The INSTITUTE for Public Policy & Economic Development at Wilkes University

A partnership among Keystone College, King's College, Lackawanna College, Luzerne County Community College, Marywood University, Misericordia University, Penn State Wilkes-Barre, The Commonwealth Medical College, University of Scranton & Wilkes University

THE IMPACT OF POVERTY ON A CHILD'S ACADEMIC PERFORMANCE

5/12/2016

Education & Workforce Development Task Force

The purpose of the following study is to explain the impact of socioeconomic factors on developing communication skills, learning, academic performance, and school dropouts. By examining the relationship between socioeconomic status (SES) and school performance, one can see ways that the education community can respond to the challenges presented by regional poverty.

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INTRODUCTION

The purpose of the following study is to explain the impact of socioeconomic factors on developing communication skills, learning, academic performance, and school drop outs. By examining the relationship between socioeconomic status (SES) and school performance, one can see ways that schools and postsecondary institutions can respond to the challenges presented by regional poverty. This study includes case studies and a set of programs or strategies that can be used by school administrators and educators to develop or improve teaching and learning, particularly in high-poverty areas.

A literature review was prepared in order to understand prior research that explored the relationship between socioeconomic factors and academic success. The literature review includes works that studied the nature of the relationship between poverty/income and student performance in school, the root causes of poor school performance among lower-income socioeconomic groups, and evaluated strategies that have attempted to address socioeconomic disparities in education.

This study also examines data from each public school district in Lackawanna and Luzerne Counties to see how the data from Northeastern Pennsylvania corresponds to existing scholarly research and to find relationships between school performance measures and socioeconomic measures that may shed light on how socioeconomic status impact education in Northeastern Pennsylvania.

RESEARCH METHODS

In order to make a valid analysis on the relationship between socioeconomic conditions and academic success, data was gathered from the Census Bureau's American Community Survey 5-year estimates (2009 – 2013) and the PA Federal School Reporting Data for each school district located within the two counties (2012-2013 school year). The socioeconomic factors gathered for each school district were median family income, percentage of families below the poverty line, percentage of children in single parent households, educational attainment, language spoken in the household, and median persons per room in housing units in the district (a measure of housing overcrowding). Family income and family poverty were used as opposed to household income and poverty; families are a subset of households that include at least two people related by blood, marriage, or adoption. The vast majority of children live in family households. The academic outcome measurements were attendance rate, 4-year graduation rate, percentage of students proficient or higher in math, and percentage of students proficient or higher in reading. In order to determine which socioeconomic factors are most highly correlated with educational outcomes, linear regression analysis was used and a table of R-squared values was compiled.

LITERATURE REVIEW

While most people are aware that there is a large gap between academic success in families with low socioeconomic status and families with high socioeconomic status (SES), there is vigorous debate over why such a gap exists. Despite numerous attempts made by public policymakers to relieve some of the educational challenges on low income families, the number of poverty-stricken students that still do poorly

in school or eventually drop out is significant. Studies show that, while the financial constraints of students coming from families of low SES have partial responsibility for low academic performance, there are also psychological and physical factors that contribute to the high rate of academic failure amongst low SES students.

A study on the influence of socioeconomic and educational background of parents on children's education in Nigeria shows that the psychology of low SES has a huge impact on children.[1] According to Kainuwa and Yusuf's article, low parental income can have a large effect on the psychological state of the child, which in turn can lead to issues such as low concentration, frustration, sickness, emotional disability, and low perception.[2] These issues usually lead to poor academic performance and drop outs. An Australian research study done by Gillian Considine and Gianni Zappalà that studies the various factors that influence the educational performance of low SES students suggests that the children's psyche have a large impact on their academics.[3] The research conducted by Considine and Zappalà shows that "family, individual, and contextual factors" such as gender, absences, ethnicity, parental education, housing type, and age all have a significant effect on how well a student performs in school.[4] These studies, which align with the findings of most research on the subject, present a new way of looking at how to deal with socioeconomic disparity in education. Rather than solely focusing on the impact of financial constraints on academic achievement, scholars now agree that the psychological impact of low SES needs to be taken into account as well.

FAMILY, INDIVIDUAL, AND CONTEXTUAL FACTORS …ALL HAVE A SIGNIFICANT EFFECT ON HOW WELL A STUDENT PERFORMS IN SCHOOL

Some studies on the effect of SES on education have shown that SES (defined by income, maternal background, housing, etc.) actually has a very low influence on education compared to the influence of family characteristics. For example, in Karl White's article on the relationship between SES and educational performance, he explains that family characteristics such as home atmosphere have shown to have a much larger role in poor academics than SES characteristics.[5] For example, low-income households tend to create an environment with less exposure to vocabulary than upper class families. In upper class households, children hear about 15 million more words than those in low income homes. As a result, only 58 percent of poor children start school ready to learn, according to a 2001 study. Further, students living in poverty also deal with noisier homes on average, as well as stress from living in violent neighborhoods, lack of good nutrition, isolation due to hours spent home alone, or overall hunger. Each of these things create a stressful environment in poor students' personal lives, which then transfer to poor concentration academically. [6] Still, many of these characteristics are correlated with socioeconomic status. According to White's research, SES as it is commonly defined through income and educational attainment directly accounts for less than five percent of the discrepancy in students' educational success.[7] These findings are interesting because they complicate the commonly held belief that most of the issues with socioeconomic disparity in schools are due to the financial factors that are commonly associated with SES. Not only are family characteristics shown to play a much larger role, but the typical definition of SES has shown to have no significant impact on academic achievement. As interesting as these findings are, however, there are still many other studies that show the opposite.

In contrast to White's study, there are many scholars that argue that maternal education is a significant indicator of academic achievement, while household characteristics play a much smaller role. Research conducted by Dimitra Hartas, which studied the effect of home learning and SES on children's education, shows that families of low SES and high SES reported a roughly equal amount of time spent on home learning, except for reading.[8] This finding helps to refute the argument that students of low SES families have poor academic performance due to a low frequency of home learning. This is a significant result, because it is clear that an increase in parental involvement in home learning is not enough to combat the effects of low SES on academic performance. However, the study goes on to show that it isn't so much about the quantity of home learning, but the quality. Hartas concludes that maternal education is one of the most significant influences on a child's language/literacy and social/emotional development, which is largely because of the psychological factors involved.[9] This conclusion is in agreement with previous studies on the subject, which place special importance on the psychology of low SES.

Caldas and Bankston, in a 1997 study from Louisiana, found that the socioeconomic status of a school as a whole affects individual student performance, and that diversity and the presence of high-achieving students can help support academic achievement.[10]

Another research study supported an entirely different take on the role of low SES in academic achievement. Rather than studying the home environment of low SES families, there are many research studies that look at the adequacy of the school systems, the teachers, and the role of the neighborhood on the children's psyche. In a book called *Pygmalion in the Classroom*, the authors (Robert Rosenthal and Lenore Jacobson) demonstrate how low teacher expectancy negatively effects student performance, particularly students of low SES. Rosenthal and Jacobson concluded that, "good schools can make a difference, and that resources should be directed at enhancing school organization, resources, and teachers' abilities and attitudes."[11] Further, in postsecondary education, high expectations by faculty and staff have been identified as a key factor student engagement. Specifically, the national Survey of Entering Student Engagement reports that, "When entering

Relevant Studies

The influence of various factors on academic performance has commonly been researched. Topic areas include:

- Educational background of parents
- Gender
- Absences
- Ethnicity
- Housing type
- Residential relocation
- Age
- Stress
- Socioeconomic factors
    - Maternal background
    - Poverty level

This research focuses on pinpointing socioeconomic factors that influence academic performance within schools in Lackawanna and Luzerne Counties.

students perceive clear, high expectations from college faculty and staff, they are more likely to understand what it takes to be successful and adopt behaviors that lead to achievement." So, instead of directing educational policy primarily on the students, policies that improve school systems overall would be extremely beneficial for low SES students.

A recent paper from the Annie E. Casey foundation on early life reading proficiency and later academic outcomes countenances much of the literature on psychic distress' negative effects on outcomes. Their list of possible sources of this stress include many of the complexities associated with residential movement (job loss, changing of social locale, and the like).[19] The effects of student transience are well documented, most plainly in 2003 paper which equated 1 movement to 32 days absent in its ability to disrupt patterns and relationships both social and academic (using test scores).[20] These results imply the dose response supported by the work from the Urban institute (2009), such that additional movements have increasingly negative effects.[18]

Kai Shafft (2005) acknowledged the effect of residential movement on academic and social outcomes and proceeded to provide context using interviews and school records of unexpected entrances and exits in a New York community. The population which experienced unexpected occurrences showed a disproportionate share of students qualifying for either special education or reduced price/free lunch program. In light of this Shafft makes a point to demarcate between the movements of higher SES families which he describes as investment in their own human capital (moving for jobs or school district), and movements of resource constrained families which he describes as often unforeseen, high frequency, short-distance, and deepening the social instability that caused the movement. Showing that resource constrained communities have higher student turnover, the study shows that most moved to a different municipality in the same county (40 percent), followed by inter-municipal movements (27). The study identified push factors as the most prominent reasons for moving. Housing led with over 60 percent of causes, specifically; eviction, moving in with family or friends, and leaving temporary housing. The second leading cause was social push, which included breakups, domestic violence, and drug use in the household.

This suggests the school is positioned to operate as an articulation point for connection to services in redressing housing insecurity and homelessness for students and their families. Faculty and staff should be aware of transience as well as the resources available to combat it.[17]

There are several policies that have been implemented in numerous U.S. states that address socioeconomic disparities in education, but their effectiveness is still under scrutiny and debate. According to the Southern Education Foundation's study of poverty and education in the South, despite the number of policies that the U.S. has to alleviate the stresses of low income families, these policies have had a very small impact on poverty-stricken families.[12] The report states that in 2007-2008, federal funding programs (i.e. reduced or free lunch) designed to assist students from low SES families were only able to reduce the disparity by 759 dollars.[13] And, while these programs are not to be dismissed as entirely useless, they can be designed to have a much greater impact on low SES families. However, as can be seen by previous articles mentioned, policies that provide assistance in the financial sense may not be as useful as policies that address the non-financial aspects of low school performance, such as family, housing, psychological, and community factors.

As the literature shows, globally, the cause of poor academic outcomes in low SES schools is complex and multifaceted. At first glance, it may seem that conventional socioeconomic measures such as income and poverty drive the disparity between schools. However, financial constraints cannot be seen as the sole factor. There seems to be a general consensus in the academic field that, while families of high SES have an advantage because of their access to multitudes of resources, it is not the lack of consumer materials that have the biggest impact on children's academic success. Rather, there are a critical psychological and environmental components involved with living in a low SES environment that has a significant effect on educational achievement. In particular, educational attainment seems to be a major factor that plays a part in educational success in children. According to an article by Leah Askarinam, parents who did not earn a high school diploma but go back to school to earn their degree later in life can benefit their families financially, because adults with GEDs earn more monthly than those who did not graduate. Further, those who go back to earn their degree can promote a positive learning environment for their children. By earning a degree, these parents are becoming positive role models for their kids, as they can demonstrate the financial and career-linked benefits of gaining valuable school experience. By extent, then, because adult learners are becoming educated as their children are, they can further promote better grades in their children's academic work by using their newfound knowledge to help their children with homework.[14] Ultimately, because parents with higher educational attainment have shown to be motivated in their own lives to achieve a proper education, it is more likely that they will create home environments that facilitate learning.[15]All of this research performed on socioeconomic disparity in education has led scholars to some suggestions on future policymaking. Most of the studies on factors that contribute to low academic achievement in students from low-income families seem to suggest that many of the problems students have the need to be dealt with on a psychological level. That is, students need to be motivated and have a change in mindset, which begins in the household. While some policies addressing socioeconomic disparity focus on financial assistance, though certainly not ineffective, it is important to acknowledge a place for programs that emphasize helping parents in providing appropriate psychological and educational support for their children.[16] Programs such as these should focus on teaching parents to improve their literacy and homework helping skills, while also teaching parents how to motivate their children and create a positive family environment.

DATA ANALYSIS

Socioeconomic Data

The following socioeconomic data comes from the Census Bureau's American Community Survey (2009-13), and includes the school districts of both Lackawanna and Luzerne counties. In Lackawanna County the data includes the following areas: Abington Heights, Carbondale Area, Dunmore, Lakeland, Mid Valley, North Pocono, Old Forge, Riverside, Scranton, and Valley View. In Luzerne County, the data includes the following areas: Crestwood, Dallas, Greater Nanticoke, Hanover, Hazleton, Lake-Lehman, Northwest Area, Pittston, Wilkes-Barre, Wyoming Area, and Wyoming Valley West.

In Lackawanna County, the lowest median family income was found to be in Carbondale Area, with a median income of $44,075. Carbondale also had the highest percentage of families below the poverty line (30.8 percent) and the highest percentage of children in single parent households (49 percent). Scranton closely followed Carbondale Area in each of these measures. Scranton had the lowest percentage of population with at least a high school (HS) diploma (84.8 percent) and had a significantly

larger percentage of households that speak a language other than English at home (14.2 percent). There was little variation in median persons per room, a measure of the number of persons living in a dwelling unit divided by the number of rooms in that dwelling. The highest district in this statistic was North Pocono; the lowest was Abington Heights. Abington Heights also had the highest average family income ($89,636), the lowest percentage of families below the poverty line (3.6 percent), the lowest percentage of children in single family homes (13 percent), and the highest percentage of population with a HS diploma (95.9 percent).

Countywide, Luzerne County scored a bit worse than Lackawanna on income, poverty, and educational attainment. Greater Nanticoke had the lowest median family income and the second highest percentage of families below the poverty line (44.6 percent). The greatest percentage of children in single parent households was in Wilkes-Barre, with 54.7 percent. Hazleton had both the lowest percentage of population with at least a HS diploma (84.8 percent) and the largest percentage of the population that speaks a language other than English at home (20.5 percent). The largest median persons per room was found in Northwest Area (.45) while the lowest were in Wyoming Area and Wyoming Valley West (both .37). Crestwood had the highest median family income ($81,771), the lowest percentage families below the poverty line (1.8 percent), and the highest percentage of population with high school diplomas (94.8 percent).

Socioeconomic Characteristics for School Districts in Lackawanna County (2009-2013)						
	Median Family Income	% of Families Below Poverty Line	% of Children in Single Parent Families	% of Population with at least HS Diploma	% of Population that Speaks a Language Other Than English at Home	Median persons per room
Abington Heights	$89,636	3.60%	13.00%	95.90%	6.30%	0.36
Carbondale Area	$44,075	30.80%	49.00%	87.00%	4.80%	0.37
Dunmore	$70,225	13.60%	28.10%	91.40%	7.90%	0.39
Lakeland	$60,381	9.80%	27.30%	92.00%	3.90%	0.38
Mid Valley	$61,970	14.60%	35.60%	90.70%	4.60%	0.40
North Pocono	$70,122	9.80%	19.10%	90.60%	4.30%	0.44
Old Forge	$59,698	10.60%	36.20%	91.00%	4.70%	0.39
Riverside	$54,923	13.90%	42.60%	86.70%	6.20%	0.41
Scranton	$48,604	26.00%	43.00%	84.80%	14.20%	0.42
Valley View	$61,632	13.40%	39.30%	89.10%	9.20%	0.40
Countywide	**$62,127**	**14.61%**	**33.32%**	**89.92%**	**6.61%**	**0.40**

Socioeconomic Characteristics for School Districts in Luzerne County (2009-2013)						
	Median Family Income	% of Families Below Poverty Line	% of Children in Single Parent Families	% of Population with at least HS Diploma	% of Population that Speaks a Language Other Than English at Home	Median persons per room
Crestwood	$81,771	1.80%	18.20%	94.80%	4.80%	0.39
Dallas	$79,388	6.00%	17.30%	93.70%	3.60%	0.38
Greater Nanticoke	$47,770	33.60%	44.60%	85.20%	4.70%	0.39
Hanover	$51,706	24.10%	44%	88.60%	2.90%	0.39
Hazleton	$50,890	22.90%	47%	84.80%	20.50%	0.41
Lake-Lehman	$72,813	9.70%	24.40%	89.80%	4.90%	0.41
Northwest Area	$61,336	10.70%	22.60%	86.30%	1.80%	0.45
Pittston	$62,066	17.40%	32.70%	89.50%	3.90%	0.39
Wilkes-Barre	$50,480	32.40%	54.70%	86.20%	10.40%	0.41
Wyoming Area	$67,402	17.10%	35.50%	92.30%	3.20%	0.37
Wyoming Valley West	$55,477	28.10%	42.50%	90.00%	3.80%	0.37
Countywide	**$61,918**	**18.53%**	**34.86%**	**89.20%**	**5.86%**	**0.40**

School Outcomes Data

The school measures of both counties follow a similar pattern as the socioeconomic data. The following school performance figures come from the PA Federal School Reporting Data for school year 2012-2013. This year was chosen rather than more recent data because the school performance data should fall within the time frame of the 5-year estimates (2009 – 2013) used for the socioeconomic data. In Lackawanna County, Scranton had the lowest measures of school performance, with a 92 percent attendance rate, a 75 percent 4-year graduation rate, and only 60 percent of students proficient or higher in both math and reading. Abington Heights had the highest percentage of students proficient or higher in math and reading (86 and 84 percent, respectively). Mid Valley had the highest attendance rate (96 percent) and Old Forge had the highest 4-year graduation rate (95 percent).

Countywide, Luzerne County again scored a bit lower on school outcomes than Lackawanna County. The lowest attendance rate is found in Greater Nanticoke, with 90 percent. The lowest 4-year graduation rate is at 77 percent in Northwest Area. The lowest proficiencies in both math and reading were found in Wilkes-Barre, with only 53 percent of students proficient or higher in those subjects. Unlike in Lackawanna County, the most affluent areas had most of the higher school measures, but not all. Crestwood has the highest attendance rate (95 percent), and tied with Dallas for both the highest percentage of students proficient or higher in math and reading (84 and 83 percent, respectively). Pittston had the highest 4-year graduation rate with 95 percent.

School Performance for School Districts in Lackawanna County (SY 2012-2013)				
	Attendance Rate	4-year Graduation Rate	% Proficient or Higher in Math	% Proficient or Higher in Reading
Abington Heights	95%	88%	86%	84%
Carbondale Area	94%	88%	65%	62%
Dunmore	94%	91%	75%	76%
Lakeland	95%	89%	76%	71%
Mid Valley	96%	89%	74%	71%
North Pocono	93%	90%	80%	77%
Old Forge	95%	95%	68%	69%
Riverside	94%	93%	67%	65%
Scranton	92%	75%	60%	60%
Valley View	94%	89%	73%	70%
County Average	**94%**	**89%**	**72%**	**71%**

School Performance for School Districts in Luzerne County (SY 2012-2013)				
	Attendance Rate	4-year Graduation Rate	% Proficient or Higher in Math	% Proficient or Higher in Reading
Crestwood	95%	93%	84%	83%
Dallas	94%	94%	84%	83%
Greater Nanticoke	90%	81%	67%	61%
Hanover	92%	89%	59%	55%
Hazleton	92%	81%	58%	58%
Lake-Lehman	94%	88%	79%	75%
Northwest Area	94%	77%	60%	65%
Pittston	92%	95%	73%	69%
Wilkes-Barre	91%	86%	53%	53%
Wyoming Area	93%	93%	78%	71%
Wyoming Valley West	91%	90%	63%	62%
County Average	**93%**	**88%**	**69%**	**67%**

Correlation Analysis

From an initial examination of the socioeconomic and school outcomes data, it is clear in Northeastern Pennsylvania higher socioeconomic status school districts seem to perform better. In order to quantify these relationships between socioeconomic factors and educational outcomes in school districts, simple linear regression was used to measure correlation for all socioeconomic statistics and school outcome statistics, including an average school performance measure that equally weights the four educational outcome metrics used.

Using this method, it is possible to get an overall impression of which socioeconomic variables have the biggest impact on academic achievement. This is important information to guide policy decisions and programs aimed at improving academic performance in struggling school districts. The table of R-squared values below shows this correlation on a scale of 0 to 1, where lower values represent lower correlation and higher values represent higher correlation – in other words, the value of the R-squared

value shows to what degree the academic outcome measures are explained by each socioeconomic metric.

For the combined school outcomes measure, the percentage of adult residents of the school district with at least a high school diploma was the greatest predictor, with a positive correlation of over 80 percent. The next strongest correlation is median family income at about 76 percent. The poverty rate of the school district and the percentage of children in single parent families followed.

The percentage of the population that speaks a language other than English at home had a relatively low correlation compared with the other socioeconomic factors, as did the median persons per room in housing units. However, for the negative correlative relationship between school outcomes and housing overcrowding, North Pocono was a slight outlier – that district has the second highest median persons per room. If removed from the data, the R-squared value for the average school measure jumps from just under .12 to .24.

Table of R-squared Values

	Attendance Rate	4-year Graduation Rate	% Proficient or higher in Math	% Proficient or higher in Reading	Average of 4 School Metrics
Family Income	0.3017	0.1845	0.7533	0.8630	**0.7625**
Poverty Rate	0.6074	0.1746	0.5995	0.7498	**0.6761**
Single Parent Families	0.3244	0.0673	0.6744	0.8145	**0.6450**
High School Diploma	0.3523	0.4423	0.7298	0.7321	**0.8083**
Language other than English	0.0677	0.2179	0.1582	0.1195	**0.1892**
Housing Overcrowding	0.0037	0.2440	0.1093	0.0415	**0.1181**

However, there were some other patterns specific to individual educational outcomes. The traditional financial measures of socioeconomic status, family income and family poverty, were both more highly correlated with proficiency in math and reading standardized tests than with attendance and graduation rates. In both reading and math scores, the highest correlation was with median family income in the school district. The 4-year high school graduation rate, on the other hand, was most correlated with the percentage of the district's adult population who are high school graduates (44 percent). This is followed by the median persons per room (24 percent) and the percent of households that speak a language other than English at home (22 percent)

CONCLUSIONS

Most scholars would agree that low socioeconomic status has a large impact on educational success, but the reasons for this are largely debated, and thus require further consideration. It is a severe oversimplification to say that low socioeconomic status has a large impact on academic success simply because of the obvious material disadvantages. In fact, according to numerous studies done on the subject, the material disadvantages that students of low SES families experience have relatively little to do with their academic success. Instead, other family, environmental, and psychological factors are important to educational achievement. The data examined for Lackawanna and Luzerne counties supports this conclusion.

While median family income and the level of poverty in each district did not have the biggest impact on academic achievement, it is important to note that these factors still had a fairly large correlation with educational success, and in fact came in second and third behind high school educational attainment of the population. The fact that family income and percentage of families below the poverty line did not have the largest correlation with educational success, however, shows that there are other factors that need to be considered when looking at the underlying reasons behind the achievement gap.

Educational attainment had the largest correlation with overall educational achievement of all the socioeconomic factors measured, and it also had the biggest impact on the 4-year graduation rate. There have already been numerous research studies done that show that parental education has a huge influence on their children's attitude towards school, but seeing the data corroborate this finding in Northeastern Pennsylvania reinforces its importance. A likely explanation for this is that when community-wide educational attainment is low, students do not place a high emphasis on furthering their own education. Because the educational attainment data from the Census Bureau covers the entire resident population age 25+ of the school district, which includes parents of students and other adults, this environmental factor could be based on the student's parents lack of education, lack of education among other adults in the community, or a combination of the two.

Although households that speak languages other than English have shown to have a very small impact on educational performance in the chart, it is clear in the socioeconomic data of each town that the factor does play at least a partial role. The three districts which have the highest percentage of households that speak a language other than English at home are Hazleton, Scranton, and Wilkes-Barre, three of the most academically challenged districts in the region. However, the weaker correlation between this factor and educational outcomes compared with the other socioeconomic factors suggests that language and cultural barriers may not be a major cause of poor academic outcomes. Instead, this correlation could be the result of generally lower income, higher poverty, and lower educational attainment among immigrant families. A definitive answer to this question would require further research.

It is important that no discussion of socioeconomic disparities in education is complete without exploring the unique dynamics of race and ethnicity in educational outcomes and on socioeconomic status. Though race and ethnicity were not specifically examined as factors on school performance here, it has been widely documented that communities with higher proportions of racial and ethnic minority groups often have lower socioeconomic status, so there is likely to be a relatively strong correlation between race/ethnicity and educational outcomes. Thus, any attempt to address socioeconomic disparities in education must be made with an understanding of the intersection of race, ethnicity, and poverty. However, determining the role of race alone, after accounting for differences in socioeconomic status, on educational outcomes, is beyond the scope of this study.

Another complicating factor that is especially relevant in Northeastern Pennsylvania is transportation challenges. Transportation to school is a barrier that is more likely to affect families of lower socioeconomic status. Among households in the region with at least one working adult, nearly five percent do not have any vehicle, and a total of 12 percent have fewer vehicles than working adults.[17] Thus, there is almost certainly a sizeable population of students whose families are transportation-limited, and it is not difficult to see how student attendance could be negatively impacted when they do not have safe and reliable transportation to school. In rural districts, transportation issues faced by families are compounded by long distances between home, work, and school. Though there is no good data on transportation modes to school or transportation challenges faced by students specifically, transportation barriers may account for part of the particularly strong correlation between family poverty rates and lower school attendance in the above analysis.

As a result of the above findings, policies that wish to address socioeconomic disparity in education should not just focus on issues of financial resources and economic poverty, but also address the non-financial factors that inhibit academic achievement. Because students whose parents have low educational attainment tend to do worse in school than students whose parents have higher educational attainment, it is important to target those students and motivate them to succeed in the educational sphere. Comprehensive Career Development education is a key approach to addressing this. By showing all students the career options that may be available to them with the right post-secondary education or job training, these more vulnerable students can be shown a pathway to success.

Programs that educate parents on the importance of their children's education achievement could also be extremely helpful, and could help parents learn to create a home environment that gets children excited about school. Several programs are already in place locally that have produced measurable success.

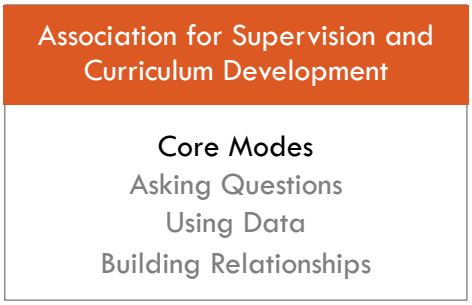
One such program currently operating in Luzerne County is the SHINE after school program. The program is based on a model in Carbon and Schuylkill counties that resulted in improvements in reading and mathematics, increased awareness of careers and STEM principles, and decreases in delinquency. Plans exist to expand the program to more schools and school districts in the next several years. In the program, students are exposed to various career paths and develop Science, Technology, Engineering and Math (STEM) skills. It provides academic support, food, and childcare until 6:15pm four days per week. There are no income eligibility restrictions; students in need of academic support are referred by their teachers. An important component of this program is home visitation. Home visitors are able to assess a child's home environment and engage families in the child's education. In order to reduce or eliminate socioeconomic disparities in education outcomes, it is important to involve students, teachers, and families in a way that accounts for the complex causes of these disparities. Children in socioeconomically challenged schools and communities do not only struggle due to lack of financial resources; there are a host of other variables such as home environment, family structure, and psychological and neighborhood factors that drive outcomes. As a result, programs aimed at helping low income students in Northeastern Pennsylvania need to consider these factors and approach their objectives in a way that fully engages the student's home life, family, and community.

Another program currently in place is Head Start. Luzerne County Head Start operates the Head Start program in 13 locations in Luzerne County, the Early Head Start program in five locations, and the Pre-K

Counts Centers in five locations. The program services 799, 202, and 126 children respectively and currently has a wait list for services. The Head Start programs engage parents in an active way to help their children learn. Families work with staff to develop family goals based on a Strengths, Weaknesses, Opportunities and Threat (SWOT) analysis and much of the parent program is developed by a Parent Policy Council – parents are elected by other parents to serve on this council. Nationwide research has shown that the Head Start model provided positive cognitive, social-emotional, health, and parenting impacts.[18]

Scranton Lackawanna Human Development Agency Head Start has 18 centers for Head Start, Early Head Start, and the Pregnant Mothers Program. It operates under similar guidelines and programs as the Luzerne County Head Start. These two examples show how successful educational support programs are engaging and connecting parents into their children's educational process. The correlation analysis as well as the literature showed that parent education is a key driver of student achievement; this demonstrates the importance of parents' attitudes on the educational success of their children. The parents ultimately have the power to inspire their children to succeed. Additionally, comprehensive career development education will be a useful approach in demonstrating pathways to success to all students, but especially those whose backgrounds may lack strong support for educational attainment.

The Association for Supervision and Curriculum Development recently (2016) published a type of call for educators to engage students in impoverished areas in a way that is consonant with poverty literacy. This involves the coupling of an understanding of the effects of poverty and the willingness to recognize and address such conditions. It is understood that these situations are discoverable within classroom settings as the educators regularly interact with the students and often with the community. ASCD's model involves three core modes, asking questions, using data, and building relationships. Based on reports from high performing schools in high poverty areas, several broad based suggestions are made. The first involves addressing myths of poverty within the environment, specifically those regarding the motivation of students and parents living in poverty. Other myths mentioned include drug use among parents, being purposefully uninvolved, and the simplicity of paths out of poverty. This is included as a part of a larger effort within the school to shift the culture around poverty, which can include honoring the dynamism within the learning process and raising expectations for both educators and students.



The cultural shift satisfies only a portion of the model prescribed by ASCD. Teachers reported several methods to build-in collection of student data to the curriculum, these include the use of journals and structured advising. There are myriad teaching suggestions that can be implemented in conjunction with what is described above. In-class suggestions for high poverty areas included less use of memorization, drilling, and lecture. These are to be substituted with engagement of curiosity, choice, effort, problem solving, group work and more. More concretely, an emphasis is placed on the development of social skills within the learning environment (cooperative learning, peer tutoring), the building of short-term working memory (multisensory instruction, memory aids). As well as the ability to teach and model critical and

creative thinking skills (problem/project based learning, Socratic seminars), accessing and building on prior knowledge (semantic mapping, autobiographical activities, thinking maps), and connecting physical activity to learning (PE focused on fitness).[21] When combined with the strategies for parental involvement these prescriptions are aimed to capture a comprehensive evaluation of opportunities seeking maximization of student outcomes.

ENDNOTES

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