IN THE COMMONWEALTH COURT OF PENNSYLVANIA

No. 587 MD 2014

WILLIAM PENN SCHOOL DISTRICT, *et. al.*,
Petitioners,

v.

THE PENNSYLVANIA DEPARTMENT OF EDUCATION, *et. al.*,
Respondents.

BRIEF OF *AMICUS CURIAE* THE PENNSYLVANIA STATE EDUCATION ASSOCIATION ("PSEA"), IN SUPPORT OF THE PETITIONERS

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I. Statement Of Interest of Amicus Curiae[1]

The Pennsylvania State Education Association ("PSEA") files this brief in support of the position of Petitioners, William Penn School District, *et al*. PSEA is a nonprofit corporation and labor organization representing over 177,000 individual members, most of who are employees of the public school districts of the Commonwealth. PSEA has over 1,000 affiliated local associations, almost all of which are certified as exclusive-bargaining representatives of the employees of public school districts of the Commonwealth. PSEA and its local associations share the primary goals of: (i) protecting and advancing the welfare of our members; and (ii) promoting the educational welfare of Pennsylvanians by delivering the best possible educational programs and most effective learning environments to all students in the Commonwealth. In pursuit of those goals, PSEA has participated as amicus curiae before this Honorable Court and before other state and federal courts in cases that present important issues impacting our members and the students they serve. PSEA has developed a reputation for comprehensive and expert research in the fields of education and labor law.

[1] No party to this case has paid, in whole or part, for the preparation of this brief.

II. Summary Of Position of Amicus Curiae, PSEA

PSEA knows public school educators and the school districts for which they work. PSEA tracks, compiles, and analyzes the comprehensive statistics on educators and their school districts that are gathered and published by the Department of Education ("PDE"). As shown in the charts and analysis that follow, PDE's own data firmly establishes that the students attending low wealth school districts have fewer human, in-person educational resources available to them than students in districts with more financial resources.

- There are fewer teachers.
- There are far fewer educational support professionals available to assist students (guidance counsellors, social workers, nurses, psychologists and instructional aides).
- More teachers are teaching outside their certificated areas of expertise on emergency permits.
- Teachers are paid less, resulting in higher teacher turnover and a less experienced faculty.

PSEA believes the quality and quantity of human educational resources available to teach and support students is the most significant determiner of educational outcomes. The data shows a significant disparity in the human educational resources available to the students of low-wealth school districts, whether viewed in absolute terms or in comparison to wealthier districts. Unfortunately, and despite the truly heroic efforts of the staff in low-wealth school

districts, the data also confirms that an outsized percentage of the students in low wealth districts continue to perform below average on state approved and mandated assessment tools, significantly worse than their peers who are fortunate enough to attend higher wealth districts.

Until low-wealth school districts can afford to provide the human educational resources that are routinely available in wealthier districts, the General Assembly has failed its constitutional duty to maintain and support a thorough and efficient system of public education in this Commonwealth.

III. An analysis of Department of Education data establishes that students attending low-income school districts have fewer human educational resources available to them than those in wealthier districts.[2]

A. Identifying low-income school districts.

PDE collects data on educators and educational support professionals for each school district. PSEA's analysis is based on PDE's data for each school district for each school year from 2016 to 2020. To analyze the impact of school district income on available human educational resources, we divided the 500 public school districts into five quintiles, based on a five-year average of the Median Household Income of the residents as calculated by the United States Census Bureau for each year from 2016 to 2020.

[2] The methodology and sources of data used to produce the tables, figures, and conclusions set forth in this Amicus brief are contained in the attached Appendix.

First quintile: Median Household Income greater than $72,466

Second quintile: Median Household Income between $60,936 and $72,466

Third quintile: Median Household Income between $53,250 and $61,936

Fourth quintile: Median Household Income between $46,893 and $53,250

Fifth quintile: Median Household Income less than $46,893.

The focus of PSEA's analysis is on the human educational resources available in the 5th quintile, the lowest income school districts. However, it can readily be seen that districts that fall into the 4th (next lowest) quintile are also significantly challenged in their ability to meet the educational needs of their students.

B. Low-income school districts have fewer financial resources available for education.

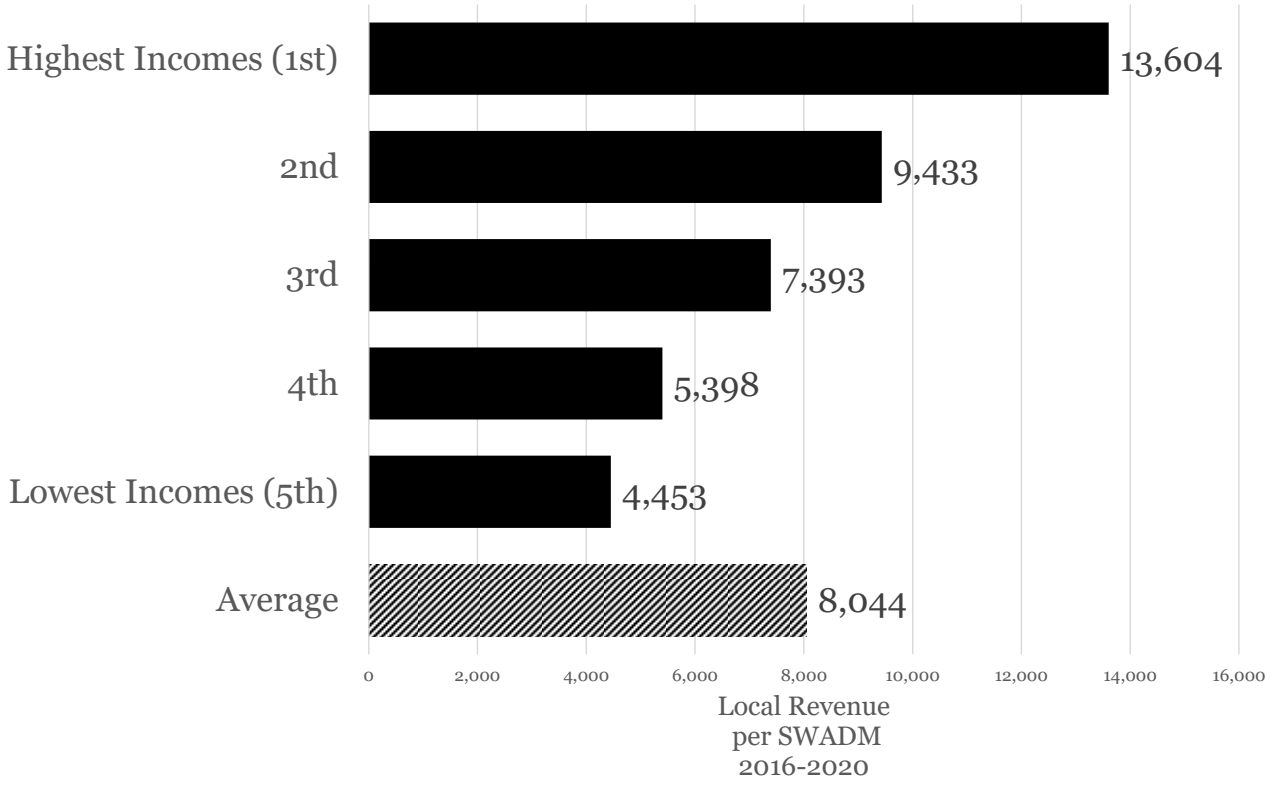
School districts have three principal sources of funds: (i) local tax revenue (real estate and local income taxes); (ii) state subsidy; and (iii) federal assistance.[3] Not surprisingly, there is a substantial difference between the household income and wealth of districts in the 1st (wealthiest) quintile and those in the 5th (poorest) quintile. As a result, districts in the 1st quintile have significantly more dollars of local revenue per student available to fund their public schools. Using PDE figures, PSEA calculated the average local revenue per *weighted student* over the

[3] Federal assistance is by far the smallest component of district revenue, is outside the scope of this litigation, and has not been considered in our analysis.

period from 2016 to 2020. To arrive at the number of students per district, PSEA used PDE's Student Weighted Average Daily Membership ("SWADM") count, which is the same count used in the current funding formula. This metric begins with each school district's Average Daily Membership ("ADM)", which is then adjusted up by PDE to reflect higher need in districts with specific characteristics that increase the cost of education services, such as a high concentration of students in poverty, English Language Learners, charter enrollment, and a relatively low population density. PSEA used PDE's weighted student count ("SWADM") throughout our analysis because it better reflects the constraints faced by districts in terms of available resources than an analysis that relies solely on enrollment or pupil counts, which implicitly assumes every child has the same needs in terms of the assistance required to achieve the proficiency in the Commonwealth's academic standards, without regard to their district of residence.

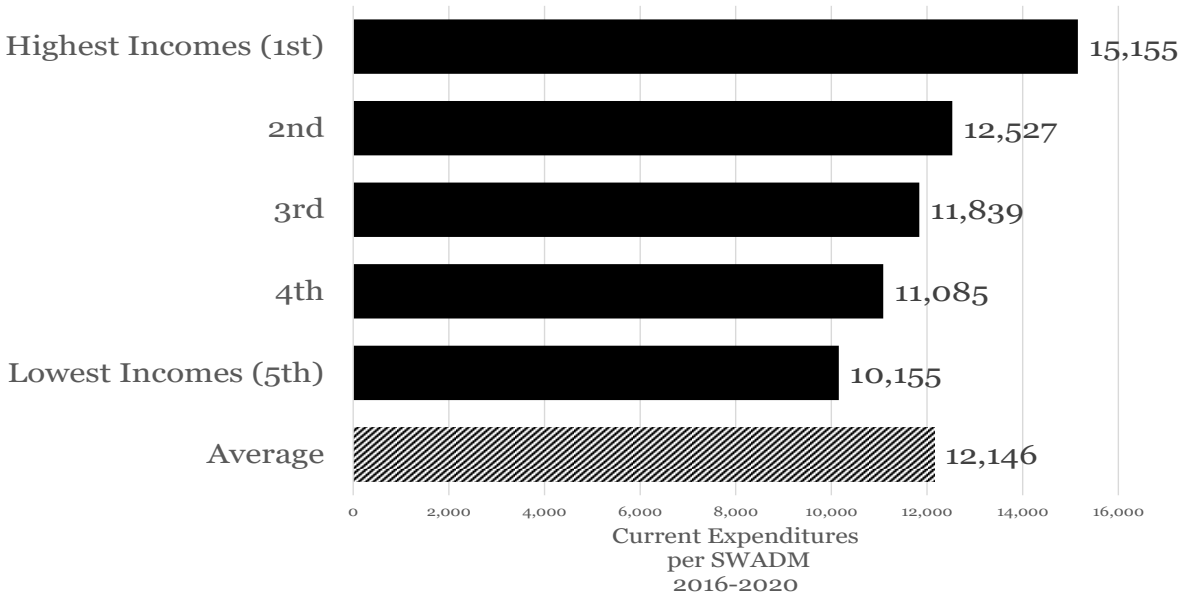
As shown below, the lowest income school districts (5th quintile) have $3,591 less local revenue per weighted student than the average, and *$9,150 less* than the highest income (1st quintile) districts.

Figure 1.
The lower household incomes are in a district, the less local revenue a district has available.



The addition of state subsidies to local budgets increases the funds available for education. If the state funding formula were perfectly aligned and funded, state subsidy money would bridge that gap and equalize the resources available for education from the wealthiest to the poorest school districts. It does not. Indeed, it does not even come close. As Figure 2 details, the lowest income districts remain far behind. Their current expenditure per weighted student of $10,155 is still $1,991 less than the statewide average of $12,146, and $5,000 (33%) per student behind the expenditure of highest income districts in the Commonwealth.

Figure 2.
The lower household incomes are in a district, the less expenditures in total a district is able to make.

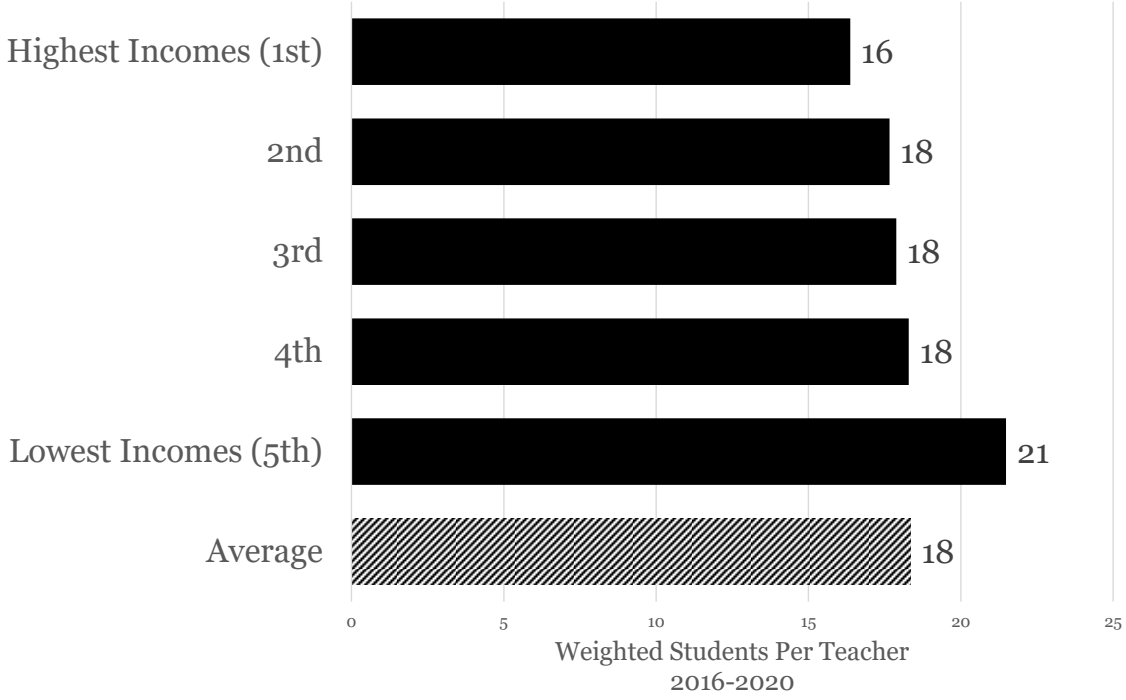


C. Low-income districts do not provide sufficient human educational resources to their students.

The disparity in resources available to low-income school districts is a fact. The question becomes: does it matter? Does the funding gap translate into less educational opportunity and achievement for the children who live there? Unfortunately, the answer is a resounding "yes." Funding does matter. Our analysis establishes that, by virtually every recognized metric, the human educational resources available to the children living in the Commonwealth's poorest school districts not only falls far below what is available elsewhere but fails to provide those children with the thorough and efficient education they have been promised.

1. **There are fewer teachers available.**

Figure 3.
The lower household incomes are in a district, the more weighted students there are per teacher.



It is a simple yardstick – but still a material one. In the lowest income districts, there are 21.5 weighted students for every teacher; that's 15% more students per teacher than the statewide average (18.3) and 31% higher than what prevails in the highest income school districts (16). The more students each teacher has, the less individualized time and attention each student can receive. Yes, these are averages, and it is a rough measure. But student/teacher ratio still matters – especially when taken in conjunction with the other "human educational resource" challenges low-income, low-wealth school districts face.

2. There are far fewer non-classroom professionals and education support professionals available to students in low-income school districts.

Of all the statistics reviewed, the analysis of non-classroom professionals and instructional aides available across school districts, divided by wealth, provides perhaps the starkest evidence of disparity. Counselors, social workers, nurses, psychologists, and instructional aides are as important to the delivery of a thorough and efficient 21st Century education as classroom teachers. Indeed, changes in the education of children with special needs, coupled with the increasing socialization demands placed on public schools, have heightened the necessity for non-classroom professionals and para-professionals. This is particularly true in low-income school districts. Many of their students arrive at school with more challenging home situations, and larger learning gaps, requiring more resources than typical of students arriving at school in higher income communities. The following table shows that those who need the most have access to the least. (Note: the table shows the number of weighted *students* per non-classroom professional and instructional aide, not the number of support professionals.)

Table 1.

The lower household incomes are in a district, the more weighted students there are for each social worker, nurse, psychologist and instructional aide.

Income Quintile	*Weighted Students Per Educational Support Professional*[1]						
	Counselors	*Social Workers*	*Nurses*	*Psychologists*	*Instructional Aides*	*Total*	*Difference From Average*
Highest Incomes (1st)	395	4,168	1,030	1,487	79	59	(18.9)
2nd	476	6,180	1,132	1,636	123	79	0.5
3rd	512	3,459	1,089	1,700	116	80	2.2
4th	530	2,952	1,060	1,840	113	79	1.3
Lowest Incomes (5th)	675	5,692	1,256	2,095	170	93	14.6
Average	518	4,768	1,113	1,724	120	78	

[1] Total Student Weighted ADM in 2016-2020

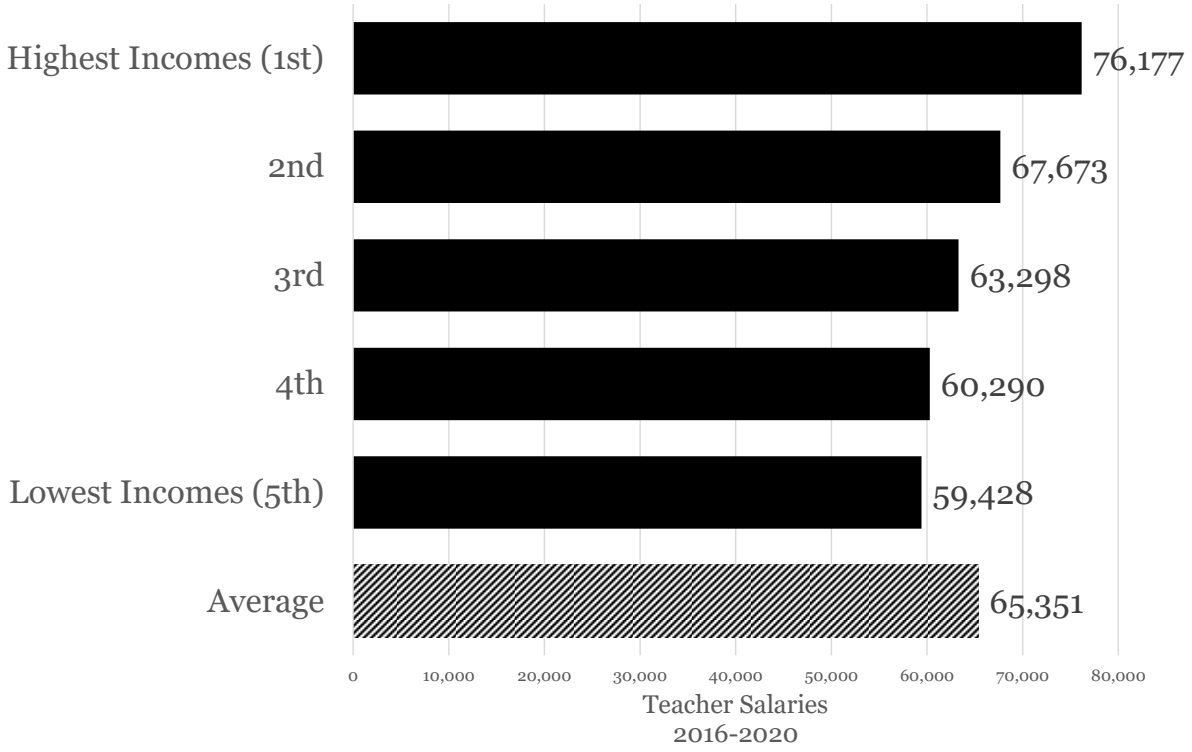
Source. PSEA Research based on Department of Education data

When budgets are built, and staff is slashed to meet those budgets, these critically important (but non-mandated) personnel are the first to go. Consider the numbers of weighted students per instructional aide in the lowest income (5th quintile) districts. The numbers jump up dramatically from the student load in all other districts. How can anyone justify 170 students per instructional aide in low-income districts when there are 79 students per aide in high income districts? Even the average in 2nd, 3rd, and 4th quintiles, at 117, is significantly above the 170 students per aide in poor districts. Would anyone suggest that the need for counsellors, social workers, nurses, or psychologists is *less* in the Commonwealth's poorest school districts?

3. Salaries and benefits are reduced in low-income school districts, making it harder for those districts to attract and retain professional staff.

Personnel costs – salaries and benefits – are the largest single budget item in every school district. It comes as no surprise that average teacher salaries are highest in high wealth districts and lowest in low wealth districts. As reflected below, the differences are substantial. Teacher salaries in the poorest districts average 10% lower than the state-wide average and $16,749 or 22% lower than the average salary in the highest income districts.

Figure 4.
The lower household incomes are in a district, the lower teacher salaries are.



This salary disparity has far-reaching consequences. Low-income school districts are not all clumped together in a single region of the Commonwealth; nor do they exist in isolation. Many of them are immediately contiguous to or surrounded by far wealthier districts. The data confirms that poor districts, which pay lower salaries, have difficulty recruiting and retaining qualified teachers and other professional staff. They are forced to employ far more teachers on emergency permits because they cannot attract properly certified professionals. They have higher teacher turnover, and their work force is, on balance, less experienced.

4. Far more teachers in low-income school districts are working on emergency permits, teaching outside their certificated areas of expertise.

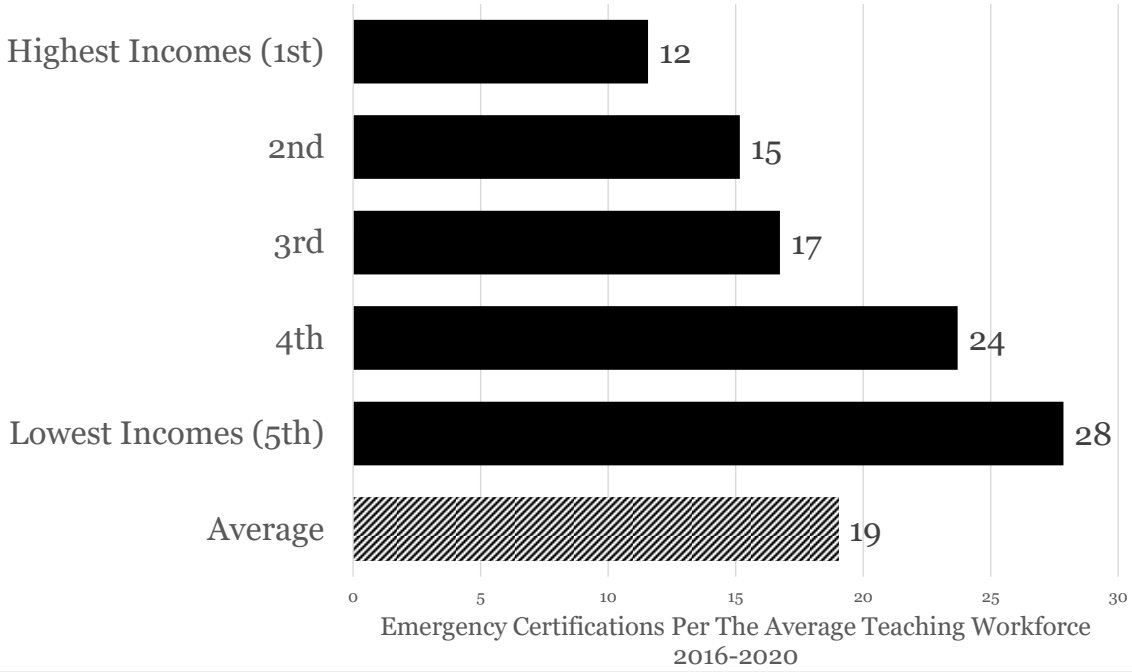
One demonstrable consequence of the funding gap faced by low-income districts is their inability to recruit and retain qualified and properly certified education professionals. *Teacher Certification* is the hallmark of a professional educator in this Commonwealth. Teachers cannot teach without a valid certificate, issued by the Secretary of Education, in their precise area of expertise. The education requirements for each subject area certificate are as specific as they are extensive. School superintendents are required to staff their schools with "properly certificated" professionals . . . unless they cannot find them. When that happens, superintendents must secure an "emergency permit" from PDE – permitting them

to hire individuals *who are not properly certified*, to teach the subjects assigned. According to PDE, emergency permits will only be issued "upon the request of an employing public school entity *when a position has been advertised and no fully qualified and properly certificated applicant is available*."[4]

PDE tracks the number of emergency permits issued to each school district. Since there are an average of 209 teachers across all the school districts in the Commonwealth, the PDE data is reported as the number of emergency permits per 209 teachers, "the average teacher workforce." As reflected below, the poorest school districts secure emergency permits for teachers and substitutes at a far higher rate than districts overall. First quintile, high-income districts secure an average of 12 emergency permits per 209 teachers (5.7% of staff). Fifth quintile, low-income districts require 28 emergency permits per 209 teachers (13.3% of staff). As a consequence, all too often the students in low-income districts are instructed by staff who, while well-meaning, are not actually qualified to teach the subjects they are teaching.

[4] Emergency Permits. Available online at: https://www.education.pa.gov/Educators/Certification/PAEducators/Pages/Emergency-Permits.aspx

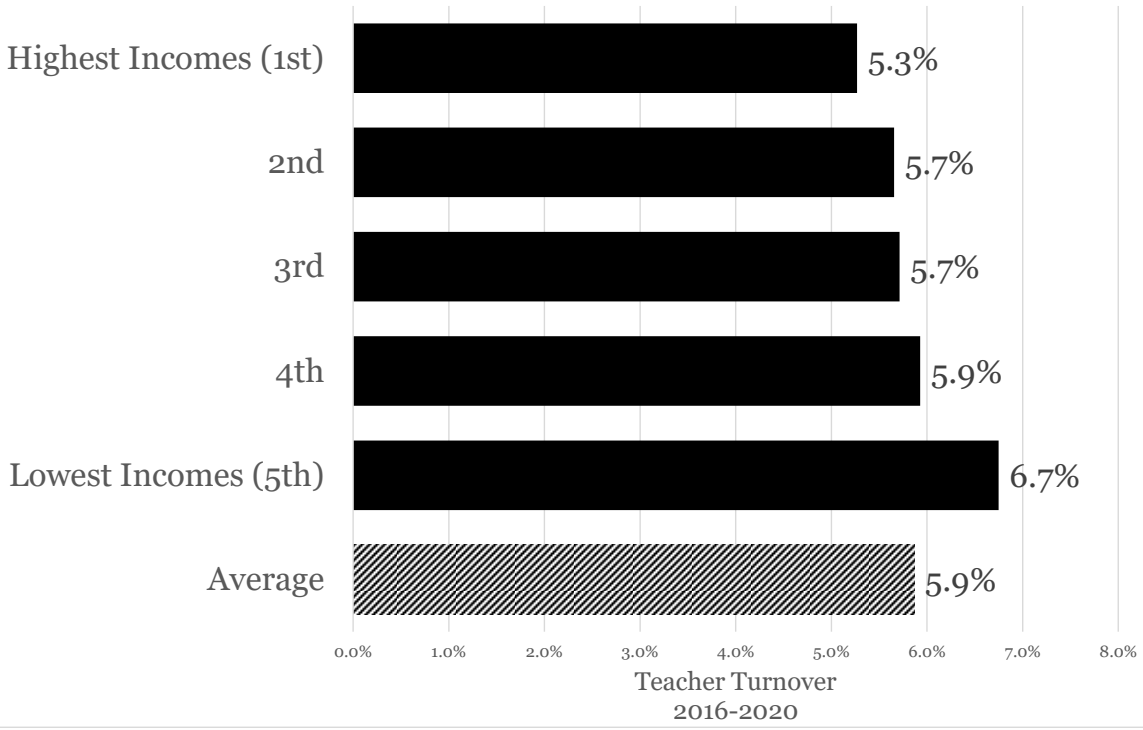
Figure 5.
The lower household incomes are in a district, the more emergency certifications for teachers and substitutes.
Emergency permits issued by the Department of Education to districts because they are unable to attract and retain fully qualified and properly certificated teachers or substitutes



5. Teacher turnover is higher in low-income districts and teacher experience is lower.

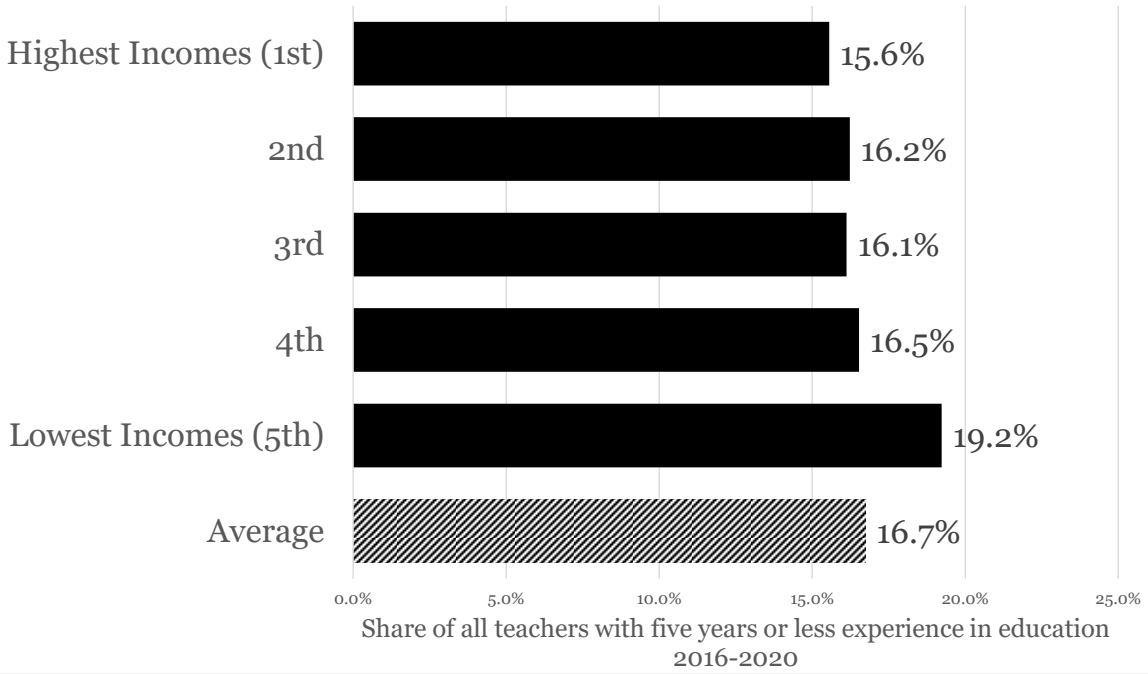
A stable faculty is an advantage and an asset. Teachers get to know the students and their families. Rules are understood and respect follows. The curriculum and the community become shared experiences. As in every other metric, the data confirms that there is a higher rate of teacher turnover in low-income districts when compared to their higher income neighbors.

Figure 6.
The lower household incomes are in a district, the higher the rate of turnover in teaching staff.



Hand in hand with higher teacher turnover in low-income school districts is a corresponding reduction in the teaching experience of the staff. Only 15.6% of the teachers in 1st quintile, high wealth districts have five years of experience or less. This number increases to 19.2% with five years' experience or less in 5th quintile, low-income districts. The 5th quintile's significant increase above the statewide average of 16.5% is also notable.

Figure 7.
The lower household incomes are in a district, the higher the share of inexperienced teachers in a district.

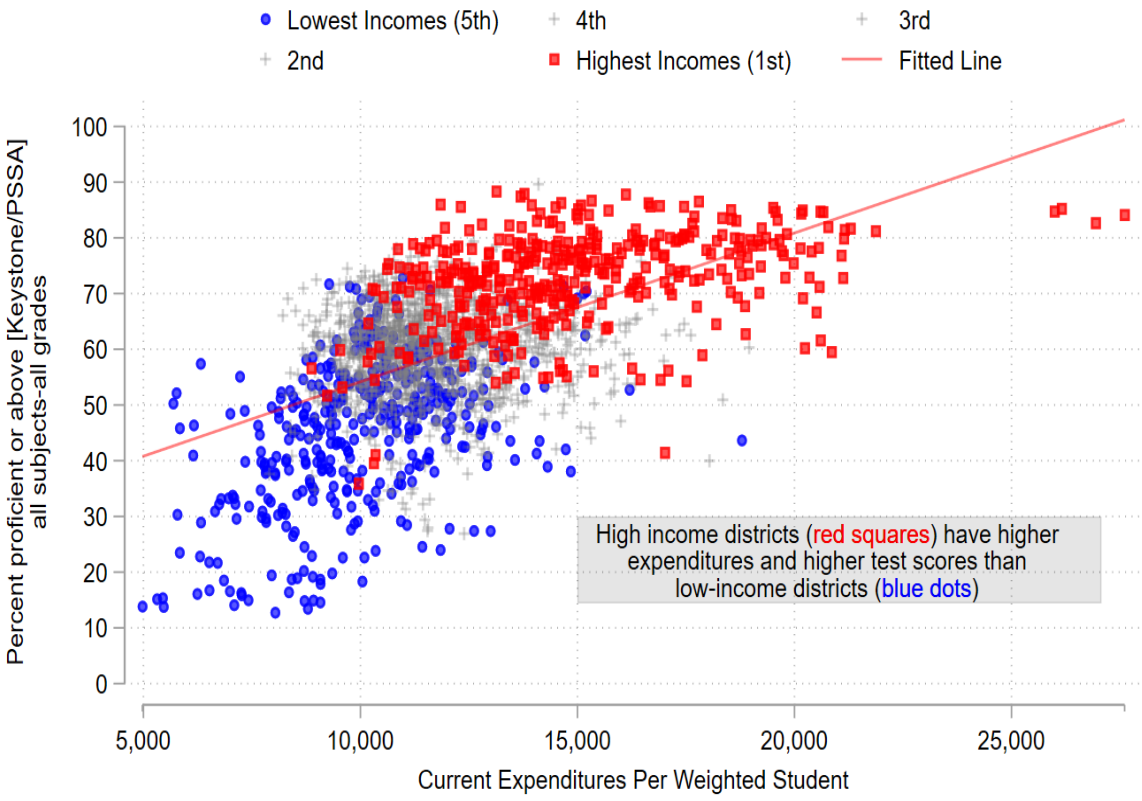


IV. The inadequacy of human educational resources in low-income districts results in a disproportionate number of their students failing to achieve their educational potential.

The deficiency in human educational resources available to the poorest districts caused by inadequate funding has dramatic consequences for students. The differences in spending, driven by differences in wealth and income, exacerbated by inadequate state subsidies, are reflected directly in student performance on the Commonwealth's standardized tests. When current spending for all districts per weighted student is plotted against the percentage of students scoring proficient or better on the Commonwealth's standardized tests, there is an

association between funding, reflected by district expenditures on their own students and student performance. First quintile, high-wealth districts, with an average expenditure of $15,155 per weighted student, see the vast majority of their students score proficient or above on the Keystone/PSSA exams. On the other hand, fifth quintile, poorest districts, with expenditures of $10,155 per student ($5000 or 33% less per student), see a sad majority of their students score below proficient.

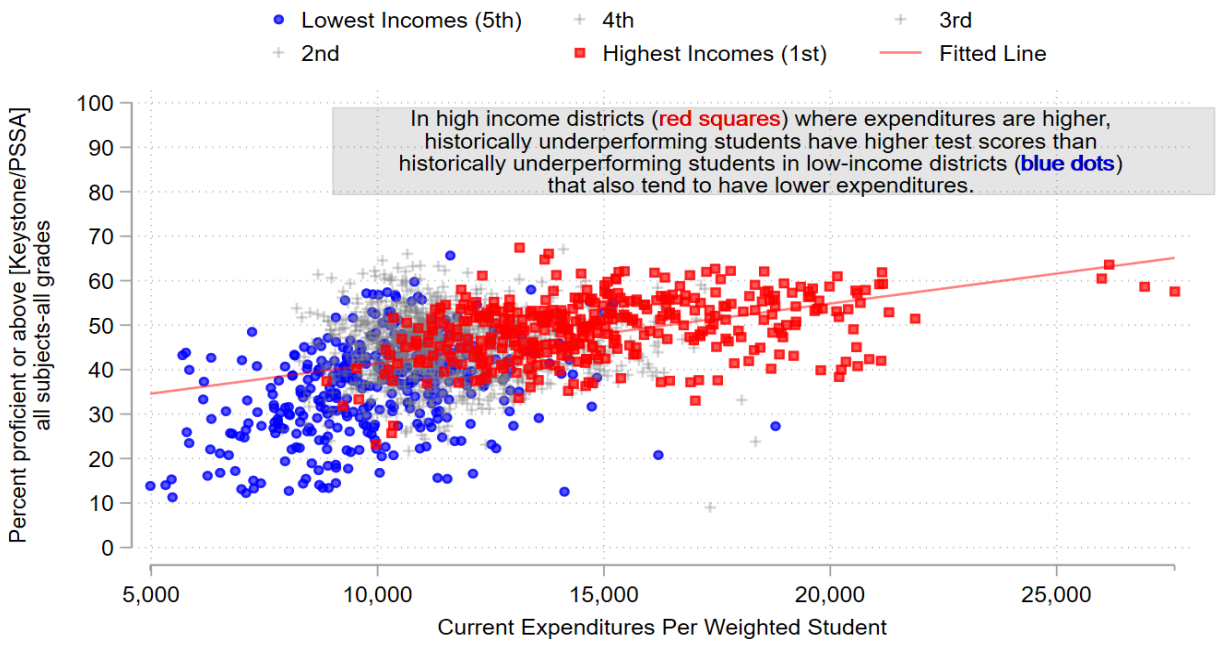
Figure 8: Relationship of Spending/Weighted Student (x-axis) & Income to Test Scores (y-axis)
2016 to 2019



Skeptics may argue that poverty and the high number of English language learners and students with disabilities in low wealth districts – and not a lack of

resources – are the true causes of the disparate student outcomes shown above. If this was true, poor students, students with disabilities, and English language learners would perform roughly the same in high and low wealth districts. The chart below isolates what PDE calls "historically underperforming students" – that is students in poverty, are English language learners, or are disabled – across all school districts and demonstrates that resources do, in fact, matter.[5]

Figure 9: Relationship of Spending/Weighted Student (x-axis) & Income to Test Scores (y-axis) for Historically Underperforming Students 2016 to 2019



[5] PDE defines "Historically Underperforming Students" as:

> a non-duplicated count of students with disabilities, economically disadvantaged students, and English Language Learners enrolled for a full academic year taking the PSSA/Keystone Exams. If a student is in more than one of the individual groups (e.g., special education and English Language Learner), s/he is only included in the Historically Underperforming Student group one time – a non- duplicated count. This group is not a cohort but rather students currently in the building meeting the definition during the reported year.

Roughly half (49.4%) of poor, disabled, and English language-learning students in 1st quintile districts score proficient on Commonwealth standardized tests. Conversely, approximately one-in-three (36.3%) students in 5th quintile districts score proficient on the same tests. Furthermore, all districts where 80% or more of poor, disabled, and English language learning students score under the proficient level are in the 5th quintile. In short, while resources are not the sole determiner of educational success, poor, disabled, and English-learning students have a far better chance of succeeding if they are lucky enough to reside in a high-wealth district that are capable of expending significant human educational resources to achieving student success.

The current funding system does not provide either a thorough or an efficient system of public education to the students, families, or communities that are currently ill-served by the lowest income, lowest wealth school districts. It is not their fault – but it is their burden. The data demonstrates that the poorest districts in the Commonwealth cannot afford, and do not provide the human educational resources necessary for student success. They fall significantly below and behind state-wide averages in every key metric, and woefully far behind the 1st quintile richest districts. Low-income, low-wealth school districts need more properly certified teachers, who are better paid, and who will make a career in their districts. They need more non-classroom professionals and more support

professional staff. When those resources become available, students will learn, scores will rise, and graduation rates will increase.

The framers of the Constitution, speaking for the People, directed the General Assembly to provide a thorough and efficient system of public education to the People of the Commonwealth. In an era of widening wealth and income gaps, the General Assembly has demonstrably failed. This Court should grant the relief requested by the Petitioners and direct the General Assembly to fulfill its Constitutional duty.

Respectfully Submitted,

Dated: May 16, 2022

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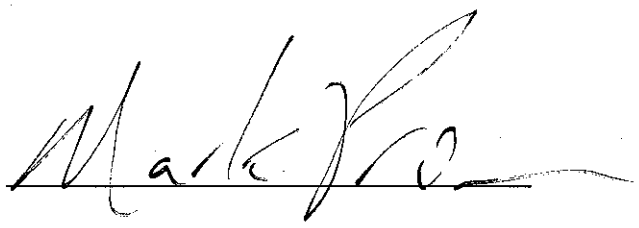
AFFIDAVIT OF MARK PRICE

I, Mark Price, hereby verify that I was personally responsible for assembling the data and performing the calculations set forth in the foregoing PSEA Amicus Curiae Brief and that the information presented is true and correct to the best of my knowledge, information, and belief. I understand that false statements herein are made subject to the penalties of 18 Pa. C. S. § 4904, relating to unsworn falsification to authorities.

Dated: May 16, 2022



Mark Price

CERTIFICATE OF COMPLIANCE

I certify that this filing complies with the provisions of the *Case Records Public Access Policy of the Unified Judicial System of* that require filing confidential information and documents differently than non-confidential information and documents.

Submitted by: Killian & Gephart, LLP

Signature: */s/ Thomas W. Scott*
Name: Thomas W. Scott, Esquire

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CERTIFICATE OF WORD COUNT

The undersigned, hereby certifies that the Brief of Amicus Curiae the Pennsylvania State Education Association ("PSEA"), In Support of The Petitioners does not exceed the 7000 word limit established in Rule 531(b)(3) of the Rules of Appellate Procedure. In submitting this certification, counsel has relied upon the word count feature of the word processing system used to prepare the Brief. According to the word processing system used to prepare the Brief, the actual number of words in the Brief and Appendix is 4,446 words.

Date: May 16, 2022

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APPENDIX TO PSEA AMICUS CURAE BRIEF
IDENTIFYING METHODS AND SOURCES FOR DATA COMPILATIONS

Section III. A: Identifying low-income school districts by Median Household Income

To analyze the impact of wealth on available human educational resources, PSEA divided 499 public school districts into five quintiles with 100 districts in each quintile save for the highest quintile which has 99 districts. Note this analysis excludes Bryn Athyn, a small school district which sends its students to other Pennsylvania school districts. Our wealth measure, Median Household Income is a well-known proxy for school district wealth. Median Household Income is estimated by the United States Census Bureau and made available at the school district level in five-year averages. Our period of analysis is 2016 to 2020 school year, therefore our median household income figure for 2016 is a five-year average of incomes reported to the Census from 2012 to 2016 and for 2020 a five-year average from 2016-2020. As incomes run from low to high, normally the first quintile would be the lowest incomes and the fifth quintile would be the highest incomes. For ease comparison we have relabeled the quintiles to match the presentation of low and high wealth that was used at trial, where low-wealth districts were labeled as being in the first quintile and high wealth districts in the fifth quintile. We are also conservatively defining quintiles with equal numbers of

districts, whereas the Petitioners relied upon equal numbers of students in defining quintiles. These technical differences don't fundamentally alter our conclusions where they overlap with those of the Petitioners. We obtained the Pennsylvania values from the from the United States Census Bureau's website, where median household income is available in Table S1901 with the geography limited to unified Pennsylvania school districts https://data.census.gov/cedsci/all/tables?q=S1901. Table A1 presents the income cutoffs used each year to determine which quintiles a district was sorted into based upon its median household income.

Table A1.

Median Household Income at the 20th, 40th, 60th and 80th percentile (the cutoffs for the quintiles)

year	20th Percentile	40th Percentile	60th Percentile	80th Percentile
2016	43,872	49,567	56,795	67,479
2017	45,299	51,645	59,237	69,751
2018	47,199	53,280	61,442	72,587
2019	48,684	55,000	62,855	75,214
2020	49,413	56,756	64,351	77,301
2016-2020	**46,893**	**53,250**	**60,936**	**72,466**

Source. PSEA Research based on Department of Education data

Section III.B: Figure 1:

An analysis of available revenue per weighted student average daily membership

Local revenue: Summarized in Figure 1 is local revenue from the general fund (10), function code 6000 or revenue from local sources. School district financial data reported which is collected by the Commonwealth from individual school districts on form PDE-2057 can be obtained from ftp://copaftp.state.pa.us/pub/PDE_PUBLIC/PDE_AFR/AFRData.

Total Student Weighted ADM (SWADM): Our measure of students used throughout our analysis is Total Student Weighted Average Daily Membership or SWADM made available on the Pennsylvania Department of Education's website each year from 2016 to 2020 as part of the Basic Education Funding data files https://www.education.pa.gov/Teachers%20-%20Administrators/School%20Finances/Finances/Historical%20Files/Pages/default.aspx. From 2016 to 2020 SWADM is in Colum Y of the Student-Weighting tab for each funding year.

Section III. B: Figure 2:

Lower household income districts spend less per student.

Current Expenditures

Summarized in Figure 2 are current expenditures per SWADM. Current expenditures are total expenditures minus (1) expenditures on facilities acquisition,

construction and improvement services; (2) other expenditures and financing uses. We also subtract tuition payments to other school districts, charter schools and nonpublic schools from current expenditures to focus on expenditures districts make on their own students. Tuition payments are from the general fund (10), function code 1000 and object code 560 which can be found in the school district financial data collected on form PDE-2057 by the Pennsylvania Department of Education at ftp://copaftp.state.pa.us/pub/PDE_PUBLIC/PDE_AFR/AFRData.

The Pennsylvania Department of Education makes available data on current expenditures on its website at https://www.education.pa.gov/Teachers%20-%20Administrators/School%20Finances/Finances/AFR%20Data%20Summary/Pages/AFR-Data-Summary-Level.aspx. Current expenditures are available in Column H of the excel the Department presents for each year from 2016 to 2020.

Section III. C. 1 -- Figure 3:

Lower household income school districts have more weighted students per teacher.

Summarized in Figure 3 are SWADMs divided by counts of classroom teachers which were obtained from the Department of Education's Professional Personnel Individual Staff which can be found online for each year from 2016 to 2020 at

https://www.education.pa.gov/DataAndReporting/ProfSupPers/Pages/ProfPersIndStaff.aspx

Section III. C. 2 – Table 1

Lower household income school districts have more weighted students per instructional aide and non-classroom professional (counsellors, social workers, psychologists, and nurses).

Education Support Professionals

Summarized in Table 1 are SWADMs divided by the number of education support professionals which were obtained from the Department of Education's Professional Personnel Individual Staff which can be found online for each year from 2016 to 2020 at https://www.education.pa.gov/DataAndReporting/ProfSupPers/Pages/ProfPersIndStaff.aspx. We sum by school district (AUN) and year the variable FTE (Full Time Equivalent) for each observation with an assignment code (assigncd) equal to 1836/1837 for Counselors, 1850/9940 for social workers, 1880/1875 for Psychologists and 1890 for nurses. This gives a count within each district of the number of Full-Time Equivalent staff in each of these categories.

Instructional Aides are collected separately by the Department of Education in the Support Staff Summary files for the years 2016 to 2020 which can be found online at https://www.education.pa.gov/DataAndReporting/ProfSupPers/Pages/SupportStaff

Sum.aspx. Our counts of Instructional Aides treated part-time aides as the equivalent of .5 of full-time teachers aides.

Section III. C. 3 – Figure 4:

Lower household income school districts have lower teacher salaries.

Summarized in Figure 4 are average teacher salaries. Individual teacher salaries are made available by the Pennsylvania Department of Education in its Professional Personnel Individual Staff which can be found online for each year from 2016 to 2020 at https://www.education.pa.gov/DataAndReporting/ProfSupPers/Pages/ProfPersIndStaff.aspx. We calculate district average salaries after limiting our sample to teachers employed full-time.

Section III. C. 4: – Figure 5:

Lower household income school districts require more emergency permitted teachers.

Summarized in Figure 5 are Emergency Certifications Per The Average Teaching Workforce for the period from 2016 to 2020. The averaging teaching workforce was calculated using the Teacher Count data summarized in Figure 1. Emergency Certifications were collected by the Pennsylvania Department of Education's Office of Postsecondary and Higher Education (OPHE), Bureau of School Leadership and Teacher Quality (BSLTQ) compiles the Educator

Preparation and Certification Report which is available online https://www.education.pa.gov/DataAndReporting/Pages/Act82.aspx. The tab "Emergency Permits by District" has the total number of all Emergency Certification by district for each year from 2016 to 2020.

Section III. C. 5: – Figure 6:

Lower household income school districts experience higher teacher turnover

Summarized in Figure 6 is teacher turnover by income quintile. District level turnover rates were calculated based on analysis of the Department of Education's Professional Personnel Individual Staff file which can be found online for each year from 2016 to 2020 at https://www.education.pa.gov/DataAndReporting/ProfSupPers/Pages/ProfPersIndStaff.aspx. To estimate teacher turnover, we limited our sample to the full-time teachers as identified by the Department of Education; we further limited our sample of teachers to their primary assignment. For each year from 2016 to 2020 we would match payroll to the next years payroll and count the individuals that were present in the first year but not present in the subsequent year. For example, we would merge by AUN and Publicid the payroll for a district in 2016 to the payroll in 2017 for that same district. A count was obtained of teachers who were present in 2016 but absent in 2017, this count was then divided by the total payroll

in 2016 to estimate a percent turnover. This procedure was repeated district by district for each year from 2016 to 2020.

Section III. C. 5: – Figure 7:

Lower household income school districts have a less experienced staff

Summarized in Figure 7 is teacher inexperience by income quintile. Inexperienced teachers were defined as those with five years or less of experience in education. Years of experience in education is available in the Department of Education's Professional Personnel Individual Staff file which can be found online for each year from 2016 to 2020 at https://www.education.pa.gov/DataAndReporting/ProfSupPers/Pages/ProfPersIndStaff.aspx. Our sample of was limited to classroom teachers.

Section IV. – Figure 8 and 9

The relationship between spending per weighted student and scores on state mandated achievement tests.

Summarized in Figure 8 is the relationship between current expenditures (as defined in Figure 2) and the percentage of students scoring proficient or better on the Pennsylvania System of School Assessment (PSSA) and the Keystone Exams. Figure 9 summarizes the same relationship as Figure 8 but for a subset of students the Department of Education defines as Historically Underperforming. Historically Underperforming students are students with disabilities, economically disadvantaged students, and English Language Learners. The percent of students

scoring proficient or better and the number of students scored is available at the school level from the Commonwealth of Pennsylvania for both exams. We aggregate those school level scores to district level scores across all grades and subject areas to a single district level figure on the percent of students scoring proficient or better in each year from 2016 to 2019 (there were no standardized tests taken in 2020 due to COVID-19). The Pennsylvania Department of Education makes PSSA data available on its website at https://www.education.pa.gov/DataAndReporting/Assessments/Pages/PSSA-Results.aspx and the Keystone Exam scores at https://www.education.pa.gov/DataAndReporting/Assessments/Pages/Keystone-Exams-Results.aspx

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing Brief of Amicus Curiae has on this date been served upon the all the parties listed in the UJS Portal Web System, PACFile eService, pursuant to Pa.R.A.P. 121.

Dated: May 16, 2022

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