Director of Teach Plus, leading Teach Plus' policy and instructional practice work across the state. Prior to joining Teach Plus, Laura served as an elementary and middle school leader in Camden, NJ; during her tenure, student proficiency on the rigorous PARCC exam increased from 6% to 50%, dramatically outpacing the statewide and network growth rates and the districtwide proficiency average. Laura began her career as a high school English and history teacher leader in Philadelphia, also serving as academy coordinator, department chair, and grade team leader. During her 16 years in education, Laura has taught in or led schools serving every grade level in both district and charter turnaround settings. Laura holds a B.A. in public and international affairs from Princeton University and a master's in educational policy from the University of Pennsylvania, and is also a graduate of Relay Graduate School of Education's National Principals Academy Fellowship.



**Testimony of the  
Pennsylvania State Education Association (PSEA)**

**Public Hearing Regarding  
The Educator Shortage**

**Presented to the  
House Education Committee**

**April 12, 2023**

**By**

**Richard Askey**

**PSEA President**





Good afternoon, Chairman Schweyer, Chairman Topper, and members of the House Education Committee. I am Rich Askey, President of the Pennsylvania State Education Association (PSEA). I want to begin by first expressing our gratitude for your inviting PSEA to share our perspective on the educator shortage, but more importantly, for hosting this vital conversation. I hear from PSEA members every week about the challenges they face in their schools and how staffing challenges impact the day-to-day operations of schools, the delivery of instruction, and the overall quality of teaching and learning environments.

The educator shortage is a crisis - not an ideological wedge issue. All parents want their children to learn from effective and properly trained educators and to have access to the support of staff like school nurses or counselors when they need it. Taking steps to implement a cohesive and bipartisan strategy to address the educator shortage now, and in years to come, is something we can all agree is a priority.

**BACKGROUND DATA**

I have been an educator for more than 30 years-long enough to remember when Pennsylvania was considered an exporter of teachers, particularly in the 1990s and early 2000s. That is not the case today. Based on the most recently available data from the Department of Education (PDE), Pennsylvania has experienced a 64 percent decline in the number of Instructional I certificates issued to in-state graduates between 2010 and 2021. PSEA has been sounding the alarm on this drastic decline in our pipeline, but let’s consider two other important factors that shed light on the severity and nature of this educator shortage. First, during that same eleven-year period, there has been a 200 percent increase in the number of emergency permits issued.

<u>Year</u>	<u>In-State Certificates Issued</u>	<u>Out-of-State Certificates Issued</u>	<u>Emergency Permits (Types 1 and 4)</u>
2010-2011	15,031	2,080	1,845
2011-2012	13,503	1,396	896
2012-2013	16,614	2,343	1,214
2013-2014	9,893	1,290	1,165
2014-2015	8,751	1,329	1,377
2015-2016	8,271	1,402	1,971
2016-2017	4,412	992	2,972

2017-2018	5,842	1,076	3,783
2018-2019	5,505	1,125	4,330
2019-2020	5,128	878	4,665
2020-2021	5,440	1,101	5,958

Source: PDE – Act 82 Report. <https://www.education.pa.gov/DataAndReporting/Pages/Act82.aspx>.

Second, a deeper dive into the data demonstrates that “teacher attrition does not appear to be the primary driver of the shortage of teachers in Pennsylvania.”<sup>1</sup> An analysis of the data indicates that annual teacher attrition from 2014-15 to 2021-22 ranges from 7.5 to 6.0. In fact, Pennsylvania is below the national average for teacher attrition.<sup>2</sup> Attrition is greatest at the beginning of an educator’s career and as they approach retirement age based on years of service. In addition, the difference in the attrition rates in school districts vs. charter schools is stark, with the rate of charter school teachers leaving the profession being “at least double the rates of teachers in school districts.”<sup>3</sup>

### **This situation is simply not sustainable.**

All of this data tells us a few things:

1. Pennsylvania has a supply problem. The commonwealth is not producing enough teachers to meet demand.
2. If teachers are going to exit the profession, they will most likely do it within the first three years of their career.
3. Charter schools have a more substantial issue with attrition than school districts.

Why don’t young people want to become educators? How do we recruit the next generation of educators? How do we better support our early career educators? We need to ask these questions loudly and swiftly to devise solutions.

## **REBUILDING THE EDUCATOR PIPELINE**

### ***Substitute Teachers***

In the short term, the lack of substitutes represents one of the most pressing of pipeline needs. Here are some examples of what is happening in schools:

<sup>1</sup> Fuller, Ph.D., Ed. Pennsylvania Teacher Staffing Challenges Fall 2022. The Pennsylvania State University Department of Education Policy Studies. Page 10.

<sup>2</sup> Ibid.

<sup>3</sup> Fuller, Ph.D., Ed. Pennsylvania Teacher Staffing Challenges Fall 2022. The Pennsylvania State University Department of Education Policy Studies. Page 11.

- Students have been reassigned to large study halls in cafeterias and auditoriums at the secondary level for asynchronous instruction on an iPad or laptop, whereas elementary classes are being split and assigned to other classrooms for the day.
- Teachers are losing lunch and prep periods to cover other classrooms. Not only are they losing valuable time to plan instruction, but they are also losing equally precious time to have a mental break. Their days are truly non-stop.
- Sometimes, when a teacher is absent, multiple teachers cover a single class at various points throughout the day because a single substitute is not available.
- Administrators are providing coverage as a desperate last effort to have an adult in the room.

Fortunately, the General Assembly responded with Act 91 of 2021, which provided some much-needed relief. PSEA was proud to draft HB 412 and the Senate amendment, which became Act 91, widening the pool of potential substitutes, streamlining the process for retired educators to return to the classroom, and allowing for the designation of classroom monitors. This was a necessary band-aid to help alleviate the current crisis and will hopefully provide teachers and administrators with some relief. Some of the law's provisions were purposefully temporary. We are looking forward to the report from PDE that is supposed to be released by this Saturday. The report will provide information on how schools used the classroom monitor permit to provide classroom coverage, but also if they responded to demand by increasing substitute teacher pay and making it worthwhile for people to take on those roles.

### ***Scholarships/Loan Forgiveness***

Fixing the longer-term educator pipeline is going to take a sustained, multi-year commitment. It should be informed by data and feedback from current and aspiring educators, as well as high school students considering the profession.

One such group that PSEA is listening to is our aspiring educators. PSEA enjoys the honor of representing 7,000 future educators who are actively enrolled in teacher preparation programs. They would be the first to tell you that the excessive cost of attaining a bachelor's degree has been one of the greatest barriers for individuals seeking to enter and remain in the teaching profession. Forty-five percent of today's educators took out student loans to finance their education with a total average loan amount of \$55,580.<sup>4</sup> Sixteen percent of Black educators who used student loans borrowed \$105,000 or more compared to 11 percent of White educators.<sup>5</sup> Long-term income projections and the ability to afford student loan payments, housing, transportation, and other necessities and accomplish personal life goals are things everyone considers when they plan their future. The near constant attacks on educators by groups in their

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<sup>4</sup> "Student Loan Debt Among Educators: A National Crisis." July 2021. National Education Association and the Center for Enterprise Strategy. <https://www.nea.org/sites/default/files/2021-07/Student%20Loan%20Debt%20among%20Educators.pdf>.

<sup>5</sup> Ibid.

communities, the changes to the retirement system, and the failure of school districts to keep up with the private sector in terms of starting salaries for similarly-educated professionals have not encouraged the next generation to commit their talents to public schools.

The federal Teacher Loan Forgiveness is just beginning to take the edge off the impact of student loans for teachers. For individuals who teach full time for five complete and consecutive academic years in a low-income school, and meet other qualifications, they could be eligible for forgiveness of up to \$17,500 on Direct Subsidized and Unsubsidized Loans and Subsidized and Unsubsidized Federal Stafford Loans. This program provides much needed relief, but significant student debt still remains.

### ***Student Teacher Stipends***

Our future teachers would also tell you that the traditional student-teaching model is an emerging barrier. Pennsylvania requires a 12-week student teacher experience. There are three concerns with these programs. First, for both traditional and non-traditional students, a lack of income for a semester is often not feasible, especially for those living independently and/or lacking family support. In fact, some higher education institutions require students to sign contracts stating they will not engage in full-time or part-time work during their student teacher experience. The traditional student-teaching model does not contemplate the current economic conditions of our society.

Second, student-teaching placements are not guaranteed to be local for the student teacher. In fact, depending on availability candidates can be forced to travel over an hour each way to their placement. This might seem insignificant to you and me but put yourself in the shoes of a 21-year-old who is trying to pay for housing, keep up with transportation costs, and get back to their campus for other course responsibilities following their student teaching day.

Third, current educators are not jumping at the opportunity to be a mentor teacher in a student teacher program. High-quality mentors are essential to prepare our aspiring educators. And before you say anything, I know PSEA has a responsibility to encourage quality mentors for our student teachers. We will work on that. But I also would argue that school entities and higher education institutions have the same responsibility to incentivize our best and brightest to take on that additional work. When you consider the potential implications for a teacher's evaluation, the additional workload, and the logistics of coordinating with student teachers and their preparation programs, people are just not jumping at the opportunity.

States are responding to the concerns of aspiring educators by creating PAID student-teaching experiences. Oklahoma committed \$12.75 million in federal relief funds to pay eligible Oklahoma college students for their work as student teachers. Michigan's state budget now includes \$50 million for stipends for student teachers, providing up to \$9,600 per semester to help with tuition, living expenses, childcare, and other costs associated with student teaching. In Colorado, teacher candidates placed in a semester-long academic residency may receive a

stipend of up to \$11,000. Alabama is jumping on this issue too by experimenting with a couple different ways of paying teacher interns.

In addition, we should note that aspiring educators do not solely pay tuition to earn their teacher certification. There are fees associated with assessments to achieve certification, certification fees to PDE, costs for the 24 post-baccalaureate credits required to get an Instructional II certificate, and finally the ongoing costs associated with professional development for the rest of an educator's career. Two years ago, one of our student members tallied his costs to get his certification after college. He spent \$1,128 to become certified in Pennsylvania with four state certificates – including his Instructional I – all before he started earning a paycheck.

### *Starting Salaries*

Finally, we would be naïve to believe that compensation does not play a role in a young person's career planning, particularly when we consider the significant costs associated with becoming a teacher. Compensation is a critical factor in one's decision whether to enter or remain in the education profession. Educator compensation must reflect the value that these professionals provide to their students, their communities, and society as a whole. Educator and support staff contract negotiations cannot be approached as an opportunity to pinch pennies, but instead must be a means of establishing appropriate levels of salary and benefits that will keep educators in the classroom.

Salaries have simply not kept up with inflation. Perhaps even more concerning is the fact that many states, including Florida, New Mexico, Arkansas, Delaware, Connecticut, Texas and Maryland, have proposed or passed significant increases in their starting teacher salaries, while Pennsylvania's statutory minimum salary remains at \$18,500. Currently, the average starting salary for teachers in Pennsylvania is \$42,000, and in some areas of the state, starting salaries are still in the \$20,000s. Unsurprisingly, education support staff (ESP) salaries are well below what teachers earn, and the average ESP salary in PA is at least \$10k below the basic living wage for a family of one adult and one child. The data is clear; education careers lack adequate compensation, leading many educators to work more than one job to achieve an adequate standard of living. The recruitment and retention crisis can be, in part, blamed on the fact that many educators can make more money in less-stressful jobs outside of education. That is why educator compensation must reflect the value these professionals provide to their students, their communities, and society.

PSEA is partnering with Representative Patty Kim, who will soon introduce legislation that would, over a 5-year period, bring Pennsylvania's minimum teacher salary up to \$60,000, and establish a minimum salary of \$20/hour for support staff. We estimate there are 25,962 certified professionals working in 580 school districts, career and technical centers, and intermediate units who would see their earnings lifted to \$60,000 if our proposal becomes law. For support staff, we estimate 34,167 (64.5% of all ESPs statewide) would be affected by the \$20 ESP minimum

salary requirement. School entities would be reimbursed by the state each year for the amounts required to lift school staff salaries to the proposed minimums, and thereafter those funds would be built into schools' base funding allocations.

We know this strategy works, because research consistently shows that increasing pay attracts more and higher-quality teaching candidates.<sup>6</sup> In addition, districts that offer higher pay have had lower levels of teacher attrition, both in terms of moving to another district as well as leaving the profession altogether. Most important, states and districts with higher educator wages have had higher levels of student achievement and smaller achievement gaps among black and Hispanic students.

### ***Educator Diversity***

Within the overall educator shortage, there is an even uglier problem. Pennsylvania lacks teachers of color. A report issued by Research for Action in December 2020 on educator diversity in Pennsylvania found that:

- Students of color make up 36 percent of Pennsylvania's public school student population, yet teachers of color comprise only six percent of the educator workforce.
- 138 school districts and 1,078 public schools had zero educators of color during any of the prior seven school years. In these schools, an average of 15 percent of students were students of color.

Further, a report issued by the Learning Policy Institute in April 2018 revealed that when taught by teachers of color, students of color have better academic performance and improved graduation rates and are more likely to attend college. As we aim to resolve the overall shortage, Pennsylvania must concurrently focus on educator diversity.

### ***Grow Your Own Programs***

One final solution that will ensure long-term success in rebuilding the educator pipeline would be for policymakers to establish and invest in a statewide Grow-Your-Own program. Grow-Your-Own programs are partnerships between school entities, community organizations, and institutions of higher education that are designed to recruit AND retain individuals from within the local school community to meet local education workforce needs on an ongoing basis. Grow Your-Own models are particularly effective at diversifying the field because recruiting from local communities means that school staff are more likely to reflect student demographics.

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<sup>6</sup> "Elevating the Education Professions." NEA. October 2022 <https://www.nea.org/sites/default/files/2022-09/solving-educator-shortage-report-final-9-30-22.pdf>

PSEA is excited to be working with Rep Schlossberg to establish a statewide GYO program here in Pennsylvania. Under his soon-to-be-introduced proposal, the department of education would provide technical and financial assistance to partnerships that develop and implement education career pathways designed to fill gaps in the local education workforce. GYO programs can focus on nontraditional candidates, career-changers, high school students, education support professionals, or any other adults in the local community who may be interested in becoming an educator. The grants awarded under Rep Schlossberg’s proposal could be used to cover the costs of tuition, wage-earning internships, and mentoring. We’ve seen great success with GYO models all over the country, and even right here in Pennsylvania.

The good news is that we already have a foundation upon which we can build and strengthen our efforts to support a robust and diverse pipeline of aspiring educators. For example, Act 55 of last year created a program of study specifically designed to provide high school students with early exposure to K-12 education career pathways, and when schools begin offering the program of study this fall, it will allow aspiring educators to begin earning post-secondary credits while still in high school. We are very excited that many local school entities have shown interest or taken steps to implement one or more GYO pathways, so it is important that policymakers establish a high-quality statewide framework to support and incentivize these education career pathways. Here again, state investments in GYO programs are scalable and can be targeted depending upon the size of the state’s investment.

The most important thing policymakers should remember as you consider ways to address the educator workforce crisis is that increasing compensation, easing the student debt burden, paid internships, and GYO programs are proven solutions. If we want to see progress in reversing the shortage, we need to work together to implement these solutions now, and we must commit to meaningful investments now and in the future to support them.

### ***Prioritizing Health and Mental Health Professionals***

Even before the COVID crisis, our educators were pushed to maximum limits. Working in schools today is completely different from those times when Pennsylvania had an oversupply of educators. Technology (cell phones, computers, etc.), social media, toxic standardized testing, a diminished retirement system, mass school shootings, facilities in dire need of repairs and improvements, and the long-term consequences of the pandemic are the reality of current and future educators. On top of these complex demands, educators must support students through ever-more prevalent mental health needs, without an adequate support structure of in-school or community mental health resources. These challenges not only impact the students facing crisis, but also cause disruption and uncertainty in the broader classroom environment, impacting all students.

Often overlooked in the rhetoric around the “educator shortage” is the fact that this term includes not only teachers, but pupil services employees like school nurses, psychologists, counselors, and

social workers. Teachers serve many roles for their students, helping them learn, grow, and explore their interests. But for children and youth to really thrive, they need access to pupil service employees. Many of our students are struggling with mental health issues, anxiety, depression, bullying, and self-harm, as evidenced by the 83,000+ reports received via the Safe 2 Say Something system. This crisis is not unique to Pennsylvania. We've known for a long time that our districts do not employ the recommended numbers of mental and physical health staff, including school nurses, counselors, social workers, psychologists, and dental hygienists, and the need for the services these professionals provide has grown exponentially since March of 2020.

Certainly, strategies like those suggested above for teachers and paraprofessionals also must be considered to attract and retain health and mental health professionals in a school setting. In addition, we must continue to invest in targeted programs to remove barriers to entry for practitioners to work in schools. Schools are very different practice environments than clinical settings, therefore internship or practicum experiences provide invaluable insight and preparation prior to employment. However, these internships are often unpaid and do not provide health benefits, creating a financial disincentive for those interested in pursuing work in schools. This financial burden also contributes to a "brain drain" of professionals who may choose to study and subsequently seek employment in other states that provide incentives.

The General Assembly wisely appropriated funding in Act 55 to provide stipends to help sustain school-based mental health professionals during their internship experience. Future professionals are applying now to participate in the program. In addition, Gov. Shapiro proposed an additional \$10 million for the intern stipend program. We thank you and Gov. Shapiro for your foresight and urge legislators to continue this investment in future years to address the massive gaps between existing and optimal staffing levels. Given that there is high demand for health care and mental health professionals in all practice settings, we must also be aware of the highly competitive nature of this labor market. Practitioners are being lured away from work in school settings with the promise of higher pay and more flexible work environments in private or clinical practice.

In the absence of qualified health professionals to whom students can be referred, teachers and paraprofessionals bear the brunt of their students' distress. Often the challenges impacting student performance originate from factors completely outside an educator's control, such as unresolved issues at home, including food or housing insecurity or lack of reliable transportation or support in the home. Educators care deeply about their students, but they are not trained counselors or social workers. Watching a student struggle and being unable to help weighs heavily on the hearts of our school staff. Districts must view adding these positions as a means to improve well-being for both students AND educators.



### ***Protecting Quality***

While we have raised significant issues and the many challenges associated with addressing the educator shortage, we must state for the record that the very worst possible solution would be to lower standards for our school employees. Our students deserve better. Pennsylvania’s educator certification requirements are some of the most rigorous and comprehensive in the nation. These high-quality standards must be lauded and protected. During times of crisis, it may seem tempting to loosen standards and fast-track preparation; however, we know that this just leads to much higher rates of turnover. For example, many people point to Teach for America (TFA) and lowering certification requirements as a solution. But those people ignore the studies that have demonstrated that retention rates among TFA are lower than overall retention rates. After four years, only 14.8 percent of TFA graduates are in the same placement and only 27.8 percent are still teaching.<sup>7</sup> Compare that retention rate to an estimated 50 percent for all new teachers across all types of schools and I think we can agree that we must address the underlying issues of why teachers leave – not create new, failing programs.<sup>8</sup>

### **CONCLUSION**

Pennsylvania’s educators and support staff have risen to meet every challenge and every hurdle placed in their path – all with the singular focus to do what they love – care for and teach students. Policymakers can demonstrate their respect for and the value they place on the work our educators have done and continue to do by tackling the educator shortage in a way that doesn’t blame them for the problem or diminish their calling. Rather, I humbly ask policymakers to approach the educator shortage in a way that recognizes my friends’ and colleagues’ value to children, communities, and society. PSEA stands ready to work with all policymakers to respond to the teacher shortage in a holistic way that puts solutions in place, so we’re not dealing with this same issue in another twenty years.

Thank you, again, for the invitation to participate today and for your consideration of PSEA’s comments. I will be happy to answer any of your questions.

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<sup>7</sup> Morgaen L. Donaldson and Susan Moore Johnson. 2011. “Teach For America Teachers: How Long Do They Teach? Why Do They leave?” Phi Delta Kappan, 93, 2, Pp. 47-51.

<sup>8</sup> Smith, T. & Ingersoll R.M. (2003, May). The wrong solution to the teacher shortage. Educational Leadership, 60 (8), 30-33.

## Testimony for Teacher Shortage

Good morning, Chairman Schweyer and members of the Committee. Thank you for asking me to speak this morning on the ever-important topic of teacher shortages in Pennsylvania.

I'm Arthur Steinberg, President of AFT Pennsylvania, the state chapter of the American Federation of Teachers, which represents about 36,000 teachers, paraprofessionals, school staff, higher education faculty and staff, and state workers across 64 local unions.

I'll start this morning by stating what should be obvious: there is no one single cause of the teacher and school staff shortage, so there is no one-size-fits-all solution. That said, I hope to shed some light on the obstacles we face as a profession, as a commonwealth, and as a nation as it pertains to education and provide some idea of legislative solutions that you and your colleagues may employ to help begin closing the gap.

Just last July, our national union, the American Federation of Teachers, published a report titled, "Here Today, Gone Tomorrow?: What America Must Do to Attract and Retain the Educators and School Staff Our Students Need" compiled by the union's Teacher and School Staff Shortage Task Force. As a union representing 1.7 million pre-K through 12th-grade teachers; paraprofessionals and other school-related personnel; higher education faculty and professional staff; federal, state and local government employees; and nurses and other healthcare professionals across the nation, our opinions on provision of education and the recruitment and retention of teachers and staff are based on firsthand knowledge.

To give you an idea of the scale of this crisis, even before the COVID-19 pandemic, nearly 300,000 teachers nationwide were leaving the profession every year. In an op-ed that Speaker Rozzi published in the Reading Eagle in November, he mentioned that the Pennsylvania Department of Education recorded a 66% drop in newly issued in-state teaching certificates over an 11-year stretch.<sup>i</sup> And per a June 2022 Rand Corporation survey, about one-third of teachers and principals reported that they were likely to leave their current job by the end of the 2021-22 school year, up from about one quarter of teachers and 15 percent of principals in January 2021.

So, what do teacher and staff shortages mean for our kids and our schools?

Every child deserves to have qualified, caring teachers and staff—people who are excited to work with them every day and dedicated to giving them a rich, joyful education. We also cannot have a strong democracy and a strong economy without an engaged, informed, well-educated citizenry. Public school staff and educators are literally the builders of democracy.

Plus, our students really need their teachers and school staff around them right now. They need the stability. Children and their families are struggling. The COVID-19 pandemic caused untold grief, trauma, and economic hardship to many Americans. And even without the pandemic, the ravages of gun violence, housing and food insecurity, and parents either forced to work several jobs to make ends meet or those who have been incarcerated, all take a toll on students. At a time when teachers and school staff are so vital in helping our children and communities recover and heal, untenable conditions are driving educators away.

The good news is that this problem is solvable.

Other countries have no problem retaining their teachers and few barriers to recruitment and retention. We can do this, too.

We must tackle shortages by changing what the AFT Teacher and School Staff Shortage Task Force refers to as the “Four-C’s”: the conditions, compensation, climate, and culture of education professions—things that can be changed, if there is a will to change them.

The educator shortage is a challenge in both recruitment and retention. Teacher preparation enrollment dropped 35 percent between 2009 and 2014.<sup>ii</sup> A 2018 PDK poll showed that for the first time in 50 years, a majority of Americans opposed their own children becoming public school teachers.<sup>iii</sup> Students see the struggles of educators; hear all the negative attacks; learn about the lack of political and financial support teachers and schools receive; and students see educators choose other professions where they know they might get more respect, higher pay, better working conditions and increased opportunities for career growth.

Along with teachers, support staff and other school positions are facing similar and harmful shortages. The COVID-19 pandemic exacerbated this challenge. Since the pandemic, school staff employment has fallen across positions, with a 2.6 percent decrease for teaching assistants, 6 percent for custodians, and 14.7 percent for bus drivers, leaving schools without the necessary staff in almost every position.<sup>iv</sup>

The most successful education systems in the world are able to recruit and retain qualified teachers because the teaching profession is greatly valued by their societies; teachers are fairly compensated; the teaching career is transparent and clearly structured; teachers are given many opportunities—and encouragement—to learn; and they receive regular feedback on their teaching, such as through mentoring programs organized by schools.<sup>v</sup> In the U.S., those who do enter the profession are hit immediately with the realities of low pay, low support, low resources, and low trust and respect. The passion many have for education often cannot overcome the austerity, struggles and stress.

We also face a shortage in the diversity of educators. The teaching workforce is overwhelmingly white and growing less representative of the students we teach, a majority of whom are now students of color. The opportunity to learn from different perspectives is valuable to all, and in particular students of color benefit from having teachers with shared backgrounds and culture. However, we do not do enough to attract and retain a diverse workforce of teachers and educators, even implementing policies and supporting a culture that prevents people from wanting to work in schools.

While the challenges that have led to the teacher and school staff shortage may impact the number of people entering or remaining in the profession, they have not removed the genuine desire many still have to work with and help children. We need to take a different approach to education to help students achieve and attract and retain educators and staff in the profession.

First, we need to change the way schools are funded. From the recent Commonwealth Court ruling, we know Pennsylvania’s public education system is unfairly funded—Judge Cohn Jubelirer’s opinion made very clear that education equity is nearly impossible in a locally funded education system. Even with the best staff, kids cannot learn when they are homeless, hungry or struggling with other family or non-school challenges. Family income is one of the most important factors affecting a child’s educational performance, and schools with the lowest rates of poverty tend to have the highest performers.<sup>vi</sup>

We cannot put a Band-Aid on the teacher and school staff shortage by cutting corners and lowering the bar for entry, as some of your colleagues have suggested. We must simultaneously raise entry standards, improve the way we treat workers, and improve recruitment and retention issues. To do this, we must give educators a larger voice in their work and allow them to have the oversight of their profession just like lawyers and doctors. Research indicates that when teachers have more control over their social and instructional roles, there is less turnover.<sup>vii</sup> And less teacher turnover is good for students.<sup>viii</sup>

During the pandemic, it became increasingly apparent just how vital teachers and school staff are to our nation's children. Education professionals shifted quickly to a new, emergency mode of schooling while taking on work beyond their traditional roles. The nation collectively saw educators as truly essential workers, with public outcries for higher pay and more respect. Yet when most of the country began to return to schooling (somewhat) as usual, the public outcries were gone. We cannot let this opportunity pass. Our children depend on us to take action that will improve the teaching and school staff professions. Every child deserves to have people in their schools who are well-trained, well-supported and excited to work with them every day. We need an overhaul in all aspects of the profession to ensure people want to enter and stay in school careers. The future of public education depends on it; the future of our democracy depends on it.

## **Solutions**

The first action we must take is to revitalize the educator and school staff pipeline.

We ought to also pass a "grow-your-own" bill to support partnerships among local education agency, university and district partners to develop and sustain residency and "grow-your-own" programs.

We must also examine why teachers of color leave the profession, and consider levers aimed at increasing equity. One such lever is the licensure exam. It has proven to be a barrier to entrance to the profession for many candidates of color. States should re-examine how content knowledge and pedagogical skills are demonstrated and measured. And we should invest in culturally responsive licensure assessments. Policymakers should also name diversity as a marker of teacher quality.

We must expand support and funding for mentorship programs. This includes administrative support and dedicated time for implementation. Administrators will ensure that mentors have the ongoing training they need to be successful, and that mentors/mentees are given the opportunities they need to make the relationship effective. Mentors should go through a strict application and interview process to determine if they are right for the job.

We also need to restructure schools to create positive working and learning conditions for all. One way for our legislature to do this is to support community schools and continue to support legislation that protects staff and students from discrimination and bullying.

Along with creating positive school cultures, restructuring schools also requires addressing the day-to-day functions of teachers and school staff workers. The AFT heard from countless members about how important it is for them to be trusted by policymakers, administrators and community members to make decisions relevant to their jobs and to their students; to be given the time in their workday to plan and prepare for their instruction or other duties; to collaborate with colleagues; and to meaningfully assess

their students' work and needs; to be given the tools and resources they need to do their jobs without being overburdened by paperwork or large class sizes; and to be given ongoing, job-embedded training that allows them continuous growth and opportunities to develop within their career or between roles.

These changes will also benefit students by ensuring that the people who work with them can exercise their professional judgment to make the best, most-informed decisions regarding teaching and learning.

To achieve a system that provides workers with time, tools, trust, and training to do their jobs, legislators must work to reduce or eliminate standardized assessments on top of those that are federally required; provide diagnostic assessment tools; and create sufficient supports for performance assessments so that the validity, reliability, and comparability requirements can be met under ESSA.

Additionally, we must require an evaluator certification to ensure every evaluator has high-quality, long-term training on how to properly evaluate evidence and provide staff with appropriate feedback.

We must also immediately review the actual class sizes in all schools. This information should be published on the state's website. Many times, the real number of students in each class is hidden behind budgeting ratios such as full-time-equivalents or FTEs. States should consider legislation that limits actual class size in all grades and subjects.

Working in partnership with teachers, state legislators should consider legislation that reduces the amount of required paperwork from teachers and school staff by removing what is redundant or unnecessary. States should investigate using technology to collect and analyze education data without burdening teachers or staff and by streamlining what tools are used.

And we must expand funding and access to high-quality professional advancement opportunities.

Finally, the teaching profession must provide sustainable and commensurate compensation and benefits.

When teachers and school staff ask for higher pay, we are often perceived as wanting to take money and resources away from students, as selfish, or suggest that we knew about the pay when we joined the profession. That narrative, however, does not accurately represent the situation that faces many teachers and school staff: Many are not paid a living wage; they must take on a second or even third job to afford necessities; they are burdened with the high costs of healthcare; and they have unimaginable student loan debt. It is true that most people do not enter education professions expecting to become rich, but they should have the expectation that they will not have to go into debt to take a job, that they will be able to start and support a family, and that they will be compensated for their education and for the job that they do.

To meet this challenge, we must create and pay for robust, speedy loan forgiveness programs—Last session, Speaker Rozzi introduced the PA Teach Scholarship Program to provide scholarships up to \$8,000 per year (for a maximum of \$32,000 over four years) to eligible students graduating from the Pennsylvania State System of Higher Education. This would be an excellent first step.

Pennsylvania should also codify a salary floor for teachers and set a living wage standard by county or metro area and use it to create a salary floor for every worker in their public schools and colleges.

## Conclusion

Our proposed solutions recognize the need to reverse and rewire many, many years of poor policy and decision-making that have led to this point, and reflect the realities faced by students and educators each day.

The adage “teachers’ working conditions are students’ learning conditions” has never been more apt. The effects of long-term neglect, never-ending austerity, misguided policy, lack of respect, concerns about health and safety, political attacks, combined with a once-in-a-lifetime pandemic have made schools a very tough place in which to work and learn. Large class sizes, inadequate time for planning and collaboration, obsessing over standardized tests, too few support staff and bus drivers, and obsolete or scarce learning materials not only affect teachers’ and school staff’s ability to do their jobs, but these things also negatively impact student learning.

Teachers experience twice as much stress as the general population.<sup>ix</sup> Although educators’ passion to serve their students remains strong, the deteriorating working conditions are taking a heavy toll.

We will not be able to recruit or retain educators and school staff in a broken system. The current situation is not sustainable. Things must change. Yes, in the short-term, but with the long-term in mind.

These solutions, grounded in the realities facing teachers and school staff, are not new—they are what educators and their unions have been seeking for decades. And now, we look forward to working on them with you.

Thank you again for inviting me to speak and I’m happy to answer any questions you may have.

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<sup>i</sup> <https://www.readingeagle.com/2022/11/14/how-to-boost-pennsylvanias-new-educator-pipeline-opinion/>

<sup>ii</sup> [https://learningpolicyinstitute.org/sites/default/files/body/Teacher\\_Shortages\\_Causes\\_Impacts\\_2018\\_MEMO.pdf](https://learningpolicyinstitute.org/sites/default/files/body/Teacher_Shortages_Causes_Impacts_2018_MEMO.pdf)

<sup>iii</sup> <https://www.ajc.com/blog/get-schooled/new-poll-majority-parents-don-want-their-kids-become-teachers/Gqdq0h8hbFmkmJpOhVch2J/#:~:text=The%202018%20PDK%20poll%20on,becoming%20a%20public%20school%20teacher>

<sup>iv</sup> <https://www.epi.org/publication/solving-k-12-staffing-shortages/>

<sup>v</sup> OECD. (2016). Overview: Policies and practices for successful schools: PISA 2015 Results (Volume II).

<sup>vi</sup> OECD, Equity and Quality in Education, 2012.

<sup>vii</sup> [https://www.aft.org/ae/winter2014-2015/kahlenberg\\_potter\\_sb](https://www.aft.org/ae/winter2014-2015/kahlenberg_potter_sb)

<sup>viii</sup> Ronfeldt, Loeb and Wyckoff, “How Teacher Turnover Harms Student Achievement,” AERJ, (2013).

<sup>ix</sup> [https://www.rand.org/pubs/research\\_reports/RRA1108-4.html](https://www.rand.org/pubs/research_reports/RRA1108-4.html)

**Pennsylvania House Education Committee Informational Hearing:**

**Teacher Shortage Crisis**

**Wednesday, 4/12/23**

**The Honorable Peter Schweyer, Chair**

**Speakers: Sarah Ulrich, Ed.D., Associate Dean for Teacher Education**

**Valerie Klein, Ph.D., Director of Teacher Education Programs**

**The School of Education**

**Drexel University**

Chairman Schweyer, members of the Pennsylvania House Education Committee, we would like to express our sincere appreciation for the opportunity to speak to you today about the teacher residency model, which we believe is *just one* strategy in response to the growing teacher shortages we are facing both in Pennsylvania and on the national level.

My name is Dr. Sarah Ulrich, and I am the Associate Dean for Teacher Education and Undergraduate Affairs in the School of Education at Drexel University. I am also joined today by my colleague, Dr. Valerie Klein, Drexel's Director of Teacher Education Programs. Drexel's nationally accredited School of Education provides multiple pathways to teacher certification for a variety of populations. The pathway we would like to focus on today is our work in teacher residencies, which we began at Drexel over a decade ago.

Teacher residencies are based on the premise that the best way to prepare new teachers is to give them extended exposure to effective teaching in schools, and *in service* to PK-12 students. The residency model, based on the medical model, consists of a rigorous, full year, classroom apprenticeship for emerging teachers, with a carefully aligned sequence of coursework, either through an institution of higher education or an alternative certification provider. Teacher residents learn alongside an effective, experienced mentor teacher in the district in which they will eventually work. Coursework is often tailored to the partnering district's philosophy and needs, in Drexel's case, the School District of Philadelphia – where residents learn the district's instructional initiatives and curriculum. Following the training or “residency year”, residencies typically require candidates to commit to teaching for a minimum of three years in the partnering district.

The Philadelphia Teacher Residency Program at Drexel University welcomed its first cohort of Residents in 2011. We recruited six residents and gave them a \$15k stipend. Since that time, Drexel University has established a formal partnership with the School District of Philadelphia (SDP) and has prepared over 138 new teachers through its residency model. As one of several partners of the School District of Philadelphia, Drexel's residents complete their residency year in Philadelphia schools, and the Philadelphia school district provides a “teacher resident” salary, health benefits, and a tuition scholarship to complete the certification. The Philadelphia Teacher Residency at Drexel currently prepares candidates in the STEM areas, Special Education and Middle years ELA. Most recently, the district and Drexel began a “grow your own” model where current paraprofessionals in the district serve as residents in a pathway that leads to PK-4 certification, and ultimately employment as a teacher of record in the district.

The residency model at Drexel uses a hybrid of online and face-to-face experiences (both credit-bearing and non-credit bearing) allowing the Teacher Residents to serve full-time in a school classroom while successfully completing Drexel course requirements and experiences leading to PA teacher certification. Our residents play an active role in the classroom alongside their mentor, while learning to lead students to learn rigorous content, and thus, maximizing their instructional experience and practice. In addition, they become a true member of the school's community, and experience the full lifecycle of an academic school year, hence preparing them to be ready for their own classroom and to be an active school community member on their first day of school the following year. This has been a successful model for our Teacher Residents for over ten years and we are now beginning to see that our former residents are serving successfully as Mentor Teachers themselves.

But beyond just the classroom-based practical experience, residencies combine several key constructs of high quality teacher preparation not seen in other models:

- First, **targeted recruitment and selection of residents** that is driven by a data-demonstrated need in the partner school districts—student achievement or human resource data that identifies achievement gaps, teacher shortages, or high turnover in high need schools, subjects, and grades. In our partnership with the School District of Philadelphia, we aligned our offerings with the district's specific, identified "hard to staff" areas: and recruit for those areas accordingly. Prospective residents must not only be eligible for admittance to the Graduate College of Drexel University. They must also participate in a "Selection Day" where they must offer a demonstration lesson and are interviewed, and in addition to describing their interests in becoming a teacher, they are also asked to articulate a commitment to teaching in Philadelphia public schools.
- Second is the **rigorous selection and support of effective teacher mentors**, including providing a mentor stipend. One of the most unique characteristics of residencies is the important value seen in experienced educators who are currently in schools. Mentor teachers are not merely seen as teachers who are offering their classrooms. Mentor teachers are seen as clinical educators. Mentors are selected because they have a strong reputation of being effective with students and have the skills to work with an adult learner—the resident. Even further, residencies provide these experienced mentors with *teacher leadership* opportunities, creating career ladders, reducing turnover and improving retention of excellent teachers in high need schools.
- Third, **intensive pre-service preparation is focused on student needs during the residents' yearlong, school-based preparation experience**. The residency is key to exposing new teachers to the typical school year, understanding the many, many roles and responsibilities of a full-time, in-service teacher. The residents learn to meet standards and expectations for student learning, they learn to forge personal relationships with students and families, and experiencing the year as it naturally unfolds. Residencies create a gradual release of responsibility that details how a



resident takes on increasing responsibility, to ultimately assuming all classroom responsibilities. Throughout the year, residents experience intensive coaching, as well as a repeated cycle of learning a skill, practicing, and then receiving actionable feedback and coaching before practicing again, thus improving their practice throughout the year.

- Fourth is the **strategic hiring and placement of graduates**. While data informs the selection of candidates up front, it is equally important to ensure that high need schools have access to effective residency graduates by guiding placement and hiring decisions. In Philadelphia, the Drexel residents commit to teaching for at least 3 years, resulting in reduced turnover in schools and an enhanced Pk-12 student experience.
- Fifth, **aligned induction supports -- The Philadelphia Teacher Residency program at Drexel** continues to support their graduates' during their first 3 years of teaching. One area where we see the potential for increased support is in the recognition of the importance of early career coaching, through State-provided new teacher supports such as induction, and supplements to ensure that residency graduates have access to ongoing professional development.

The movement toward teacher residencies is growing rapidly. It is a positive indicator that states see the importance of strong teacher preparation contributing to improved teaching and learning for students, and growing a *stronger, more diverse* educator workforce with a commitment to staying in the profession.

Furthermore, Impact data from our national network - the National Center for Teacher Residencies ( or NCTR) on the teacher residency movement suggests a powerful model. We would like to highlight some of that data here:

**First, teacher residency programs positively impact student outcomes.** One hundred percent of principals surveyed (throughout the 46 NCTR teacher residency programs) who hosted teacher residents and/or hired residency graduates agree that participation in a residency program positively impacts the school's culture, and 97% reported that participation in a residency program improved student achievement at their school.

**Teacher residency graduates have a higher retention rate.** Eighty to ninety percent of the graduates of teacher residency programs teach in the same school district they completed their residency year experience. The current partnership in the School District of Philadelphia, in which Drexel is a longstanding partner, currently has an *82% retention rate over the last seven years* (across all partners). The national average for teacher retention in large urban contexts like Philadelphia is closer to *50% retention rate over just 3 years*.

**Teacher residencies serve as a pipeline for teachers who reflect the diversity of the communities they serve.** Sixty-two percent of teacher residents nationally are persons of color. Thirty-seven percent of all residents are Black, as compared to 7% of the entire teaching field.

Twenty-nine percent of all residents are Hispanic or Latino/a, as compared to 9% of the entire teaching field.

Currently, the Philadelphia Teacher Residency at Drexel University averages from 34% to 42% candidates of color annually, which is slightly higher than the average of in-service teachers in Philadelphia and significantly higher than the state average in Pennsylvania. In fact, a recent study shows that more than 1/3 of Pennsylvania school districts have zero teachers of color.

**Mentor teachers** report overwhelmingly positive experiences working with teacher residents. NCTR data on the Philadelphia Teacher Residency Program at Drexel tells us that hosting a resident in the classroom is positively associated with a higher teacher effectiveness score for the host teacher. Moreover, our data shows that 100% of mentor teachers report that residents are prepared or very well prepared to be teachers of record.

### **Proposed Legislation:**

Legislation around the investment in teacher pathway programs as one strategy to address teacher shortages and “hard to staff” certification areas, has already been on the horizon in several other states including Minnesota, California and Delaware to name a few. We encourage the Pennsylvania Legislature to focus on legislation that prioritizes a collaboration between local education agencies (LEAs) and Institutions of Higher Education (IHEs) to construct clear, intentional pathways for teacher certification through a one-year residency path to certification. Critical considerations should include;

1. Support LEAs through funding temporary “resident” positions within the LEAs, and provide funding to supplement tuition expenses - to alleviate financial burden on the *pre-service* teachers (residents),
2. Prioritize programs that seek candidates from diverse backgrounds to expand the racial, ethnic, gender and linguistic diversity of the teaching population,
3. Require residents to continue to work in the district for a full three years after program completion to fulfill their District commitment,
4. Prioritize programs that include “grow your own”, which either support opportunities for districts and charters to hire their own graduates, or those that allow districts and charters to train and hire their non-instructional staff as teachers.
5. Use data to drive recruitment selection and preparation, experiences of candidates. Data systems should be in place to track program effectiveness and long-term state outcomes,
6. Place stronger, emphasis on identifying, selecting and developing experienced educators to serve as mentor teachers. Incentivize in-service teachers to serve in these critical roles.

**To close**, teacher residencies offer states and districts the opportunity to have a consistent, reliable pipeline of effective new teachers. When done in partnership with school districts, residencies provide new teacher candidates with a learning experience unlike any other that prepares them for successful teaching careers and positive academic outcomes for their students. Thank you.



# **Pennsylvania Association of School Administrators**

## **Testimony to the House Education Committee**

**Wednesday, April 12, 2023**

### **Educator Workforce Shortage**

**Sherri Smith**

**Executive Director, PASA**

Good afternoon Chairman Topper, Chairman Schweyer, and members of the House Education Committee. I am Dr. Sherri Smith, Executive Director of the Pennsylvania Association of School Administrators. Thank you for hosting this informational hearing and inviting PASA to speak on behalf of more than 950 PASA members including 456 who are sitting school superintendents and executive directors. We are at a critical level in our ability to meet the staffing needs in our schools, and I anticipate that unless we find creative ways to address these shortages, both in the short-term and the long-term, the situation will become even more desperate. I provide this testimony to not only emphasize the current workforce shortage crisis but to bring potential strategies to assist our schools to overcome these shortages both in the short-term and long-term.

The workforce shortage is affecting all our schools- rural, urban, and suburban. Both in retention as well as recruitment. It is affecting many certification areas, leaving many open positions in our schools filled with emergency-certified teachers. And with all things in education, it is affecting some of our schools more than others; typically, those with less financial stability to provide reasonable starting salaries and better working conditions, such as class sizes, student support services, etc.

One of our corrective actions must be retention efforts to maintain our current educators, therefore we also need to discuss the effect of our inability to hire the necessary support staff to effectively operate our schools. The lack of individuals in our support staff positions creates additional workloads and stress on our classroom teachers and other educators. Just to emphasize this issue, let me provide an example: a special education certified teacher, (that is if you have a fully certified teacher in the room) trying to manage an elementary intensive autistic support classroom with 6 high need students without any support of a classroom aide. This situation is not only beyond manageable but becomes a safety concern for both the children and the teacher. Burnout of these teachers is quick, with constant teacher turnover and lack of consistency for the students year to year. This is just one example among many

more and seen in most of our schools across the Commonwealth. In order to stabilize our schools, we need to hire the needed support staff to assist in the daily school operations.

You may ask why we can't fill these positions. Low pay, difficult positions, and many times due to constrained school budgets - shorter week work hours for support staff to keep them below certain thresholds. Here is one solution to consider: Right now, new part-time support staff who work 25 hours or less have the option of waiving membership with the Public School Employees' Retirement System (PSERS). That is, they choose not to participate and contribute to PSERS. Why not raise the work hours to something less than 40 hours? This will allow schools to hire support staff at a higher hourly rate and compete with other businesses by saving the cost of their PSERS payments. Even in my time as a Superintendent there were many part-time support staff that did not want to join the PSERS system as they had other retirement options, were not going to work long enough to get vested in the system, and were looking for employment in which they could bring home a bigger paycheck. Additionally, by increasing the cap above the 25 hours for this option, schools will be able to afford additional hours for employees without triggering PSERS. We have too many potential candidates for these positions who will not take the position based on low pay, fewer hours paid, and who have no need or will never be vested in the PSERS retirement system. This is a possible solution to this problem without increasing costs for schools.

There are several solutions that could provide more immediate relief to our schools by reviewing the PSERS System for Retirees and some changes in Certification.

### **PSERS System for Retirees**

Statewide schools should be able to hire past (and future-to-be) educator retirees. Schools and the state spend millions on teacher professional development over teacher careers and on a single day of retirement, we preclude and forbid their help and assistance to the local public school children of the Commonwealth. Yet, they can go work almost anywhere else except in the field which the taxpayers paid them to master. This same standard does not exist for our charter schools. According to PSERS regulations, charters can hire retirees with no recourse, restriction, or penalty for return to service. Even with some restrictions relieved in the past few years to allow retirees to assist our schools, retirees are scared to jeopardize their retirement and restrain from working in the local public schools. To allow our local public schools to compete fairly and to better target student needs, all public schools should be able to compete similarly and have the same access to the tens of thousands of our retired teacher pool. By removing these restrictions, we can also assist in hiring our retired K-12 educators in our higher education system to provide the preservice education needed for our future educators.

### **Certifications**

One of the areas that needs to be reviewed to provide more flexibility is our Teacher Certifications.

We should first look to borrow methods used by other education sectors for use in our local public schools. Here are a few thoughts:

1. In Higher Education, many of the courses are taught by Adjunct Professors; professionals who have areas of expertise that teach part-time to our college students. As we move to focus our high school programs on more career preparedness and earlier opportunities, adopt the concept of Adjunct Teachers, and community and business partners who teach a course for our students. Imagine the opportunities for our students to learn from a chemist, nurse, business manager, or lawyer... the opportunities are endless.
2. As per Chapter 49, Section 49.142. Career and Technical Instruction I, we provide opportunities for individuals holding an occupational competency credential (issued by the Department or an IHE approved by the Secretary) with a minimum of 4 years of full-time experience, and other requirements, to hold an Instructional 1 Certification and teach in our CTE classrooms. They can hold this Instructional 1 Certification for 8 years to complete the approved preparation programs which lead to their Instructional II Certification. Implementing this same model This would also be an opportunity for our other K-12 programs.
3. Charter Schools have a 75% rule for Teacher Certification. Can local public schools have the same flexibility? Again, opening the door in certain classrooms to professionals in our communities and local businesses.

Additionally, there are other opportunities within Certification that provide needed flexibility to our schools:

1. Collapse certain Certifications into one broader College Degree to create more flexibility. A good example of this is secondary certifications for the Sciences. We have separate certifications for biology, chemistry, earth and space science, environmental science, general science, middle-level science, physics, and agriculture. If we could certify our new Science teachers to teach in multiple areas, there would be more opportunities for students (particularly in our small districts that can only hire 1-2 science teachers) and provide flexibility in scheduling for our schools.
2. Expansion of 2-year preparation programs for other 4-year degree professionals.
3. Recruit our past teacher applicants who completed their 4-year preservice program and who did not originally find teaching positions, therefore went into other professions. Offer them a 1-year refresher preparation program and get them back into their chosen profession.

### **Paid Student Teacher Apprenticeships and Preparation Programs**

Students who are attending college to get their teacher certifications often have to maintain part-time or full-time work to survive. Certainly, looking at ways to support our future teachers by grants to assist in paying for their teaching degrees will be a great incentive. However, when these individuals are finished with their coursework and move to student teaching, many are not

able to maintain their paid jobs. Treating our student teachers as we do in other professions as a paid intern or apprenticeship will solve this problem for our future teachers. In a recent Educator Workforce Shortage panel, each of the teacher panelists indicated this paid apprenticeship as a priority.

Another area for investigation is to discuss alternatives to the Basic Skill Assessment, as well as Praxis Exams, for our teacher candidates. We know that not all students are great test takers; these exams often filter out future teachers based on having a few questions incorrect and falling below the set baseline. We cannot continue to lose these future teacher candidates due to test frustration. Why not offer an alternative method for these candidates to prove they are proficient in their knowledge and skills?

### **Recruitment Opportunities**

As we look to long-term solutions to ensure qualified, correctly certified teachers for our students, we must put increased efforts into the recruitment of future educators. This becomes the responsibility of our local schools across the Commonwealth, along with our state providing competitive salaries and benefits for our educators.

To recruit new teachers, teaching must be an appealing profession, one in which they feel valued as professionals and can make a difference in the lives of their students. Establishing healthy school environments for both staff and students creates the first step for our young people to want to enter the educator workforce. Secondly, school-specific or regional programs to “grow your own teachers” is what will make the greatest difference in getting our young people into the teaching profession and overcoming the shortages we are experiencing currently. Providing models and opportunities for our local schools or regions to develop or adopt these “grow your own” programs are needed. It will take time and effort, however, rebuilding the teacher pipeline to a healthy state is necessary to stabilize ongoing quality instruction for all our students.

We appreciate the House Education Committee providing PASSA the opportunity to provide these educator workforce recovery thoughts. We welcome further collaboration to engage in other creative thinking and discussion to strengthen our educator workforce across the Commonwealth.

April 12, 2023

Dear House Education Committee,

My name is Esteban Cabrera Durán and I am a dual language educator in the Hunting Park neighborhood of Philadelphia. I am a member of the Expanding and Diversifying the Teacher Pipeline Working Group for Teach Plus Pennsylvania and over the last several months, I have been able to collaborate with colleagues from all over the Commonwealth on this topic to bring teacher voice and action to this pressing issue.

The teacher shortage poses a direct threat to the academic success of the students in the state of Pennsylvania and consequently, the wellbeing of the Commonwealth. Over the last ten years, the number of initial teacher certificates issued by the state for graduates in Pennsylvania have declined by 67%<sup>1</sup>. With fewer and fewer teachers entering the profession and veteran teachers retiring every year, the capacity for schools to serve students is diminishing. Moreover, according to the National Center for Student Statistics, the elementary and secondary student population is increasing nationwide, with projections of 2 percent growth between 2016 and 2028. With student academic outcomes closely correlated to teacher quality<sup>2</sup>, students are less likely to receive necessary individualized attention with a diminishing teacher pool and an increasing student population. Moreover, active teachers are expected to take the brunt of this shortage, eliminating the time we have to plan for quality instruction to ensure that students are supervised, generating burnout as we are expected to do more with less time. We are stuck in a negative feedback cycle and decisive multi-pronged action is needed to address the teacher shortage.

Often, my students ask me if I like my job as a teacher. With exhaustion and stress painted on my face I always respond with an 'I do'. I love what I do. I love supporting my students in their personal and

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<sup>1</sup>Fuller, E. (2022). Pennsylvania Teacher Staffing Challenges

<sup>2</sup>Goldhaber, D. (2018). In Schools, Teacher Quality Matters Most



## MEMORANDUM

**TO:** Members, House Education Committee

**FROM:** Dr. Donna Wilson  
Vice Chancellor for Academic and Student Affairs, Chief Academic Officer

Dr. Kate Shirley Akers  
Associate Vice Chancellor and Chief Data Officer

**DATE:** April 10, 2023

**RE:** Addressing the Education Workforce Shortage

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PASSHE universities were created over a century ago to train teachers, and with 17,400 majors, education remains our second largest academic program. And from driving social mobility to serving as engines of workforce development, the power and promise of PASSHE shows daily in what our universities do for our future educators, their communities, and our commonwealth:

- 4,120 education students graduated from PASSHE universities in 2020-21.
- 48,800 PASSHE education graduates are working in Pennsylvania.
- 23% of PA's education workforce consists of PASSHE graduates.
- 25% of PA's teacher shortage can be filled by PASSHE by 2030.

Pennsylvania schools are facing a well-documented teacher shortage, with new teacher certifications declining by more than 67% since 2011. What's more, based on data collected from the Bureau of Labor Statistics, our occupational projections indicate Pennsylvania's need for educators is growing. By 2030, nearly 10,500 (or 6%) more educators will be needed. Adding to the urgency, a recent study found more teachers on emergency permits than newly certified teachers from teacher preparation programs.

PASSHE has a plan to support our future educators and help close the gap for this critical high-growth industry. In addition to requesting an inflationary increase of 3.8%, PASSHE's FY 23-24 budget request seeks a targeted investment of \$112 million in new funding to produce more graduates in six high-growth jobs, including education. PASSHE plans to use \$56.5 million to provide direct financial relief to education students, saving each an average of \$1,500. Pell-eligible (high-need) students could receive an additional \$5,000 on average, for a total savings of \$6,500 per year. *See High-Growth Program Area: Education.*

By strategically targeting investment in high-growth workforce areas, e.g., education, PASSHE would increase enrollment of education program students by 8%. Many of whom



may be the first in their family to go to college, work while learning, or raising children. Their education and distinct campus and residential experiences at a PASSHE university propel them into good sustaining jobs that create economic security for themselves and their families and provide a tremendous return on investment.

- 75% of PASSHE education graduates are working in PA five years after graduation.
  - 78% in 3 years after graduation
  - 75% in 5 years after graduation
  - 71% in 10 years after graduation
- PASSHE education program graduates working in the Education sector earn an average weekly wage that is 6% higher than the overall PA average for all workers in the Education sector.

PASSHE is ready to meet the demands of our workforce and graduate more students to educate our children. Together, with the General Assembly's continued investment, we can ensure Pennsylvanians of all ages can get an affordable degree or credential for jobs in the education field and fulfill community workforce needs. Thank you.

The following information highlights the positive impact our universities and our future educators are making in our commonwealth and beyond.

## **SUCCESS HIGHLIGHTS**

### **Commonwealth University-Bloomsburg**

#### *Coming Back to "Catch" Fellow Huskies*

Dr. Elizabeth Robison '88M was already an elementary level educator when she had her first experience with the career community at Commonwealth University-Bloomsburg. As a teacher at All Saints in Pottsville, Robison decided to pursue her M.Ed. at Bloomsburg. And even though she already had some classroom experience, she gained confidence and made multiple connections with her coursework as a graduate assistant with the reading clinic.

### **Cheyney University**

#### *Cheyney Alum Joyce Abbott – Table Talk From Fail To Prevail*

Cheyney University, once named the Cheyney Training School for Teachers and Cheyney State Teachers College, has an exceptional history of cultivating educators, many of which served the Greater Philadelphia area. Alumna Joyce Abbott, who graduated with a Master's in Education from Cheyney, is the inspiration behind the hit Emmy-winning TV show *Abbott Elementary*, which is written, produced, and starring her former sixth-grade student, Quinta Brunson. Abbott visited Cheyney last September for a Table Talk.

### **East Stroudsburg University**

#### *ESU Education Major Uses GI Bill to Bring Diversity to the Education Field*

Growing up, East Stroudsburg University student Jared Johnson never considered a career in teaching. Now, as an adult, he can't imagine doing anything else. Johnson, a native of Effort, Pa., now living in Saylorsburg, served five years in the United States Navy prior to enrolling in college. His experience as a trainer in the military laid the foundation for his civilian teaching career.

### **Indiana University of Pennsylvania**

#### *IUP Receives Funding from Pennsylvania Department of Education for Program to Address Teacher Shortage, Diversity in Teacher Workforce*

IUP has been selected to receive \$72,049 from the Pennsylvania Department of Education through its Teacher Prep2Practice grant program. IUP's funding will be used to design a culturally relevant teaching academy to diversify the teacher workforce and address the national teacher shortage. This work will take place in partnership with the Gateway School District in Monroeville, Allegheny County.

### **Kutztown University**

#### *Student Spotlight*

Mallory Schmidt, a native of Boyertown, Pa., graduated from Kutztown University in December 2022 with a degree in Early Education/Visual Impairment Education. Kutztown is one of six universities in the United States to offer a program to become a teacher of the visually impaired at the undergraduate level, which made it the perfect fit for Mallory.

### **Commonwealth University-Lock Haven**

#### *Lock Haven Sophomore Receives 'Making a Difference' and Susan Selleck Memorial Scholarships*

Cora Stackhouse, of Jersey Shore, is the recipient of Commonwealth University-Lock Haven's LHU Foundation "Making a Difference" Scholarship and Susan Selleck Memorial Scholarship for the 2022-23 school year. Stackhouse is a sophomore majoring in education with a dual emphasis in Pre-K to 4th grade and special education. Stackhouse said both scholarships have had a meaningful impact on her Haven experience.

### **Commonwealth University-Mansfield**

#### *Mansfield student teacher 'leaves mark' at Canton school*

McCauley Fox, a student at Commonwealth University-Mansfield, has "left her mark" in more ways than one while student teaching at Canton Elementary School. Fox spent many hours outside of the school day bringing color to the elementary playground.

### **Millersville University**

#### *Daniel Herr Earns Fourth Degree from MU*

Earning one degree is a major accomplishment. Earning four degrees is simply amazing. And that is exactly what Daniel Herr accomplished this month. Herr has been a student at Millersville University for many years. He first earned his Bachelor of Science in Education in 2006. From there, he earned a Master of Education in Mathematics in 2010. Herr then went on to earn his second Master of Education in Leadership for Teaching & Learning in 2017. And, on Dec. 11, he earned his third Master of Education, in Assessment, Curriculum & Teaching.

### **Pennsylvania Western University**

#### *PennWest initiates recruitment, training programs to address U.S. teacher shortage*

The National Education Association estimates the United States is facing a shortage of about 300,000 teachers and support staff. Job openings began to outnumber hires in 2017, and the gap has only widened throughout the COVID-19 pandemic. With more than 480 years of combined experience in preparing exceptional educators, it's no surprise that Pennsylvania Western University is doing its part to address this growing crisis.

### **Shippensburg University**

#### *Shippensburg University earns second grant to address teacher shortages in PA*

The Pennsylvania Department of Education awarded Shippensburg University a \$100,000 Prep2Practice grant that will support the recruitment and retention of middle school and high school students from underrepresented populations who wish to pursue a career in math education. According to the U.S. Department of Education, there is a shortage of secondary mathematics teachers across Pennsylvania, and secondary schools in the South Central region are no different.

### **Slippery Rock University**

#### *SRU student and local police chief answers the call to become a teacher*

First responders run to where help is needed most. Sometimes that means going where few others are willing to go, where danger lurks on the other side of the door. Police officers like Jeff Hollidge do this every time they serve an arrest warrant. The 35-year-old has spent his 12-year career in law enforcement running to danger. But now, as a student at Slippery Rock University, Hollidge is running to a different kind of uncertainty and need. He is changing his career and becoming a schoolteacher.

### **West Chester University**

*WCU helps answer the national teacher pipeline shortage by teaching schools how to "Grow Their Own"*

Fueled by a passion to help others learn and discover, teaching is one of the most inspirational careers one can take on. Post-pandemic, however, the profession has evolved dramatically, and those who have dedicated themselves to the life-transforming career understand that it will take a lot more than tempting teachers with apples to swell the ranks. Interestingly, a significant factor associated with the current national teacher shortage is decreased interest in the profession prompted by the perception of what it means to be a teacher. West Chester University's Dean of the College of Education and Social Work, Desha Williams, knows exactly what it will take to fill the pipeline once again— Partnering in Raising Inclusive, Zealous Educators (PRIZE).

## **RESOURCES**

### **PASSHE'S FY 23-24 Strategic Proposal to Graduate More Students in High-Growth Jobs and Industries**

[https://www.passhe.edu/fundpasshe4pa/Documents/PASSHE\\_BudgetRequest\\_2023-24\\_Overview.pdf](https://www.passhe.edu/fundpasshe4pa/Documents/PASSHE_BudgetRequest_2023-24_Overview.pdf)

### **High-Growth Program Area: Education**

[https://www.passhe.edu/fundpasshe4pa/Documents/PASSHE\\_BudgetRequest\\_2023-24\\_Education.pdf](https://www.passhe.edu/fundpasshe4pa/Documents/PASSHE_BudgetRequest_2023-24_Education.pdf)

### **Pennsylvania's Projected Job Growth**

[https://www.passhe.edu/fundpasshe4pa/Documents/PA-Projected-Job-Growth-Chart\\_2020-2030.pdf](https://www.passhe.edu/fundpasshe4pa/Documents/PA-Projected-Job-Growth-Chart_2020-2030.pdf)

### **Pennsylvania Job Growth by Region**

[https://www.passhe.edu/fundpasshe4pa/Documents/Occupational-Projections-by-Region\\_Growth.pdf](https://www.passhe.edu/fundpasshe4pa/Documents/Occupational-Projections-by-Region_Growth.pdf)

### **PASSHE'S Plan to Address Pennsylvania's Teacher Shortage**

<https://www.passhe.edu/News/Pages/Releases.aspx?q=2023-2-27-pa-teacher-shortage>



ADDRESSING THE WORKFORCE SHORTAGE:

# EDUCATION



**THE STATE SYSTEM IS SEEKING \$112 MILLION IN NEW FUNDING\***

\$56.5 million of that amount will be used for financial aid to reduce costs for students pursuing jobs in education

## The POWER of PASSHE:

- 48,800 PASSHE education graduates are working in PA
- 23% of PA's education workforce consists of PASSHE graduates
- 25% of PA's teacher shortage can be filled by PASSHE by 2030

### The Need:

Pennsylvania schools are facing a well-documented teacher shortage, with new teacher certifications declining by more than 67% since 2011. Adding to the urgency, a recent study found more teachers on emergency permits than newly certified teachers from teacher preparation programs.

### PASSHE Solution:

State System universities were created over a century ago to train teachers, and with 17,400 majors, education remains the second largest academic program. Now more than ever, the State System is ready to prepare and train more teachers/educators. The State System is seeking a targeted investment of \$112 million in new funding to produce more graduates in six high-growth jobs, including education. PASSHE plans to use \$56.5 million to provide direct financial relief to education students, saving each an average of \$1,500. High-need students could receive an additional \$5,000, for a total of \$6,500 per year.

\* PASSHE is also seeking \$573.5 million, an inflationary increase of \$21 million (or 3.8%), that combined with the \$112 million in new funding for targeted student support would enable the Board of Governors to consider freezing the basic in-state undergraduate tuition rate for an unprecedented fifth consecutive year.

## Education Innovation



There's a movement happening in teaching tomorrow's educators.

In recent years, school districts have begun eliminating classes like music, art, and physical education to save money or to improve performance in academic areas that are included in mandatory testing.

This caught the attention of Dr. Amy Shannonhouse, an associate professor in PennWest's College of Education, who wrote her doctoral dissertation on the academic benefits of physical activity.

"You never want to have young children sitting still," Shannonhouse said, citing additional research that reinforces her findings. "Classroom teachers should do brain breaks."

Brain breaks, as well as an emphasis on integrating fundamental motor skills into content areas, are an important part of the PennWest curriculum for education majors.

Combining movements with literacy has been shown to support brain and motor skill development. Motor skills enable children to be efficient movers, which leads to physical health and improved self-esteem.

## Navy Veteran Pursuing Dream of Teaching



Growing up, Jared Johnson never considered a career in teaching. Now, as an adult, he can't imagine doing anything else. Johnson, a native of Effort, Pa., now living in Saylorsburg, served five years in the Navy. His experience as a military trainer laid the foundation for a civilian teaching career.

"I found I really enjoyed it—I enjoyed listening for that 'aha' moment," he said. By working with children, "I was investing in my fellow servicemen's futures," he said.

Jared transferred to East Stroudsburg

University's education program after earning an associate degree from Northampton Community College. He says the university is very welcoming to veterans and the faculty is excited to see adult students enhance their education.

After graduation he plans to teach English to fourth- through eighth-grade students and be a positive, real-life role model for his students.

"I enjoy writing and the art of writing. I also love reading—I think it's a great escape," he explained. "Reading and writing are two fundamental skills that can help you achieve great things."

Jared will be a student teacher next fall and is on track to graduate in May 2024, when he will begin mentoring future generations of students and passing on his love for reading.

### Pennsylvania's High-Growth Jobs and Industries

EDUCATION	NURSING	SOCIAL SERVICES
BUSINESS	COMPUTER SCIENCE	ENGINEERING

[www.passhe.edu](http://www.passhe.edu)

**#FundPASSHE4PA**

## Testimony for Teacher Shortage

Good morning, Chairman Schweyer and members of the Committee. Thank you for asking me to speak this morning on the ever-important topic of teacher shortages in Pennsylvania.

I'm Arthur Steinberg, President of AFT Pennsylvania, the state chapter of the American Federation of Teachers, which represents about 36,000 teachers, paraprofessionals, school staff, higher education faculty and staff, and state workers across 64 local unions.

I'll start this morning by stating what should be obvious: there is no one single cause of the teacher and school staff shortage, so there is no one-size-fits-all solution. That said, I hope to shed some light on the obstacles we face as a profession, as a commonwealth, and as a nation as it pertains to education and provide some idea of legislative solutions that you and your colleagues may employ to help begin closing the gap.

Just last July, our national union, the American Federation of Teachers, published a report titled, "Here Today, Gone Tomorrow?: What America Must Do to Attract and Retain the Educators and School Staff Our Students Need" compiled by the union's Teacher and School Staff Shortage Task Force. As a union representing 1.7 million pre-K through 12th-grade teachers; paraprofessionals and other school-related personnel; higher education faculty and professional staff; federal, state and local government employees; and nurses and other healthcare professionals across the nation, our opinions on provision of education and the recruitment and retention of teachers and staff are based on firsthand knowledge.

To give you an idea of the scale of this crisis, even before the COVID-19 pandemic, nearly 300,000 teachers nationwide were leaving the profession every year. In an op-ed that Speaker Rozzi published in the Reading Eagle in November, he mentioned that the Pennsylvania Department of Education recorded a 66% drop in newly issued in-state teaching certificates over an 11-year stretch.<sup>1</sup> And per a June 2022 Rand Corporation survey, about one-third of teachers and principals reported that they were likely to leave their current job by the end of the 2021-22 school year, up from about one quarter of teachers and 15 percent of principals in January 2021.

So, what do teacher and staff shortages mean for our kids and our schools?

Every child deserves to have qualified, caring teachers and staff—people who are excited to work with them every day and dedicated to giving them a rich, joyful education. We also cannot have a strong democracy and a strong economy without an engaged, informed, well-educated citizenry. Public school staff and educators are literally the builders of democracy.

Plus, our students really need their teachers and school staff around them right now. They need the stability. Children and their families are struggling. The COVID-19 pandemic caused untold grief, trauma, and economic hardship to many Americans. And even without the pandemic, the ravages of gun violence, housing and food insecurity, and parents either forced to work several jobs to make ends meet or those who have been incarcerated, all take a toll on students. At a time when teachers and school staff are so vital in helping our children and communities recover and heal, untenable conditions are driving educators away.

The good news is that this problem is solvable.

Other countries have no problem retaining their teachers and few barriers to recruitment and retention. We can do this, too.

We must tackle shortages by changing what the AFT Teacher and School Staff Shortage Task Force refers to as the “Four-C’s”: the conditions, compensation, climate, and culture of education professions—things that can be changed, if there is a will to change them.

The educator shortage is a challenge in both recruitment and retention. Teacher preparation enrollment dropped 35 percent between 2009 and 2014.<sup>ii</sup> A 2018 PDK poll showed that for the first time in 50 years, a majority of Americans opposed their own children becoming public school teachers.<sup>iii</sup> Students see the struggles of educators; hear all the negative attacks; learn about the lack of political and financial support teachers and schools receive; and students see educators choose other professions where they know they might get more respect, higher pay, better working conditions and increased opportunities for career growth.

Along with teachers, support staff and other school positions are facing similar and harmful shortages. The COVID-19 pandemic exacerbated this challenge. Since the pandemic, school staff employment has fallen across positions, with a 2.6 percent decrease for teaching assistants, 6 percent for custodians, and 14.7 percent for bus drivers, leaving schools without the necessary staff in almost every position.<sup>iv</sup>

The most successful education systems in the world are able to recruit and retain qualified teachers because the teaching profession is greatly valued by their societies; teachers are fairly compensated; the teaching career is transparent and clearly structured; teachers are given many opportunities—and encouragement—to learn; and they receive regular feedback on their teaching, such as through mentoring programs organized by schools.<sup>v</sup> In the U.S., those who do enter the profession are hit immediately with the realities of low pay, low support, low resources, and low trust and respect. The passion many have for education often cannot overcome the austerity, struggles and stress.

We also face a shortage in the diversity of educators. The teaching workforce is overwhelmingly white and growing less representative of the students we teach, a majority of whom are now students of color. The opportunity to learn from different perspectives is valuable to all, and in particular students of color benefit from having teachers with shared backgrounds and culture. However, we do not do enough to attract and retain a diverse workforce of teachers and educators, even implementing policies and supporting a culture that prevents people from wanting to work in schools.

While the challenges that have led to the teacher and school staff shortage may impact the number of people entering or remaining in the profession, they have not removed the genuine desire many still have to work with and help children. We need to take a different approach to education to help students achieve and attract and retain educators and staff in the profession.

First, we need to change the way schools are funded. From the recent Commonwealth Court ruling, we know Pennsylvania’s public education system is unfairly funded—Judge Cohn Jubelirer’s opinion made very clear that education equity is nearly impossible in a locally funded education system. Even with the best staff, kids cannot learn when they are homeless, hungry or struggling with other family or non-school challenges. Family income is one of the most important factors affecting a child’s educational performance, and schools with the lowest rates of poverty tend to have the highest performers.<sup>vi</sup>

We cannot put a Band-Aid on the teacher and school staff shortage by cutting corners and lowering the bar for entry, as some of your colleagues have suggested. We must simultaneously raise entry standards, improve the way we treat workers, and improve recruitment and retention issues. To do this, we must give educators a larger voice in their work and allow them to have the oversight of their profession just like lawyers and doctors. Research indicates that when teachers have more control over their social and instructional roles, there is less turnover.<sup>vii</sup> And less teacher turnover is good for students.<sup>viii</sup>

During the pandemic, it became increasingly apparent just how vital teachers and school staff are to our nation's children. Education professionals shifted quickly to a new, emergency mode of schooling while taking on work beyond their traditional roles. The nation collectively saw educators as truly essential workers, with public outcries for higher pay and more respect. Yet when most of the country began to return to schooling (somewhat) as usual, the public outcries were gone. We cannot let this opportunity pass. Our children depend on us to take action that will improve the teaching and school staff professions. Every child deserves to have people in their schools who are well-trained, well-supported and excited to work with them every day. We need an overhaul in all aspects of the profession to ensure people want to enter and stay in school careers. The future of public education depends on it; the future of our democracy depends on it.

## **Solutions**

The first action we must take is to revitalize the educator and school staff pipeline.

We ought to also pass a "grow-your-own" bill to support partnerships among local education agency, university and district partners to develop and sustain residency and "grow-your-own" programs.

We must also examine why teachers of color leave the profession, and consider levers aimed at increasing equity. One such lever is the licensure exam. It has proven to be a barrier to entrance to the profession for many candidates of color. States should re-examine how content knowledge and pedagogical skills are demonstrated and measured. And we should invest in culturally responsive licensure assessments. Policymakers should also name diversity as a marker of teacher quality.

We must expand support and funding for mentorship programs. This includes administrative support and dedicated time for implementation. Administrators will ensure that mentors have the ongoing training they need to be successful, and that mentors/mentees are given the opportunities they need to make the relationship effective. Mentors should go through a strict application and interview process to determine if they are right for the job.

We also need to restructure schools to create positive working and learning conditions for all. One way for our legislature to do this is to support community schools and continue to support legislation that protects staff and students from discrimination and bullying.

Along with creating positive school cultures, restructuring schools also requires addressing the day-to-day functions of teachers and school staff workers. The AFT heard from countless members about how important it is for them to be trusted by policymakers, administrators and community members to make decisions relevant to their jobs and to their students; to be given the time in their workday to plan and prepare for their instruction or other duties; to collaborate with colleagues; and to meaningfully assess



their students' work and needs; to be given the tools and resources they need to do their jobs without being overburdened by paperwork or large class sizes; and to be given ongoing, job-embedded training that allows them continuous growth and opportunities to develop within their career or between roles.

These changes will also benefit students by ensuring that the people who work with them can exercise their professional judgment to make the best, most-informed decisions regarding teaching and learning.

To achieve a system that provides workers with time, tools, trust, and training to do their jobs, legislators must work to reduce or eliminate standardized assessments on top of those that are federally required; provide diagnostic assessment tools; and create sufficient supports for performance assessments so that the validity, reliability, and comparability requirements can be met under ESSA.

Additionally, we must require an evaluator certification to ensure every evaluator has high-quality, long-term training on how to properly evaluate evidence and provide staff with appropriate feedback.

We must also immediately review the actual class sizes in all schools. This information should be published on the state's website. Many times, the real number of students in each class is hidden behind budgeting ratios such as full-time-equivalents or FTEs. States should consider legislation that limits actual class size in all grades and subjects.

Working in partnership with teachers, state legislators should consider legislation that reduces the amount of required paperwork from teachers and school staff by removing what is redundant or unnecessary. States should investigate using technology to collect and analyze education data without burdening teachers or staff and by streamlining what tools are used.

And we must expand funding and access to high-quality professional advancement opportunities.

Finally, the teaching profession must provide sustainable and commensurate compensation and benefits.

When teachers and school staff ask for higher pay, we are often perceived as wanting to take money and resources away from students, as selfish, or suggest that we knew about the pay when we joined the profession. That narrative, however, does not accurately represent the situation that faces many teachers and school staff: Many are not paid a living wage; they must take on a second or even third job to afford necessities; they are burdened with the high costs of healthcare; and they have unimaginable student loan debt. It is true that most people do not enter education professions expecting to become rich, but they should have the expectation that they will not have to go into debt to take a job, that they will be able to start and support a family, and that they will be compensated for their education and for the job that they do.

To meet this challenge, we must create and pay for robust, speedy loan forgiveness programs—Last session, Speaker Rozzi introduced the PA Teach Scholarship Program to provide scholarships up to \$8,000 per year (for a maximum of \$32,000 over four years) to eligible students graduating from the Pennsylvania State System of Higher Education. This would be an excellent first step.

Pennsylvania should also codify a salary floor for teachers and set a living wage standard by county or metro area and use it to create a salary floor for every worker in their public schools and colleges.

## Conclusion

Our proposed solutions recognize the need to reverse and rewire many, many years of poor policy and decision-making that have led to this point, and reflect the realities faced by students and educators each day.

The adage “teachers’ working conditions are students’ learning conditions” has never been more apt. The effects of long-term neglect, never-ending austerity, misguided policy, lack of respect, concerns about health and safety, political attacks, combined with a once-in-a-lifetime pandemic have made schools a very tough place in which to work and learn. Large class sizes, inadequate time for planning and collaboration, obsessing over standardized tests, too few support staff and bus drivers, and obsolete or scarce learning materials not only affect teachers’ and school staff’s ability to do their jobs, but these things also negatively impact student learning.

Teachers experience twice as much stress as the general population.<sup>ix</sup> Although educators’ passion to serve their students remains strong, the deteriorating working conditions are taking a heavy toll.

We will not be able to recruit or retain educators and school staff in a broken system. The current situation is not sustainable. Things must change. Yes, in the short-term, but with the long-term in mind.

These solutions, grounded in the realities facing teachers and school staff, are not new—they are what educators and their unions have been seeking for decades. And now, we look forward to working on them with you.

Thank you again for inviting me to speak and I’m happy to answer any questions you may have.

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<sup>i</sup> <https://www.readingeagle.com/2022/11/14/how-to-boost-pennsylvanias-new-educator-pipeline-opinion/>

<sup>ii</sup> [https://learningpolicyinstitute.org/sites/default/files/body/Teacher\\_Shortages\\_Causes\\_Impacts\\_2018\\_MEMO.pdf](https://learningpolicyinstitute.org/sites/default/files/body/Teacher_Shortages_Causes_Impacts_2018_MEMO.pdf)

<sup>iii</sup> <https://www.ajc.com/blog/get-schooled/new-poll-majority-parents-don-want-their-kids-become-teachers/GdqQ0h8hbFmkmJpOhVch2J/#:~:text=The%202018%20PDK%20poll%20on,becoming%20a%20public%20school%20teacher>

<sup>iv</sup> <https://www.epi.org/publication/solving-k-12-staffing-shortages/>

<sup>v</sup> OECD. (2016). Overview: Policies and practices for successful schools: PISA 2015 Results (Volume II).

<sup>vi</sup> OECD, Equity and Quality in Education, 2012.

<sup>vii</sup> [https://www.aft.org/ae/winter2014-2015/kahlenberg\\_potter\\_sb](https://www.aft.org/ae/winter2014-2015/kahlenberg_potter_sb)

<sup>viii</sup> Ronfeldt, Loeb and Wyckoff, “How Teacher Turnover Harms Student Achievement,” AERJ, (2013).

<sup>ix</sup> [https://www.rand.org/pubs/research\\_reports/RRA1108-4.html](https://www.rand.org/pubs/research_reports/RRA1108-4.html)