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In 2015, six Little Rock School District schools were classified as academically distressed because fewer than half of their students scored at proficient levels on a standardized test. Two-thirds of the district's elementary schools scored in the lowest twenty-five percent on math exams. Consequently, the Arkansas Board of Education voted 5-4 to take control of the district. Numerous parents, students, community activists, and teachers pleaded against the takeover at a public hearing (Geswein et al. 2015, para. 2-3). The motivations of the state board members who voted for the takeover are questionable because they are all related to or heavily involved in the charter school movement. One former board member commented that other states have taken away local control from similar, poor communities and privatized the local schools. Research reveals that when schools become privatized, elite and middle-class children get great schools. On the contrary, poor children get poor schools. This is problematic because most students in the Little Rock School District are classified as low-income (Geswein et al. 2015, para. 14-16). 2019 data indicated eight schools were failing their assessments. The same year, the state proposed a partial return to local control under a tiered system that would effectively segregate the district by race and class. Local control was returned to the Little Rock School District this year. However, this all suggests significant problems within the district that could be related to educational policy.

It is important to determine how inconsistencies in the district affect students. How does the economic status of elementary school students in the Little Rock School District affect their success? Compared to non-economically disadvantaged students, the academic success of economically disadvantaged students might be lower because they typically have unfulfilled needs. However, their social success could still be equal to or greater than that of their peers.

This paper first analyzes previous research on the importance of early education and related consequences of child poverty. The presentation of a theory, hypotheses, and testing follows. The paper introduces new research on the relationship between economic status and the academic and social success of elementary school students. Furthermore, the implications of such findings are explored.

Literature Review

Researchers aim to gain more insight into poverty because approximately ten percent of Americans live below the poverty line. Desmond and Western conclude poverty is multidimensional (2018). Smeeding explains how individuals cannot control every aspect of their environment but such factors are influential nevertheless. He argues that insufficient resources prohibit those living in poverty from being able to participate fully in society (Smeeding 2002).

Research into child poverty matters because children have no control over their living situation but poverty negatively impacts them. An individual's formation of self and social identities develop in childhood (Ridge 2009). Child poverty rates in the United States have historically been amongst the highest relative to other rich countries. In 2000, seventeen percent of children were living below the poverty line (Chen and Corak 2008). Madrick states one in three children currently lives in a household with significant deprivation. Their physical health, emotional well-being, and cognitive abilities are worse off as a result (Madrick 2020; Adamson et al. 2007). Ridge's qualitative research includes economically disadvantaged children's experiences at school. He describes the embarrassment of receiving free school meals and the inability to afford school trips, social activities, and essential items such as books or uniforms. Consequently, children are stigmatized and feel isolated (Ridge 2009). Wong et al. conclude

deprived children have a reduced quality of life and lack access to informal education resources and social interaction opportunities compared to non-deprived children (2015). Rainwater and Smeeding find that childhood deprivation can increase the likelihood of an individual experiencing problems or causing problems for others in adulthood (2004). Madrick argues money is the solution to improving children's outcomes (2020). Further, children need access to quality education to advance in a knowledge-based society (Rainwater and Smeeding 2004).

Poverty affects children in ways that could hinder their educational experience. This is problematic because elementary school impacts students beyond just the six or seven years spent there. Bennett finds elementary school to be the second most influential institution in children's lives. It shapes their self-worth, aspirations, and skills as well as introduces them to their country, culture, and the universe (Bennett 1986). It is where they establish their academic self-image, level of achievement, study habits, and receptiveness to schooling. Children are typically influenced by parents and teachers. Entwisle and Hayduk refer to such influential individuals as significant others. In their follow-up study, they find that the influences of significant others on children in grades 1-3 are linked to the student's reading and mathematics performance four to nine years later (Entwisle and Hayduk 1988). The benefits of elementary school extend to the community as well. Ekstrand finds a link between elementary education and employment opportunities, criminality, drug misuse, and social exclusion. She concludes elementary education to be a prerequisite for democracy (Ekstrand 2015). Ansari and Pianta's quantitative research illustrates that the math, language, and literacy knowledge gained during preschool years only benefits children long-term if they have access to high-quality elementary education (2018). This research confirms the importance of elementary education.

There is an emerging field of research directed towards establishing a relationship between poverty and education. Noguera explains poverty's influence on learning. He describes how economically disadvantaged students are more prone to reduced health, safety, and well-being which invariably influences their educational experience. They are also less likely to have access to academic and social support outside of school (Noguera 2011). Morrisey and Vinopal conclude poverty can negatively affect children's readiness to enter school (2018). Specifically, high-income children spend on average four hundred hours more than low-income children in literary activities before entering elementary school (Wallenstein 2012). Morrisey and Vinopal's research illustrates an association between family poverty, neighborhood poverty, and children's achievement and behavioral outcomes in early elementary school (2018). Guerin finds academic success to be correlated to social class, parental qualifications, and income (2014). Van der Berg explains that those experiencing poverty often do not have access to an adequate education. He also concludes higher levels of education increase the likelihood of finding employment as well as an individual's earnings (Van der Berg 2008). Van der Berg et al. argue education is the only viable avenue for low-income individuals wanting to enter the top end of the labor market. However, their research presents large performance gaps when comparing eight-year-old school children in the top twenty percent and the bottom eighty percent of the population (Van der Berg et al. 2011). Murnane states young students' cognitive skills are a predictor of whether they will graduate high school, enroll in college, and earn a four-year degree, but offers an explanation beyond their economic status. Economically disadvantaged students tend to be concentrated in low-performing schools staffed by ill-equipped teachers. Consequently, the schools are not providing students with the skills necessary for success

(Murnane 2007). Petrilli recognizes the connection between a student's socioeconomic status and academic achievements but argues poverty alone does not serve as a proper explanation (2016).

Contribution

This paper joins previous research in examining how economic status affects children's educational experience. However, it specifically focuses on one school level and district. This research investigates elementary schools in the Little Rock School District. This is advantageous in determining the existence of discrepancies in decision-making within the Little Rock School District. Even if no inconsistencies materialize, this paper can assist the district in determining necessary improvements to provide all their students with the best educational experience possible. Furthermore, this research measures academic and social success simultaneously. Consequently, their relationship to each other can be analyzed alongside their relationships with economic status.

Theory

Lev Vygotsky proposed his sociocultural theory to explain cognitive development. He placed a high value on the social environment and interactions. Vygotsky defined learning as a social process formed by human intelligence in the culture of society where the learner lies (Daneshfar and Moharami 2018, 600-601). He subdivided learning into scientific concepts that are taught in school and everyday concepts that are acquired in daily life (Van Der Veer 1994, 296). Two important aspects of sociocultural theory are mediation and the zone of proximal development. Mediators such as teachers, textbooks, or computers connect students with knowledge. Through mediation, individuals can surpass their independent performance and improve their development (Daneshfar and Moharami 2018, 601-603). However, the

effectiveness of symbolic tools is limited unless they are facilitated by a human mediator (Kozulin et al. 2003, 35).

The zone of proximal development finds that when two people with different levels of competency interact to complete a task, the less competent one develops further. The actual level of development represents what an individual is capable of on their own and the potential level of development represents their abilities when working with a more competent person (Daneshfar and Moharami 2018, 601). The fluidity of and between the two levels is constantly changing and dependent on the location and individuals involved. Further, the upper boundary is undefined. Concerning children, the purpose of the zone of proximal development is to advance their capacity for abstract thinking. This is accomplished by teaching them problem-solving skills and strategies. However, success is only achievable if children are active contributors and adults are sensitive to children's needs. Adults must be aware of the child's cues and influence of background factors, as well as open to the various alternatives to reaching a goal (Chak 2002, 383-391). Individuals from different backgrounds typically think, speak, and act differently (Smagorinsky 2007, 66). Vygotsky also concludes that knowledge and skill gained in one domain will positively impact other domains (Van Der Veer 1994, 298).

Hypotheses

The living conditions of economically disadvantaged and non-economically disadvantaged children differ highly. Teachers' lives are more likely to resemble those of their non-economically disadvantaged students. This matters because sensitivity comes more naturally among individuals from similar backgrounds. Economically disadvantaged children are further hampered in relation to sensitivity. If their parents have to work more to cover expenses, they have less time to be empathetic when helping children with schoolwork. Sensitivity is crucial to

cognitive development. Research has established a positive correlation between income and education. On average, non-economically disadvantaged children's parents have reached higher levels of educational attainment. This increases such children's zone of proximal development in relation to academics. Excess income also allows parents to purchase their children better resources, and this is beneficial because mediators are advantageous to learning. Consequently, it is reasonable to presume the subsequent relationship:

> **H_1: Elementary schools that have a high percentage of low-income students tend to produce students with lower academic success than schools with a low percentage of low-income students.**

Regarding academics, teachers could have the most influential role in children's zone of proximal development. Every teacher is required to obtain a bachelor's degree and follow specific curriculums. They should have the same influence on all students, regardless of economic status. Awareness of the unfulfilled needs of low-income individuals could result in teachers being especially sensitive towards such students. Economically disadvantaged children could be more motivated to improve their living conditions, and education is one way to achieve this. This sensitivity and active participation would help further facilitate their learning. Although non-economically disadvantaged children are more likely to have access to better resources, they are ineffective unless accompanied by a human mediator. Consequently, it is reasonable to presume the subsequent relationship:

> **H_2: Elementary schools that have a high percentage of low-income students tend to produce students with equal or higher academic success than schools with a low percentage of low-income students.**

Low-income parents' limited available time to be sensitive with their children can affect more than just their academic success. They may not have the time to properly redirect their children's negative behavior or model positive attributes such as creativity; therefore, hindering such children's zone of proximal development. The similar backgrounds of teachers and

non-economically disadvantaged children would make teachers more understanding of such children's behaviors. This could result in teachers disciplining economically disadvantaged children more and negatively affecting their social success. Consequently, it is reasonable to presume the subsequent relationship:

> **H_3: Elementary schools that have a high percentage of low-income students tend to produce students with lower social success than schools with a low percentage of low-income students.**

Income does not affect parents' ability to positively influence their children's behavior. Therefore, children's zone of proximal development in relation to social success is not impacted by their economic status. Teachers' awareness of economically disadvantaged students' unfulfilled needs could result in them being more sensitive when such students act out. If low-income children are motivated to improve their living conditions, their behavior will reflect it because they know such a change is only possible if their behavior aligns with social norms. This sensitivity and active participation would positively impact their social success. Consequently, it is reasonable to presume the subsequent relationship:

> **H_4: Elementary schools that have a high percentage of low-income students tend to produce students with equal or higher social success than schools with a low percentage of low-income students.**

Research Design

The unit of analysis in this paper is elementary schools. The elementary schools are also defined by their percentage of low-income students. Each school report card represents one elementary school. Teachers reference their current and past students overall; however, their answers should be representative of situations prevalent throughout their elementary school. 2019 school report cards are used to analyze students' academic success. This is because it is the last academic year that was not affected by the coronavirus pandemic. During the past two

academic years, hybrid or virtual learning could be a factor in influencing students' academic success. Teacher interviews occur in September and October of 2021.

The dependent variable in this paper is student success. Student success is measured academically by analyzing school report cards and socially through interviews with elementary school teachers. Measuring student success is essential in determining how economic status influences a child's educational experience. Their academic and social success can be affected by countless factors such as family, teachers, peers, or the resources they have access to. The sociocultural theory explains their influence. This research paper assumes the Little Rock School District treats all its elementary schools equally. If this is true, family and peers should be the only explanation of different levels of success. However, a distinct pattern and the results of the interview could prove different levels of access regarding teachers and resources and therefore discrepancies in decision-making within the Little Rock School District.

The independent variable in this paper is economic status. In the 2018-2019 academic year, seventy-two percent of students attending a Little Rock School District school were classified as low-income, meaning their family income was below two-hundred percent of the federal poverty line. However, such students are not evenly distributed within the district. School report cards from the same year indicate the percentage of low-income students at each Little Rock School District elementary school varied from 18.8 to 98.35. The percentage of low-income students at each elementary school is listed in table one below. The academic and social success of students at these schools is compared to determine if there is a correlation between economic status and student success.

Table 1: Little Rock School District Elementary Schools

Schools	Percentage of Low-Income Students
Forest Park	18.8
Don Roberts	22.84
Jefferson	27.64
Fulbright	44.83
Pulaski Heights	49.64
Gibbs Magnet	57.88
Williams Magnet	58.69
Carver Magnet	82.17
Terry	83.78
Otter Creek	84.06
Baseline Elementary	84.59
David O. Dodd	87.07
Booker Arts Magnet	87.82
M.L. King Magnet	89.1
McDermott	90.09
Bale	90.1
Stephens	91.45
Western Hills	91.45
Brady	91.78
Watson	92.51
Washington Magnet	93.61
Mabelvale	93.7
Romine Interdistrict	94.34
Meadowcliff	96.04
Chicot	97.39
Wakefield	98.35

Table 1: Forest Heights STEM Academy is excluded from the quantitative methodology because it is a combined elementary and middle school.
Source: Little Rock School District 2021.

The control variables in this paper are average class size, average years of teaching experience, and per-pupil expenditures. Average class size affects how much time teachers can dedicate to individual students. Teachers can acquire more skills through the years that could increase their ability to help students. Per-pupil expenditures correlate to the resources a school, and therefore their students, have access to. These could all influence student success and are available on school report cards. However, it could be difficult to get teachers to admit how truly influential class size and years of teaching experience are. The Little Rock School District and individual elementary schools do not specify their decisions regarding per-pupil expenditures. Nevertheless, these variables will be analyzed to determine their relationship with student success (dependent variable) compared to the relationship between student success and economic status (independent variable).

One attribute of student success is academic success. It is especially important when analyzing schools because their purpose is to educate students. There are twenty-seven elementary schools within the Little Rock School District. Hence, a quantitative method is effective and efficient for measuring the academic success of elementary school students in the district. Data is obtained from yearly report cards published by the Arkansas Department of Education (ADE). Most of the data available on the report cards are for third through fifth graders; therefore, for this research paper, third graders are analyzed for one element and fifth graders for the other. The two elements are reading at grade level and ready or exceeding on ACT Aspire Mathematics. Using two measurements of two different grade levels to compare all the Little Rock School District elementary schools helps to better determine if there is a clear pattern in the relationship between economic status and academic success within the district, effectively testing hypotheses one and two.

Two steps are completed to determine the influence economic status has on elementary school students' academic success. First, ready or exceeding on ACT Aspire Mathematics for fifth graders within each elementary school is analyzed. The school's economically disadvantaged and non-economically disadvantaged students are compared. Students are classified as economically disadvantaged if they are eligible for the Free or Reduced Lunch Status under the National School Lunch Program. This occurs if their family income is below one-hundred-and-eighty-five percent of the federal poverty level. Non-economically disadvantaged students are those with a family income too high to qualify for the Free and Reduced Lunch Status. This comparison is to determine if, at the same school, students' economic status influences their academic success. Data on the report cards is restricted if there are fewer than ten students in a subgroup or if the data would likely result in information identifiable for individual students being released. However, comparisons are possible for a range of the schools, so conclusions can be drawn from them.

Second, between schools, ready or exceeding on ACT Aspire Mathematics for all fifth graders and reading at grade level for all third graders are analyzed. The ACT Aspire is a summative assessment that measures what students have learned in different subject matters throughout the academic year. Standardized testing can be controversial; therefore, reading at grade level was selected as a second academic measurement. It also highlights a different subject matter than the ACT Aspire Mathematics. These two measurements should be representative of overall academic success.

Student success is not limited to academic measurements, as they do not illustrate growth or behavior. Social success is another attribute of student success. Eight interviews with elementary school teachers within the Little Rock School District are conducted to measure

students' social success. Four teachers currently teach at an elementary school with less than sixty percent low-income students, and four teachers currently teach at an elementary school with more than eighty percent low-income students. However, six of the teachers have taught at multiple Little Rock School District elementary schools and shared their experiences beyond their current school. In describing the interviews, schools with less than sixty percent low-income students are referred to as high-income, and schools with more than eighty percent low-income students are referred to as low-income. Further, teachers are randomly labeled participants one through eight. Participants are asked about current and past students. Social success is evaluated in several ways; examples include willingness to learn, behavioral issues, and creativity. By interviewing teachers from numerous elementary schools, specifically, ones with varying percentages of low-income students, hypotheses three and four are tested. Participants are also asked their opinion on the relationship between economic status and educational experience.

Primary Testing

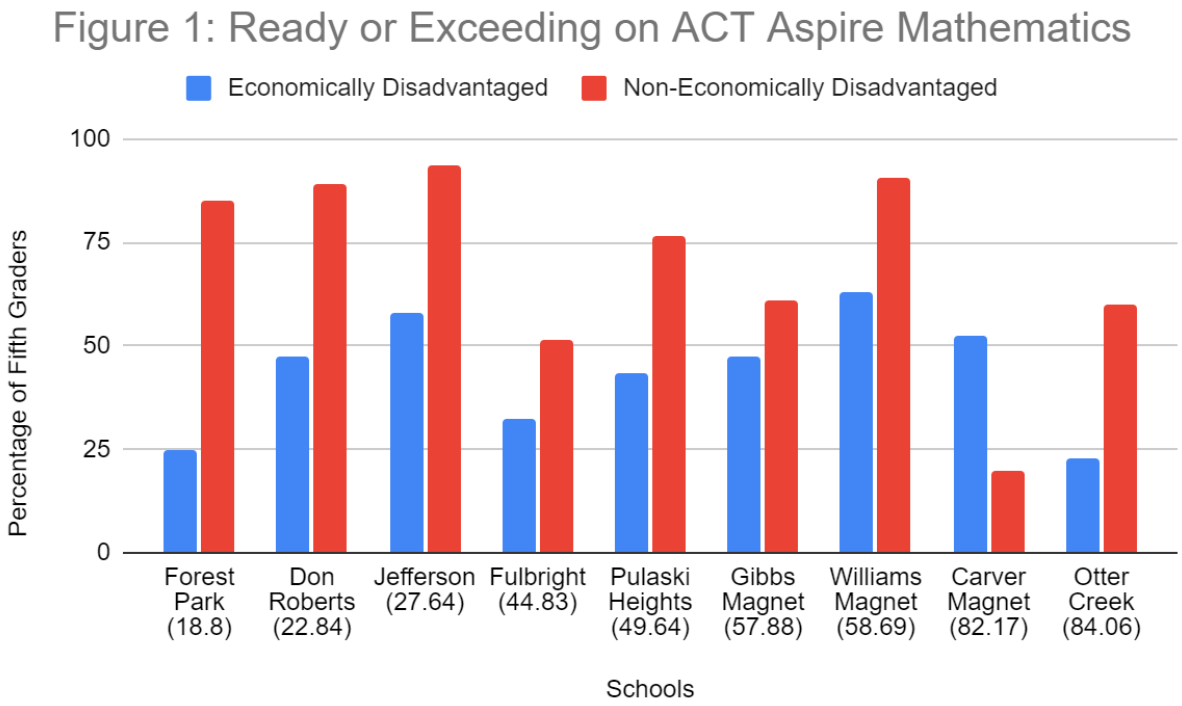
The quantitative methodology analyzes academic success, one attribute of student success (dependent variable). The first step is to determine the relationship between academic success and economic status (independent variable) within elementary schools. Specifically, ready or exceeding on ACT Aspire Mathematics for fifth graders is measured. This is only possible for nine of the twenty-six elementary schools because the rest have less than ten fifth-graders classified as non-economically disadvantaged and therefore the ADE withheld their data. In fact, Baseline Elementary has zero non-economically disadvantaged fifth-graders. The percentage of low-income students at the nine schools varies from 18.8 to 84.06, so conclusions can be drawn from the comparison. The results are illustrated in table two and figure one below.

For eight of the nine schools, their non-economically disadvantaged students are scoring higher than their economically disadvantaged students on the fifth grade ACT Aspire Mathematics. The difference in scores is highest at Forest Park Elementary and lowest at Gibbs Magnet Elementary. Carver Magnet Elementary is the exception. Their economically disadvantaged students scored higher than their non-economically disadvantaged students. These results are not related to any of the hypotheses but are important for corroborating the findings between elementary schools. If this step did not exist, claims could be made that differences between elementary schools were a consequence of different teachers or resources. These findings confirm the influence of economic status on elementary school students' academic success.

Table 2: Ready or Exceeding on ACT Aspire Mathematics

Schools	Percentage of Economically Disadvantaged Fifth Graders	Percentage of Non-Economically Disadvantaged Fifth Graders
Forest Park	25	85
Don Roberts	47.62	88.98
Jefferson	57.89	93.48
Fulbright	32.61	51.52
Pulaski Heights	43.48	76.67
Gibbs Magnet	47.62	61.11
Williams Magnet	62.79	90.63
Carver Magnet	52.5	20
Otter Creek	22.73	60

Source: Little Rock School District 2021.



Source: Little Rock School District 2021.

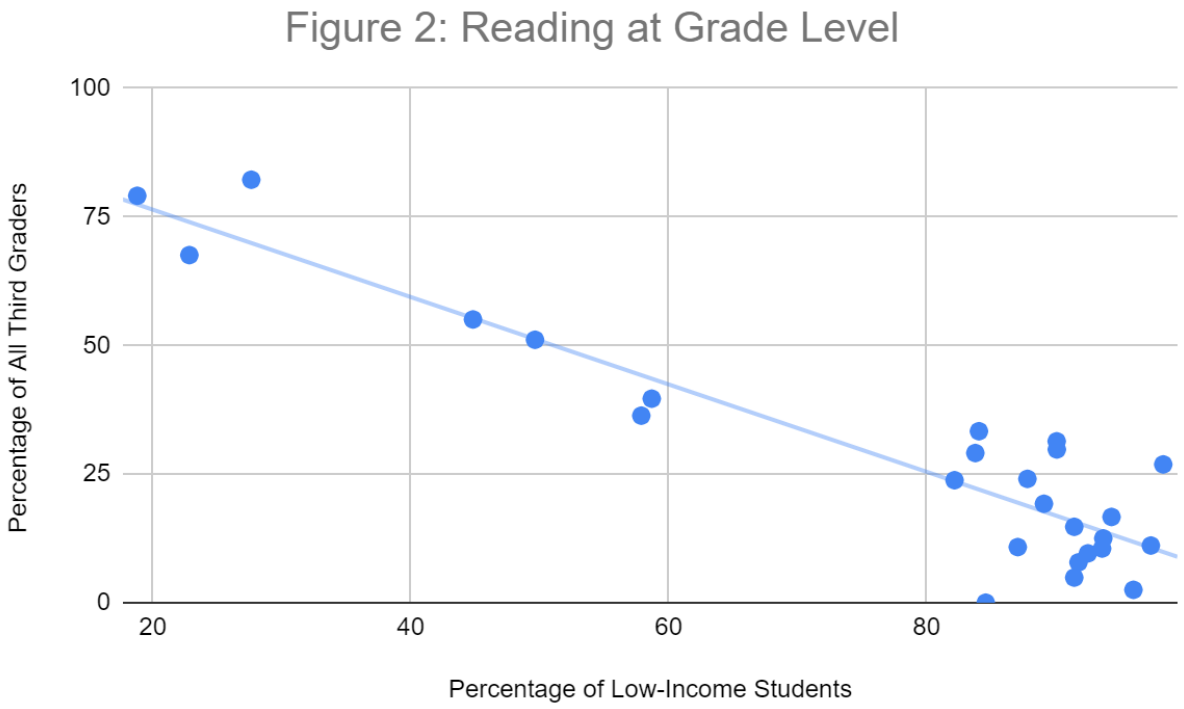
The second step is to determine the relationship between academic success and economic status (independent variable) between elementary schools. Academic success is measured by the percentage of fifth-graders who scored ready or exceeding on the ACT Aspire Mathematics and the percentage of third-graders reading at grade level. These percentages were obtained for all twenty-six elementary schools. The results are illustrated in table three and figures two and three below. A distinct negative correlation between academic success and economic status emerges for both variables. Jefferson Elementary has the highest percentage of third-graders reading at grade level at 82.22, while Baseline Elementary has the lowest percentage at 0. Jefferson Elementary also has the highest percentage of fifth-graders classified as ready or exceeding on the ACT Aspire Mathematics at 83.08, while Washington Magnet Elementary has the lowest percentage at 14.29. Only five elementary schools have more than fifty percent of their third-graders who can read at grade level and only seven elementary schools have fifty percent or

more of their fifth-graders who scored ready or exceeding on the ACT Aspire Mathematics. Apart from one school, the other seven schools have below sixty percent low-income students. For seventeen of the elementary schools, the percentage of third-graders reading at grade level and the percentage of fifth-graders who scored ready or exceeding on the ACT Aspire Mathematics does not exceed thirty-five percent. All those elementary schools have eighty-four percent or more low-income students. These results are related to hypotheses one and two.

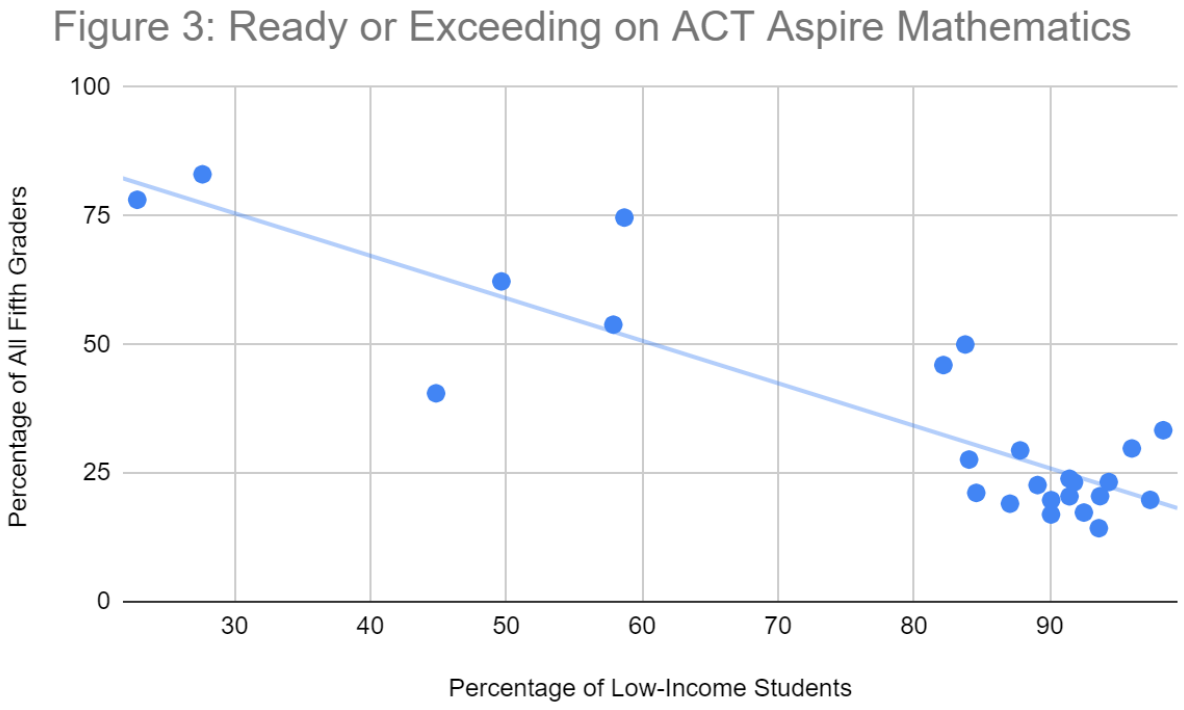
Table 3: Measurements of Academic Success

Schools	Percentage of All Third Graders Reading at Grade Level	Percentage of All Fifth Graders Ready or Exceeding on ACT Aspire Mathematics
Forest Park	79.1	67.86
Don Roberts	67.57	78.13
Jefferson	82.22	83.08
Fulbright	55.06	40.51
Pulaski Heights	51.11	62.26
Gibbs Magnet	36.36	53.85
Williams Magnet	39.66	74.67
Carver Magnet	23.81	46
Terry	29.09	50
Otter Creek	33.33	27.63
Baseline Elementary	0	21.15
David O. Dodd	10.81	19.05
Booker Arts Magnet	24.07	29.41
M.L. King Magnet	19.23	22.67
McDermott	31.37	16.95
Bale	29.79	19.74
Stephens	14.75	20.48
Western Hills	4.88	23.91
Brady	7.84	23.21
Watson	9.59	17.33
Washington Magnet	10.53	14.29
Mabelvale	12.5	20.51
Romine Interdistrict	16.67	23.26
Meadowcliff	2.5	29.79
Chicot	11.11	19.79
Wakefield	26.88	33.33

Source: Little Rock School District 2021.



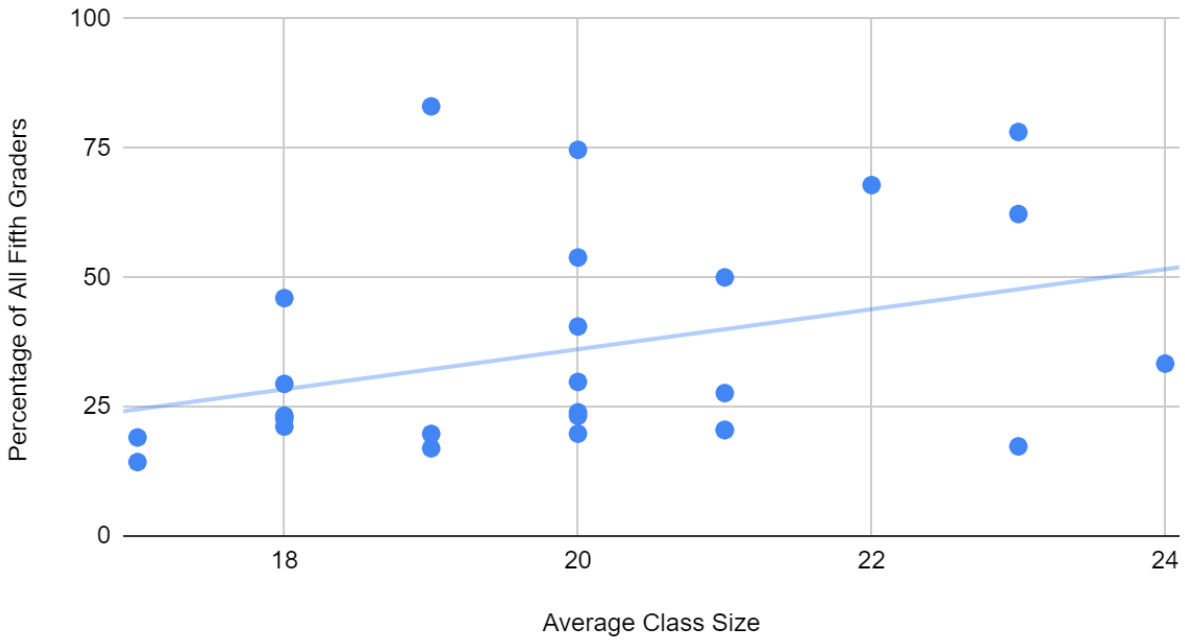
Source: Little Rock School District 2021.



Source: Little Rock School District 2021.

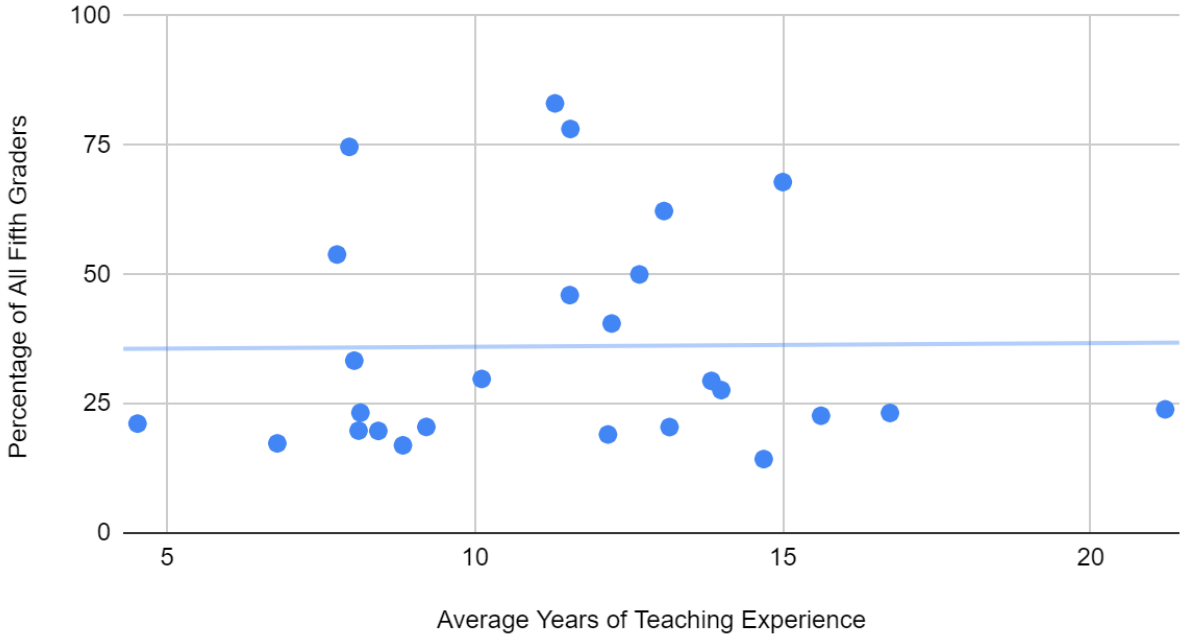
Lastly, the relationship between the control variables and academic success is determined. The control variables are average class size, average years of teaching experience, and per-pupil expenditures. This data was obtained for all twenty-six elementary schools. Ready or exceeding on ACT Aspire Mathematics for fifth graders was selected as the measure of academic success. The results are illustrated in figures four, five, and six below. No clear pattern emerges for any of the three variables. The schools with the lowest and highest average class size and average years of teaching experience are ones with lower academic success. The schools with the highest per-pupil expenditures are also ones with lower academic success. Therefore, no evidence materialized to support the claim that average class size, average years of teaching experience, or per-pupil expenditures correlate to academic success. This step is important for confirming that economic status is responsible for the differences in academic success. If this step did not exist, claims could be made that differences in academic success between elementary schools were a consequence of any other difference between the schools besides their percentage of low-income students. Although other explanations could still exist, average class size, average years of teaching experience, and per-pupil expenditures are the most probable ones. Therefore, by finding no relationship between such variables and academic success, the claim that economic status is responsible for differences in academic success is strengthened.

Figure 4: Ready or Exceeding on ACT Aspire Mathematics

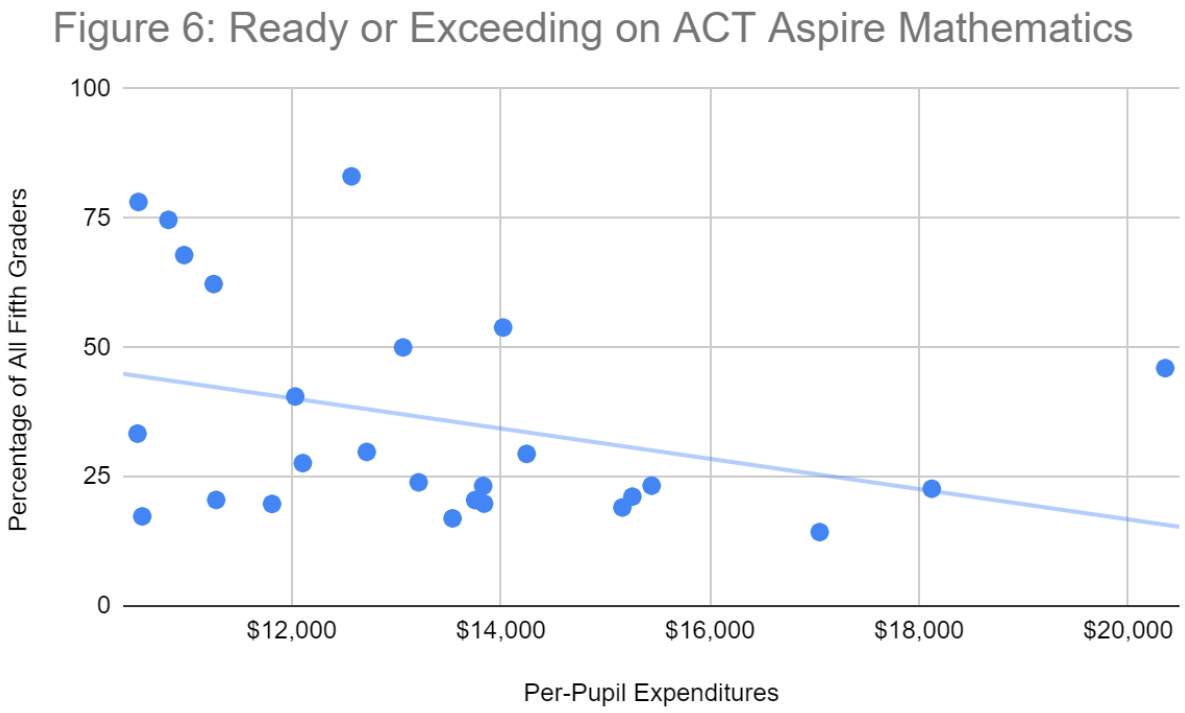


Source: Little Rock School District 2021.

Figure 5: Ready or Exceeding on ACT Aspire Mathematics



Source: Little Rock School District 2021.



Source: Little Rock School District 2021.

Secondary Testing

The interviews with elementary school teachers are used to measure social success, another attribute of student success (dependent variable). In the first half of the interview, teachers described their current and past students' willingness to learn, improvement during the school year, socialization, behavioral issues, involvement in school clubs, and creativity; as well as the accomplishments of their past students. This is to determine a relationship between social success and economic status (independent variable). Teachers' responses to these questions are related to hypotheses three and four.

Teachers' perspectives on their student's willingness to learn, improvement during the school year, creativity, and socialization were overall positive. Many teachers described how their students want to learn. Participant seven, who teaches at a high-income school, discussed how her fifth-graders are motivated by an eagerness to please others; they do not yet see learning

as their responsibility. Participant two, who teaches special education at a high-income school, also mentioned that her students are eager to please teachers. Participant four, who teaches at a high-income school, has had a small percentage of first-graders who are not as motivated but justified it because they had a difficult kindergarten year. Participants three and five, who both teach at a low-income school, did state it varied more for their students. Participant one has previously taught at a low-income school and said her third-graders were not concerned about their grades until they were brought to their attention, such as report card time. On the contrary, her current fifth-graders at a high-income school are always aware of and concerned about their grades. Every teacher described witnessing their students improve academically and socially during the school year. Participants one and three both explained that growth is more visible for students who begin below grade level.

Students were also overall creative. However, teachers provided almost contradicting explanations. Teachers at high-income schools provided explanations such as creativity being tied to experiences. Participant seven claimed her students classified as gifted are typically more task-oriented and therefore have more difficulty practicing creativity. Teachers at low-income schools tied creativity to independence and unfulfilled needs. Participant six, who teaches at a low-income school, explained that if her students have difficulty practicing creativity, it is because they fear being wrong and therefore avoid stepping out of their comfort zone.

More teachers had a positive opinion of their students' socialization skills. Participant two described how her special education students benefit because they participate in activities with other students. Participant one said her fifth-grade girls are very sociable and chatty. On the contrary, participant five stated the fourth- and fifth-grade girls are catty and nitpick at each other. Participant eight, who teaches at a low-income school, explained that students at her

schools have experienced an abnormal amount of trauma. Consequently, they are always in a hyper state and typically overreact to situations.

There was more variation in teachers' perspectives on their student's behavioral issues and involvement in school clubs. Teachers at high-income schools were not as concerned about behavioral issues. Participant four justified her first-graders behavioral issues as underlying anxiety. For example, they would act out before their turn to answer a question to avoid letting others know they did not know the answer. Participant one described her students' behavioral issues as passive-aggressive and include having an attitude, talking out of turn, and slight shoving. Participant seven commented that students who are not performing at grade level tend to have more behavioral issues. Behavioral issues were more serious at low-income schools. Participant three said that while there are fewer problems nowadays, they are more serious. She has had students consider self-harm and seriously harming others. Participant one discussed that in her time at a low-income school, it was common for students to throw items and get into fights. Teachers at low-income schools explained that students act out because of unfulfilled needs, adverse childhood experiences, and mental disorders. Students at high-income schools are more involved in school clubs. However, participant three did mention that involvement was also high at a low-income school she had previously taught at. Participant two said that for her special education students, involvement depends on whether they have an adult in their life encouraging extracurricular activities. Participant one said that although the low-income school she previously taught at only had an after-school program and most students were there for after-school care, they did enjoy it. Teachers explained that if involvement was low, it was typically because of a lack of finances, transportation, or space. Participant five mentioned how many of her students play sports outside of school.

Several teachers were able to recall the accomplishments of their past students. Participant one has had first-place mathletes and one student who earned a top-three place in a national speaking competition. Participant seven has had one student earn a perfect score on the ACT and SAT and plans to attend MIT, and one student ranked number two in the country in gymnastics for her age level. Participant three has had one student become high school valedictorian and multiple students be awarded full scholarships. Participant eight has had students join the military, graduate university, graduate from the naval academy, and one student is currently studying abroad in France. Multiple teachers mentioned individuals having jobs and families. Teachers' responses to questions from the first half of the interview provide sufficient insight to test hypotheses three and four.

In the second half of the interview, teachers were asked their opinion on the relationship between economic status and educational experience. They provided multiple insights into the differences between economically disadvantaged and non-economically disadvantaged students. Non-economically disadvantaged children are likely to have more resources, experiences, and involved parents. Experiences are important so children relate to the material they are being tested on. Non-economically disadvantaged parents are typically more educated and therefore more likely to emphasize education to their children. They are also more likely to initiate communication and find their own solution when their child is struggling. Economically disadvantaged children typically have more trauma, more social and emotional issues, and fewer opportunities. They have fewer opportunities to join social groups or clubs because they typically require money. Their parents are typically less involved because they work multiple jobs or inconsistent hours to provide a home and food. Two teachers mentioned that most of their students who are not performing at grade level also happen to be economically disadvantaged.

Every teacher agreed with the quantitative findings regarding a negative correlation between academic success and economic status. They attributed it to differential resources, high mobility, unfulfilled needs, adverse childhood experiences, and trauma. Lastly, teachers were asked to compare elementary schools in the Little Rock School District. They cited differences in resources, buildings, funding, Parent-Teacher Associations (PTAs), and support from the district. However, teachers agree the staff is equally as dedicated. These findings are important for better understanding the influence of economic status established by the quantitative methodology. These responses attempt to explain why low-income students have lower academic success and are therefore related to hypothesis one.

Discussion

The quantitative methodology finds a negative relationship between economic status and academic success regarding Little Rock School District elementary schools. The findings are strengthened because no relationship was found between academic success and the control variables: average class size, average years of teaching experience, and per-pupil expenditures. This supports hypothesis one over hypothesis two. Elementary schools that have a high percentage of low-income students tend to produce students with lower academic success than schools with a low percentage of low-income students.

Teachers' responses to questions from the second half of the interview are beneficial in relating the findings to sociocultural theory. They indicate economically disadvantaged students are hindered by their parents' work schedules, while non-economically disadvantaged parents positively influence their children's zone of proximal development in relation to academics and provide their children with more resources. Economically disadvantaged parents may work multiple jobs with inconsistent or evening hours. Consequently, they have fewer opportunities to

read to their children or help with homework. Non-economically disadvantaged parents are more likely to work a 9-5 and can be with their children in the evenings and partake in such activities. They are also more likely to have reached higher levels of educational attainment and therefore reinforce learning at home and be always aware of their children's grades. Parents' income does not directly affect a child's academic success, but indirectly in non-economically disadvantaged parents' ability to spend more time with their children and prioritize education. Their excess income allows them to fund effective PTAs, purchase their children better resources such as technology to benefit their educational experience, and provide their children with more experiences. Participant five explained how experiences are important to be able to relate to the material they are being tested on. Non-economically disadvantaged students also have access to more resources through the school district. Participant five described how her low-income school does not have enough desks and participant eight stated her students were not provided Chromebooks until the pandemic.

Teachers' responses to questions from the first half of the interview support hypothesis four over hypothesis three. Participants have overall positive opinions of their students. There are outliers, and although the outliers concerning economically disadvantaged students are more extreme, they are not enough to discredit such students' social success. The trends that appear throughout the interviews follow: students want to learn, they improve academically and socially, are overall creative, and socialize well. One outlier given for non-economically disadvantaged students is not being motivated because they had a difficult previous year. Outliers for economically disadvantaged students include not being concerned about grades until they were brought to their attention, girls being catty and nitpicking at each other, and overreacting because they are in a hyper state. Non-economically disadvantaged students are less likely to be involved

in school clubs because of a lack of finances, transportation, or space. However, such students do enjoy their schools' after-school programs and look forward to after-school events such as the fall fest. Economically disadvantaged students' behavioral issues are more concerning. Nevertheless, one category should not discredit the four categories where most economically disadvantaged students are thriving alongside their non-economically disadvantaged peers and one category where they have unequal resources. Consequently, hypothesis four holds; elementary schools that have a high percentage of low-income students tend to produce students with social success equal to that of schools with a low percentage of low-income students. Teachers' responses are also beneficial in relating the findings to sociocultural theory. Multiple teachers discussed how economically disadvantaged parents find a way to provide for their children and are willing to work with teachers. This illustrates how they can positively impact their children's zone of proximal development in relation to social success regardless of income.

Interviews are more complex than a quantitative methodology. Therefore, it is reasonable to presume more limitations are associated with the interviews. There were no questions concerning the control variables. This was realized after the interview questions had already been approved by the Institutional Review Board. Participants' responses lead to the conclusion that students' success is affected by factors related to their economic status. However, the additional questions could have been beneficial in determining if the control variables are also influential; although teachers would likely be hesitant to acknowledge the influence of class size and years of teaching experience.

The interview questions did not lean towards providing a lot of insight concerning teachers' sensitivity. Participant four did justify her students' lack of motivation and behavioral issues. She also acknowledged she has witnessed economically disadvantaged students being

treated differently by staff. Multiple teachers at low-income schools did acknowledge their students' unfulfilled needs, adverse childhood experiences, and trauma. This level of insight does not compare to that gathered about parents and resources. However, this is another topic that it would likely be difficult for teachers to accurately reflect on.

This research provides insight into the relationship between economic status and student success within the Little Rock School District. The research can be expanded to draw further conclusions. Regarding the Little Rock School District, further research can be done to explain the different levels of success between economically disadvantaged students at high-income students and those at low-income schools. This would be beneficial for gaining more knowledge related to different access to resources within the district. Research can be conducted to compare special education students to their counterparts. Participant two does teach special education; however, multiple special education teachers at low- and high-income schools would need to be interviewed to have a better understanding. This would be beneficial in gaining insight into whether economic status affects special education students and their counterparts the same or different. Researchers can attempt to reproduce this study on a different school level or in other districts and states to compare results. This would further test the applicability of sociocultural theory.

Conclusion

The initial thesis holds; economically disadvantaged students have lower academic success, but equal social success. It appears unfulfilled needs are not one of the main contributors to differences in academic success as previously written, but they do affect behavioral issues. The findings confirm economic status negatively impacts academic success, but they do not absolve the Little Rock School District. Public schools should be aspiring for all

their students to succeed. The Little Rock School District is currently practicing neither equality nor equity. Multiple teachers touched on differences in resources and district support. Further, the district must be aware of the differential levels of success and justifying them as a consequence of differential levels of economic status is not acceptable. They should be supporting economically disadvantaged parents and students so every student can succeed. The Little Rock School District must do better.

Works Cited

Adamson, Peter, Bradshaw, Jonathan, Hoelscher, Petra, and Richardson, Dominic. “Child Poverty in Perspective: An Overview of Child Well-Being in Rich Countries.” *Innocenti Report Card* 7 (2007): 1-48. Accessed May 24, 2021. https://eprints.whiterose.ac.uk/73187/1/Document.pdf.

Ansari, Arya, and Pianta, Robert C. "Variation in the Long-Term Benefits of Child Care: The Role of Classroom Quality in Elementary School." *Developmental Psychology* 54, no. 10 (2018): 1854-1867. Accessed May 21, 2021. https://doi.org/10.1037/dev0000513.

Bennett, William J. *First Lessons: A Report on Elementary Education in America*. Washington, D.C.: The Department of Education, 1986. Accessed May 15, 2021.

Chak, Amy. “Adult Sensitivity to Children’s Learning in the Zone of Proximal Development.” *Journal for the Theory of Social Behaviour* 31, no. 4 (2002): 383-395. Accessed July 2, 2021. https://doi.org/10.1111/1468-5914.00166.

Chen, Wen-Hao, and Miles Corak. "Child Poverty and Changes in Child Poverty." *Demography* 45, no. 3 (2008): 537-553. Accessed March 6, 2021. https://www.jstor.org/stable/25475989.

Daneshfar, Samran, and Mehdi Moharami. "Dynamic Assessment in Vygotsky's Sociocultural Theory: Origins and Main Concepts." *Journal of Language Teaching and Research* 9, no. 3 (2018): 600-607. Accessed February 9, 2021. https://libcatalog.atu.edu:443/login?url=https://www.proquest.com/scholarly-journals/dynamic-assessment-vygotskys-sociocultural-theory/docview/2041568996/se-2?accountid=8364.

Desmond, Matthew, and Bruce Western. “Poverty in America: New Directions and Debates.” *Annual Review of Sociology* 44, no. 1 (2018): 305-318. Accessed May 29, 2021. https://doi.org/10.1146/annurev-soc-060116-053411.

Ekstrand, Britten. "What It Takes to Keep Children in School: A Research Review." *Educational Review* 67, no. 4 (2015): 459-482. Accessed May 21, 2021. http://libcatalog.atu.edu:2097/10.1080/00131911.2015.1008406.

Entwisle, Doris R., and Leslie Alec Hayduk. "Lasting Effects of Elementary School." *Sociology of Education* 61, no. 3 (1988): 147-159. Accessed March 6, 2021. https://doi.org/10.2307/2112624.

Geswein, Amy, Marlisa Goldsmith, Macy Jenkins, and Dan Grossman. “Arkansas Takes over Little Rock School District.” USA Today. Gannett Satellite Information Network, January 29, 2015. Accessed October 10, 2021. https://www.usatoday.com/story/news/nation/2015/01/29/arkansas-takes-over-little-rock-school-district/22542995/.

Guerin, Benoit. “Breaking the Cycle of Disadvantage: Early Childhood Interventions and Progression to Higher Education in Europe.” *RAND Corporation* (2014): 1-26. Accessed May 29, 2021. https://doi.org/10.7249/RR553.

Kozulin, Alex, Boris Gindis, Vladimir S. Ageyev, Suzanne M. Miller, Roy Pea, John Seely Brown, and Christian Heath. *Vygotsky's Educational Theory in Cultural Context*. Cambridge: Cambridge University Press, 2003. Accessed July 2, 2021.

“Little Rock School District.” ADE My School Info. Accessed October 6, 2021. https://myschoolinfo.arkansas.gov/Districts/Detail/6001000.

Madrick, Jeffrey G. *Invisible Americans: the Tragic Cost of Child Poverty*. New York: Alfred A. Knopf, 2020. Accessed May 14, 2021.

Morrissey, Taryn W., and Katie M. Vinopal. "Neighborhood Poverty and Children's Academic Skills and Behavior in Early Elementary School." *Journal of Marriage and Family* 80, no. 1 (2018): 182-197. Accessed May 22, 2021. https://doi.org/10.1111/jomf.12430.

Murnane, Richard J. "Improving the Education of Children Living in Poverty." *Future of Children* 17, no. 2 (2007): 161-182. Accessed May 18, 2021. https://www.jstor.org/stable/4495065.

Noguera, Pedro A. “A Broader and Bolder Approach Uses Education to Break the Cycle of Poverty.” *Phi Delta Kappan* 93, no. 3 (2011): 8–14. Accessed May 29, 2021. https://doi.org/10.1177/003172171109300303.

Petrilli, Michael J., and Brandon L. Wright. “America’s Mediocre Test Scores: Education Crisis or Poverty Crisis?” *Education Next* 16, no. 1 (2016): 46–52. Accessed May 17, 2021. http://libcatalog.atu.edu:2062/login.aspx?direct=true&db=eue&AN=111378673&site=ehost-live&scope=site.

Rainwater, Lee, and Timothy M. Smeeding. *Poor Kids in a Rich Country: America’s Children in Comparative Perspective*. New York: Russell Sage Foundation, 2003. Accessed May 14, 2021. http://libcatalog.atu.edu:2062/login.aspx?direct=true&db=e000xna&AN=1069820&site=ehost-live&scope=site.

Ridge, Tess. “Living with Poverty: A Review of the Literature on Children’s and Families’ Experiences of Poverty.” *Department for Work and Pensions*, no. 594 (2009): 1-102. Accessed May 18, 2021. https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.470.3752&rep=rep1&type=pdf.

Smagorinsky, Peter. "Vygotsky and the Social Dynamics of Classrooms." *The English Journal* 97, no. 2 (2007): 61-66. Accessed February 10, 2021. http://www.jstor.org/stable/30046790.

Smeeding, Timothy M. "Sociology of Poverty." *LIS Working Paper Series*, no. 315 (2002): 1-15. Accessed May 24, 2021. https://www.econstor.eu/bitstream/10419/160987/1/lis-wps-315.pdf.

Van der Berg, Servaas. "Poverty and Education." *Education Policy Series* 10 (2008): 1-28. Accessed May 24, 2021. https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.464.9607&rep=rep1&type=pdf.

Van der Berg, Servaas, Cobus Burger, Rulof Burger, Mia de Vos, Gideon du Rand, Martin A. Gustafsson, Eldridge Moses, et al. "Low Quality Education as a Poverty Trap." *Stellenbosch Economic Working Papers*, no. 25 (2011): 1-20. Accessed May 14, 2021. https://ssrn.com/abstract=2973766.

Van der Veer, René. "The Concept of Development and the Development of Concepts. Education and Development in Vygotsky's Thinking." *European Journal of Psychology of Education* 9, no. 4 (1994): 293-300. Accessed February 9, 2021. http://www.jstor.org/stable/23420125.

Wallenstein, Roger. "Educating Students of Poverty: One School's Story." *Schools: Studies in Education* 9, no. 2 (2012): 160–175. Accessed May 22, 2021. https://doi.org/10.1086/667913.

Wong, Yu-Cheung, Ting-Yan Wang, and Yuebin Xu. "Poverty and Quality of Life of Chinese Children: From the Perspective of Deprivation." *International Journal of Social Welfare* 24, no. 3 (2015): 236-247. Accessed May 15, 2021. https://doi.org/10.1111/ijsw.12115.