Fall 2022

When Smart Kids Fall Behind: Root Causes and Remediation

Victor T. Logan
Eastern Kentucky University, victor_logan2@mymail.eku.edu

Follow this and additional works at: https://encompass.eku.edu/honors_theses

EASTERN KENTUCKY UNIVERSITY

When Smart Kids Fall Behind: Root Causes and Remediation

Honors Thesis

Submitted

In Partial Fulfillment

Of The

Requirements of HON 420

Fall 2022

By

Victor Tyler Logan

Faculty Member

Dr. Richard Day

Department of Teaching, Learning, and Educational Leadership

When Smart Kids Fall Behind: Root Causes and Remediation

Victor Tyler Logan

Dr. Richard Day, Department of Teaching, Learning, and Educational Leadership

Absenteeism, alongside root causes such as socio-economic status and health indicators, is a primary driving force in young students falling short of academic goals, particularly in elementary and middle school. Determining the root causes of this chronic absence, and the mechanisms by which it hinders student achievement, is necessary to effectively fight back. Which sources of absences are preventable? Which are not? Is it better to construct a system of remediation that broadly addresses the challenges these students face, or to develop multiple smaller systems designed to more specifically target the needs of students based on their particular situation? These are the decisions that must be made to provide these students with the same opportunity for success as their peers who are not facing the same obstacles. Examining existing literature regarding third-party remedial programs as well as examples of school-system centered programs allows for a comparison to emerge, identifying aspects of each that have worked and the contexts in which they have been effective. Funding, reliance on home environments, and teacher involvement are all critical facets for development of a remediation method that helps the largest number of students to the greatest extent in catching up to their peers and getting back on track to academic success.

Keywords and phrases: remediation, absenteeism, truancy, health indicators, socio-economic status.

Acknowledgements

I'd like to thank my daughter, Miley, for inspiring my work and providing endless motivation to move forward. I would also like to thank my wife, Jessica, for putting up with the chaos associated with taking on this project and helping to prop me up no matter what. Lastly, I want to acknowledge Dr. David Coleman for providing me a rare second chance, Dr. Richard Day for helping me find my footing, and the late Dr. Bruce MacLaren for shaping me into the sort of person who might accomplish things such as this, despite how dubious he may have found me at times. My greatest achievement has been surrounding myself with such incredible individuals, who have shaped and supported me endlessly.

Chronic absenteeism, especially in children in elementary and middle school, is a leading factor in subpar academic achievement among young students. While this fact is broadly accepted, there is comparatively little consensus on the best way to address the issue. A significant contributor to this discord amongst educational systems is the diversity of reasons for the missed school days. A very common cause for absenteeism, and perhaps the primary driving force behind most existing remediation mechanisms at the moment, is due to a lack of importance placed on education by the parents or guardians of students. Absenteeism can result from a general lack of interest but is often also due to precarious economic situations within the home. A multitude of other possible causes for absenteeism exist as well, such as issues caused by relocation as well as large spans of time missed due to chronic illnesses or injuries. This diversity in causation has contributed to a largely uncoordinated series of efforts to address the academic disparity generated by absenteeism among these affected students, particularly in reading comprehension and fundamental math skills. As a result of the

disjointed efforts to address absenteeism, it is the case that all too often that students

are left to slip through the cracks of systems not optimized to address their specific

needs. In order to effectively help remediate students who have fallen behind in school,

often due to circumstances out of their control, there must be a coordinated effort to

identify systems that are flexible and broadly applicable enough to assist students from

a variety of backgrounds. Students' individual needs vary significantly based on the

environment of the school system, and as such, the best method for effective

remediation is to tie solutions to the school system itself via after-school programs that

capitalize on the familiarity of the teachers and administrators to best help students on

an individual basis.

While there is little research into big picture and small picture remedial

approaches, a treasure trove of insights into the effectiveness of various possible

solutions to the challenges absent students face exists and can be drawn from. The first

order of business is to look for evidence that consistent absenteeism contributes

meaningfully to academic setbacks, and furthermore that those setbacks are likely to

come to be regardless of the specific source of the absenteeism. While it may seem

obvious that repeated long-term absences will damage a student's academic

experience, it is worth acknowledging the extent to which those experiences differ

between students who miss because education is not a priority at home and students

who miss because of unavoidable issues, such as surgeries and chronic illnesses. In

Kirsten Hancock's article "Does the Reason Matter" in *The British Educational Research

Journal*, she asserts that absenteeism affects the education of students fairly uniformly

regardless of reason. Further, she insists that understanding that fact and tailoring a more generalized approach to manage the remediation necessitated by these absences is more critical than the common approach of trying to control the absences themselves, which are often out of the control of the students. Punishing students, or their families, for this missed school time is far less effective than working to adjust the infrastructure of the school system to help get those students back on track. In another article, *Associations between School Absence and Academic Achievement*, Hancock examines nearly 90,000 student records in Western Australian public schools to glean insight into the impact socio-economic status has on academic achievement and found that socio-economic standing had less impact across the board than the absences themselves. This strongly suggests that, rather than speculating about unmotivated students from poor or disinterested households, the focus should be on developing systems to reach out to these students and get them back on track. Socio-economic disadvantages, just like unsuccessful medical remedies and other causes for truancy, do generate an unequal academic experience among students. However, it is the missed school itself that generates that inequality and should be the primary objective when looking to resolve those issues.

Moving from an acceptance that a more flexible approach to remediation that focuses on addressing the academic struggles of students who, for one reason or another, have missed a significant amount of school is better than focusing on preventing the absences themselves, it is best to examine the specific needs that tend to be most critical for those students. Reading comprehension and fundamental math

skills tend to be the most critical gaps that form when elementary and middle school age students miss large quantities of school. These skills tend to be the building blocks for much of these students' future educational endeavors, and if they are allowed to remain behind those gaps will grow as they are ill-equipped to learn more complex topics. Sylvia Abbot, in her article *It's never too late to remediate*, focuses on teaching word recognition to students with reading disabilities, specifically dyslexia, in grades 4 to 7. Many of the tenets proposed by Abbot are perfectly applicable to students who have fallen behind in their reading comprehension due to prolonged or consistent absences from school as well, suggesting that focusing efforts on helping these students even as they grow older, a commonly accepted barrier to remediation, can be effective. Reading comprehension becomes an exponentially growing struggle for students that bleeds into their other disciplines more and more as they progress through their school careers, making it the single most important factor when focusing remedial efforts. A student who has poor literacy will perform poorly on standardized tests, which can impact the school's funding in many school systems, as well as struggle to develop skills that will aid them as they prepare to move into the real world such as interview skills and resume or job application proficiency. Just behind literacy in importance, basic fundamental math skills are a critical component to a student's continued success both inside and outside of the classroom. In the British Journal of Developmental Psychology article *Assessment and conceptual remediation of basic calculation skills in elementary school students*, Karakonstantaki analyzed the cognitive underpinnings of math skills and shortcomings of students from grade 3 to 6 and concluded that grade 4 tends to be

a critical turning point in math education. While students have different circumstances that may require remediation on a different timeline, its evident that for math education specifically it would serve students well for the school infrastructure to use 4th grade as a key focal point for remediation efforts. This study looked specifically at the MyMath intervention method, but studies such as those outlined in J.S. Kim's article *A randomized experiment of a mixed-methods literacy intervention for struggling readers in grades 4-6*, suggest that third-party remediation mechanisms perform roughly the same as district after-school programs. Given that, going through the school system to incorporate the trusted educators into the process is an effective way to ensure at-risk students get the individualized attention they require.

Identifying which factors contribute to repeated absenteeism, and consequently consistent academic underperformance, in elementary and middle school age students is a necessary first step towards constructing a system that works effectively towards remediating those students and ensuring their math skills and literacy are sufficient so as to not hinder their future education. Rather than using additional resources to prevent the truancy, which tends to target certain subsets of students while ignoring those with medically based absences, programs that focus on the remediation itself are more impactful and more likely to help keep these students on track. Additionally, working through the infrastructure of the schools themselves and including educators who know, and are more likely to have a bond with, the students has proven to be at least as effective as third-party systems. School systems, and the needs of the students within, also vary dramatically based on the region they exist in. That context matters

and a school system is more likely to be flexible when aiding each student on their individual needs than an external process. That said, some excellent remedial programs exist and should be incorporated into school system's methodologies as appropriate. Ultimately, the primary objective should be to ensure students with certain home lives, medical needs, or other limitations are not left to slip through the cracks of our educational system. School is meant to prepare students for success as they move forward with their lives and not assisting, in a logical and effective manner, those in need sets them up for failure.

The cascading impacts of chronic absences on young students can be seen even as early as three- and four-years old. A study recorded by Arya Ansari and Kelly Purtell in their article "Absenteeism in Head Start and Children's Academic Learning", published in the journal *Child Development* in July of 2018, examines the data from the Family and Child Experiences Survey 2009 to determine the impact of missing days of school on their academic development. In their research, it was discovered that consistently among the 2842 students involved in the survey, those who missed more days of school demonstrated fewer gains academically. This phenomenon was particularly true for the areas of math and literacy during the preschool year. This study also looked into the impact of the Head Start program, a program initially instituted by President Lyndon B. Johnson in 1965 as part of his War on Poverty, and how that impact can be hindered by this absenteeism. One interesting deviation in this study compared to many others that focus on a slightly older base of students is a relative consolidation of motivation behind the missed school. The research found that a significant portion of the missed school

days resulted from a belief among parents that early childhood programs are either not school or were less critical than later schooling. Additional estimates discussed in this study regarding preschool attendance in urban communities suggest this belief is reflected on a larger scale. The extent to which parents discount the value of preschool is difficult to ascertain because the majority of school attendance literature tends to focus on the K-12 educational system, but it is clear from the existing literature that does exist on preschool attendance that failure to consistently attend school at an early age result in disadvantages academically. The capacity and ease of social integration and inter-generational bonding between students and teachers can set the stage for the relationship a student has with education for the remainder of their development. Taking this study into consideration, a narrative begins to form in which young students who miss significant amounts of school lose traction in their education, causing them immediate damage to their fundamental skills, both in their education and in their social development, as well as generating a compounding negative impact for future academic progress. This effect is more pronounced in elementary and middle school aged students than in older students, and this study suggests that the potential for slippery slope begins even earlier and, critically, is not taken as seriously by parents who might demand more strict attendance for their children only a couple of years later, not realizing the disadvantages they have already enabled.

Chronic Absenteeism differs meaningfully from truancy from a legal standpoint, and as a result it has historically be managed differently as well. Truancy, which results from an accumulation of unexcused or unexplained absences, is well known to be a

phenomenon monitored by school systems due to studies proving those students are less successful in school, and truancy carries with it potential legal issues for the parents of these students. Comparatively, chronic absenteeism, defined more broadly as any large number of absences regardless of cause or status as excused or otherwise, is less closely monitored. Additionally, there is no codified definition or policy for how to manage chronic absenteeism within American education codes, unlike truancy. This disparity in how seriously large-scale absences are taken depending on source is mentioned in the *Education Policy Analysis Archives* journal "The Dynamics of Chronic Absence an Student Achievement" by Rebecca London, Monika Sanchez, and Sebastian Castrechini. By using the dearth of established literature on the associations of truancy and academic performance and applying those same principles to, working alongside California boards of education, develop a study to confirm the impact of absences on student academic progress. Similar studies modeled to examine truancy and its impact students are designed to acknowledge factors that predict those absences, such as family conflict, perception of family cohesion, and lack of consistent and effective discipline in the household, in addition to the presence of a single parent. In addition to the domestic factors, they examine school related elements such as the lack of positive relationships with school personnel and academic placement issues. Those studies have found that those factors are interconnected and contribute to issues with academic performance and negative peer involvement, both with bullying and relationships with delinquent peers. The studies being developed along this model to learn more about the impacts of chronic absenteeism will look to explore similar factors and determine if the

impact of academic successes is similarly affected. While the factors may align somewhat, general absenteeism likely has a different range of primary motivators than truancy, such as chronic medical needs, that are relevant when determining the impact it has on students and, ultimately, the best methods for remediation for these effected students.

Similar studies were conducted in other parts of the United States, as the understanding of the diverse drivers of chronic absenteeism and the consequences associated began to increase. One such study conducted in several large school districts in Ohio, outlined by Douglas Roby in his article "Research on School Attendance and Student Achievement: A Study of Ohio Schools" published in *Educational Research Quarterly*, approached the subject with a hypothesis that the positive impact of good school attendance on the academic achievement on students may be greater even than previously understood. From that, it is simple to derive that the negative impact on those students with poor attendance may be more dramatic than assumed. Importantly, this study acknowledged a number of possible reasons for sustained absences including illness and family deaths. This study looked into student achievement by analyzing proficiency test averages in 4th, 6th, 9th, and 12th grades, each time comparing student assessments with attendance to determine the deltas being formed. In the school districts of Cincinnati, Columbus, Dayton, and Toledo the top three and bottom three schools, in terms of academic achievement, were observed and in each case the schools that had a higher proficiency test score also had a higher student attendance average. Interestingly, the studies found that, overall, smaller schools had a higher average

student attendance rate. There is an acknowledgment that further data is needed to conclude the need to understand the interaction of attendance, student achievement, and school size, but its clear that a smaller school typically corresponds with a larger focus on community and student relationships with educators. These factors all traditionally align with higher student achievement and fewer students slipping through the cracks. Something to consider with this data is finding ways to simulate these positive experiences in larger school systems, which can also help offset some natural disadvantages students in low-income domestic environments.

Continuing to explore the impact a school system can have on the achievement and needs of its students, Rebekah Wilson, in her article "Student Absences and Student Abscesses: Impediments to Quality Teaching", published in *Urban Review*, takes a primary school in northern England and examines the pressures both internal and external. This particular school system performed well below national expectations on standardized testing and was under pressure from the Local Authority, a body of local government in the UK, to raise standards. Wilson's investigate showed the school system in question re-examining student learning needs in order to rebuild the curriculum with an eye for addressing inequitable opportunities within the urban school system, as well as understanding the high degree of context necessary to improve the school for the students struggling most. In these urban environments, students can exist in a wide range of socio-economic spheres and the influence that has on the resources a student brings to the table, both at school and at home, cannot be overstated. The larger scope this study points to is that many student populations are diverse in their

resources and their needs, and an effective means of education, both baseline and remedial, must involve a certain degree of broad application and modularity to meet those needs.

Delving further into some of the potential root causes of chronic absenteeism, and the varied consequences involved, it is evident that income inequality is a significant contributor to uneven academic success. In the article "Family Income, School Attendance, and Academic Achievement in Elementary School", published in *Developmental Psychology* by Taryn Morrissey, Lindsey Hutchison, and Adam Winsler, it is outlined how achievement gaps between children living in low-income environments compared to more well-off homes begin very young and widen with age. School attendance is a substantial contributing factor to this gap in success and tends to be a much larger issue for students in lower income homes. In general, the study analyzed data that determined a household income increase of $1,000 was associated with a 2.1% increase in children's math test scores and a 3.6% increase in reading test scores. While there are other factors at play, such as lower income families having less available time to help their children with schoolwork, it is clear that some of that disparity is a result of the increased absenteeism seen in lower income households. Income's effect on attendance is challenging to cleanly identify, but neighborhood and societal characteristics likely play a role. Low-income families are more likely to live in dangerous neighborhoods and are more likely to be exposed to violence, which can make getting to school safely more troublesome. Further negative stressors such as gang activity and drug exposure, combined with a comparative lack of positive role models and

institutional resources, can impact truancy or absenteeism. The study suggests that, regardless of cause, students who miss school frequently, defined here as being present less than 80% of school days, score 20 points lower on reading achievement tests compared to those with close to perfect attendance.

Building on the work done in Morrissey's study, Annemarie Rujisbroek's article "School Performance: A Matter of Health of Socio-Economic Background? Findings from the PIAMA Birth Cohort Study", published in *PLOS One* alongside Alet Wijga, Ulrike Gehring, Marjan Kerkof, and Mariel Droomers, looks into the relative impact of income inequality and health issues on school performance, with missed school days being a major contributor to both. The Dutch PIAMA birth cohort study mentioned a variety of health indicators, such as eczema, asthma, weight, chronic respiratory infections, all of which potentially contributed to school absence. It also accounted for socio-economic status for students, determined by highest attained educational level of the mother and father. With both of those factors in mind, 1,865 children were evaluated by scores on a standardized test and standardized with Z-scores in order to compare the impacts of the two driving forces in question. Interestingly, the findings of this study suggested that the socio-economic standing of students, or rather the educational levels of their parents which was found to be a reliable correlation with socio-economic status, had a stronger direct influence on student academic success than childhood health indicators. This does not consider the detriment caused by certain health concerns to attendance, the negative impacts of which have been discussed by other peer-reviewed studies. Nevertheless, the relationship between socio-economic status and academic success

should not be ignored. Understanding the reasons various student groups fall behind is critical for developing remediation plans that account for a variety of needs. A student whose difficulties stem from a non-supportive domestic life may not respond to a remedial technique tailored for students who have missed a lot of school but are otherwise motivated and supported. Ideally, a system that can account for many different sources would be in place so that fewer students fall through the cracks.

Health factors can influence the academic career of students in a wide variety of ways, depending on the specific nature of the issues and how those impact attendance or other facets of education. In "Factors Promoting or Potentially Impeding School Success: Disparities and State Variations for Children with Special Health Care Needs", Christina Bethell looks into the factors that can cause academic impediments for children with special health care needs (CSHCN). Bethell determined that this class of students needs specific attention, described as "complexity and presence," in 3 categories: emotional problems, behavioral problems, and developmental problems. The 2007 National Survey of Children's Health, the study at the center of Bethell's work, determined that roughly 60% of school-age students received all three categories, but that number drops to 51.3% for CHSCN and further to 36.2% for those CHSCN who experience more complex service needs and behavioral concerns. Across the board, CHSCN were more likely to face obstacles to school success than their peers. However, CHSCN in states requiring case management in schools for students with disabilities were considerably less likely to require grade repetition. Additionally, the disparities between CHSCN and non-CHSCN in terms of academic success were fairly broad from

state to state. Ultimately, it is clear that there exists a wide range of threats to school success for students and that certain groups of students are more vulnerable to those factors. As a result, this study and Bethell herself recommend "broad, non-condition specific efforts" to work towards student success. This logic extends to many remedial considerations, as attempting to address each potential issue on an individual basis would be a futile and exhausting effort. Given that preventing every medical condition, socio-economic situation, and other barriers to success is not realistic, it seems clear that pursuing more broadly applicable solutions that are effective after the fact should be the priority.

There are several angles by which to examine the relationship between health and academic performance, with co-variables such as absence or necessity of additional resources to consider as well. One angle, relating to the physical fitness of students, is explored in "Associations between Health-Related Physical Fitness, Academic Achievement and Selected Academic Behaviors of Elementary and Middle School Students in the State of Mississippi", a journal article published by Lindsey Blom of Ball State University, with several international colleagues assisting. Blom suggests, after analysis of a Mississippi study of 2,992 students from varied backgrounds, that the physical fitness level of students has a tangible impact on attendance, disciplinary action, and standardized test scores in Language Arts and Math. In this case, the majority of the negative correlation between fitness and academic success is tied to the increased absence associated with poor fitness. Whether it is due to an increased risk of injury, a higher rate of illness, or other factors, it is clear at this point that poor

attendance will generally translate to damaged academic achievement. Therefore, this study provides an interesting breakdown that ultimately falls under the umbrella of established correlations. Blom and company use the findings here to present a case for increasing and improving physical education in school systems to address the negative impacts on display. Improving PE programs is a virtuous goal, but in terms of preparing schools to best help students who are struggling academically, a broader approach would be more effective.

Further examining the relationship between students with disabilities (SWDs) and academic achievement, specifically by way of increased absenteeism, Michael Gottfried's article, "Showing Up: Disparities in Chronic Absenteeism between Students with and without Disabilities in Traditional Public Schools" evaluates a study he led which utilized a massive sample size of 653,736 students over 6 years in the New York City public school system to better understand how SWDs fare as compared to students without disabilities in a traditional school structure. Gottfried here defines "chronic absenteeism" as missing 10% or more of the school year and determined that SWDs were dramatically more likely to meet this definition as compared to their peers in a traditional school. Additionally, there was critical heterogeneity between the classifications of disability. In particular, students with tendencies for emotional disturbances exhibited very high rates of absenteeism. Students with learning disabilities, the largest subcategory of SWDs, were found to have very poor attendance. These findings are problematic because these student groups are already vulnerable to hindrances to academic achievement and, for many of the same reasons they suffer

greater absenteeism, are at higher risk of not receiving the necessary additional resources to undo the damage done by the missed schooling. Of interest, SWDs who operated in classrooms that were primarily comprised of their peers without disabilities had fewer instances of chronic absenteeism than those who were placed into separate special education classrooms. The growing trend is to provide SWDs with as much traditional educational experience as possible, accounting for variations between subcategories of SWDs. Much of the old-fashioned special education experience can have negative impacts on the attendance and achievement of groups of students who are already vulnerable. This is a critical point of understanding, and further points to a broader approach to remediation, one that operates alongside traditional academic practices, being more effective for the largest number of students.

There are a lot of health indicators that can have various influences on achievement in school, but perhaps the most common and expected category of those factors is illness. Students who are ill miss school and face the task of "catching up," which is largely out of their control. Extrapolating, a student who faces frequent and/or extended illnesses is going to be faced with even more attendance issues and the resultant academic detriment will escalate as well. Lennart Ohlund and Kerstin Ericsson discuss this topic at length in their *Journal of Genetic Psychology* article "Elementary School Achievement and Absence Due to Illness", identify correlations between poor student attendance and poor performance in both arithmetic and verbal evaluation. One avenue taken by Ohlund and Ericsson in the course of this study is the distinction between three groups of students with poor attendance. First, and most broad, among

these is absenteeism, which takes into consideration all absences regardless of cause or legitimacy. Second, defined as absence from school while concealing it from parents or guardians, is truancy which is a well-established issue with legal consequences and no shortage of investigative literature. Lastly, they address the concept of "school refusal," which is an absence with the knowledge of parents or guardians, often a result of complaints by the child, such as headaches or stomach pain, that aren't necessarily backed by a medical explanation of the symptoms. The latter two categories are primarily associated with unexcused absences, though truancy is typically associated with juvenile delinquency while school refusal is more likely to be indicative of psychiatric disorders of some magnitude. While these findings remain consistent with previous assertions, that illness increases absence which in turn hinders the school success of students, it is noteworthy that the degree of delinquency or parentally sanctioned absences can dictate some of the specifics on how the process of getting these students back on track needs to go. Delinquent students are more resistant to traditional remediation and may require a more dedicated approach to reshape their perspective on education, and students whose parents are involved in some of the challenges facing them may require the school to communicate those needs directly to the parents in hopes they can be a positive influence during the remediation process.

In "The Prevalence of Sickness Absence Among Primary School Pupils – Reason to be Worried?," Esther Piji explores the relationship between sickness in students and facets of their education. The study analyzed a sample of 1000 students in the West-Brabant region of the Netherlands and found that 85% of students in mainstream

primary schools experienced sickness-based absence. In most of those cases, sickness was the most common reason for absence among students and as many as 13% of students were reported to have experienced "extensive" sickness absence which is well documented to have strong negative implications for student academic success. Similar to standards still common in the United States, Dutch legislation differentiates between truancy and authorized absence, such as that due to sickness, and does not have a systematic approach to addressing the latter. Students who are reported sick, or otherwise absent, for more than 9 days per school year are at a significantly increased risk of negative consequences both academically and socially, as disruption to normal social interactions with peers can have a negative influence on development. An interesting aspect of sickness-related absence examined by Piji in this study is how other elements, including student age, parental education, and ease of access to a doctor, change student experiences. In general, the study found that lower student age resulted in higher rates of absence due to sickness. Younger students are more vulnerable to various common contagious illnesses and parents of young children are more likely to keep them at home in the event of mild illness. Lower parental educational scores are also associated with higher absence due to illness, possibly because of the correlation with lower socioeconomic status and the cascading effects that can have on a student's health and academic career. Finally, easy access to a doctor resulted in a greater willingness to keep a student out of school in order to be evaluated. This typically results in fewer illness-related absences overall because the span of absence tends to be reduced by professional medical attention and treatment.

One element of school success not discussed as often in literature, compared to the impact of socio-economic status or similar broad factors, is the requirements of schools to ensure that immigrant students as well as linguistically diverse student populations have their educational needs met. Often, especially in school systems with relatively culturally homogenous student bases, students that do not fit the mold are fundamentally disadvantaged. In "Using Institutional Structures to Promote Educational Equity: A Tale of Two Schools", John Ippolito examines this very issue through a study that focused on two Ontario school systems with divergent models for managing these vulnerable groups. In one case, the school utilized an enrichment program designed to take these students and immediately get them on track starting from where they are. In the other, the school took a more remedial approach for students within this group that were deemed impacted enough by their situation to warrant inclusion. As the study progressed, both approaches proved to be effective in helping students better meet the academic goals of the school systems. The enrichment approach was more effective for some students, proving to be a highly impactful framework for literary improvement. There were gaps, however, for students whose cultural and linguistic differences proved to be major barriers to seamlessly continuing their education. For such students, who come from backgrounds that translate to being behind from the start as they transition to these new schools, the remedially minded approach proved to be more effective. Being able to backtrack and address more fundamental inequities was an important step in giving those students a fair chance of success in a new environment. Students from immigrant or linguistically diverse backgrounds, similarly to students from

challenging socio-economic backgrounds, have varied needs and ideally are operating within a flexible system prepared to maneuver those difficulties and give them chances to succeed. A social component present here, that can also exist in other scenarios involving culturally or socio-economically diverse students, is the need to ensure that the students' background and identity are not costing them opportunities due to prejudice.

Hayati Akyol outlined some commonly utilized remedial tools in his article "Reading Difficulty and Its Remediation: A Case Study", published in 2019 in the *European Journal of Educational Research*. This study, which spanned 38 lesson periods, sought to design a system for remedying reading problems and developing reading skills in fourth grade students by way of sound, syllable, and word recognition exercises. Specific strategies utilized by Akyol and colleague Yasemin Boyaci-Altinay to cultivate improved literary skills included "prior listening to the paragraph", "repetitive reading", and "word repetition". Additionally, an "Error Analysis Inventory" was the primary means by which reading errors were determined. The data from this study was collected by direct observation and document examination, accompanied by audio and video recordings of all exercises. Overall, this intervention resulted in students who gained confidence to read aloud, identify sounds not previously recognized, improved general reading skills, and reported an increased desire to read. This is unsurprising, as confidence and self-esteem play a significant role in a student's relationship with the academic skills taught in school. Often a student who has fallen behind will continue to lose ground because their perspective on school sours due to lack of confidence in their

own ability to succeed. Working to improve that confidence is a critical component of any intervention.

Beyond using reading competency as an indicator for possible remedial intervention, a student's relationship with reading on a broader scale can play a large role in how those skills are developed as well as how any remediation should be structured in order to be maximally effective. For the first time in modern history, fewer than 50% of adults read literature for pleasure and those rates drop dramatically in younger individuals. This represents a possible trend in anti-intellectual mindset that both serves to contribute to an underinformed and independently minded populace as well as hinder the development of reading skills in elementary and middle school age students. This phenomenon is further examined by Michael Roberts in his article "Reading Attitudes and Instructional Methodology: How Might Achievement Become Affected?", who identifies two primary goals: instilling the necessary reading skills into students and developing a sense of enjoyment towards reading. Roberts' work begs the question: "Does our instructional method teach reading at the expense of enjoyment?" The necessity of not only finding an appropriate and effective method of reading instruction, but also of one that encourages rather than discourages reading for enjoyment is a tall hurdle for an already difficult task, but one that must be considered if we are to avoid continually decaying reading skills. Students' relationships with their academic subject matter applies to math skills development and remediation as well, but due to the relative lack of "math for casual enjoyment" it does not strike an exact mirroring of the issues surrounding reading skills and enjoyment.

With further consideration given to the role of self-esteem in academic achievement and students' response to remedial attempts, the journal article "Peer Tutoring in Reading: The Effects of Role and Organization on Two Dimensions of Self-Esteem", published by Miller, Topping, and Thurston in *The British Journal of Educational Psychology* looks to elucidate the effects that incorporating of peer tutoring can have on self-esteem and the resultant boost to school success. Paired Reading is the primary process this study is centered around, representing an extensively researched application of peer tutoring that has well-established efficacy across a range of outcomes. This study, given that the improvements to key reading skills and self-esteem are well documented by this technique, looks instead to examine the exact nature by which the self-esteem of students can be influenced and ways to apply those positive outcomes to a wider range of remedial methods. The study determined that a two-dimensional model, by which two same-grade students work to teach each other and trade roles as tutor vs. tutee, is a critical element of its remarkable success. By exposing students to peers who may also be struggling, or at least to students alleviating the fear of embarrassment or judgment that many students experience, this system allows students to make strides in important skill sets. This methodology could be easily applied to other subjects, such as fundamental math skills, to a similar effect due to the critical point of efficacy that lies within the structuring itself. Students historically respond better to trusted educators, as fear of judgment is not as much of a factor. That is elevated further here and can serve as an important reminder to students that they

are not alone in any struggles they may be experiencing academically, regardless of the

root causes driving them.

Developing consistently effective methods for assisting students who have, for

any number of identified reasons fallen behind in school, is certainly a necessary and

valuable endeavor. It is also valuable to have systems in place to identity at risk students

in an attempt to intervene before too much damage has been done. Furthermore, being

equipped to recognize when current techniques are not effective for specific students

and adjust to ensure nobody slips through the cracks is important. In a case study

surrounding a specific second grader referred to as "Ray" whose pre-test scores in a

larger study were too low for inclusion, Laura Ashcroft's article "Preventing School

Failure by Enhancing Reading and Social Skills", details a four-week treatment that

ultimately proved to be a promising addressing of both the academic difficulties the

student was experiencing and some behavioral issues, both resultant and contributing,

afflicting them. In this case, Ray was an English-language learner, having Spanish as a

first language, and the added challenges that can arise for students in that position have

been well documented. For Ray, it was determined that part of the instigating issue was

low stamina for reading, which was causing him to lose focus and exhibit reduced

participation in the second half of his lessons. When he was given additional attention

and resources, he quickly improved on his behavioral concerns, undergoing a significant

reduction in these tendencies within only three lessons and replacing them with positive

behaviors more conducive to meeting his educational goals. Such an individualized

approach was made much more practical due to an existing remediation study that was

easily modulated into a version that better suited Ray's needs. Developing an approach

to remediation that seeks to best serve the largest number of students often means

creating a flexible system that educators can adjust in predetermined ways to ensure

that students from any background can have their needs met and be given the same

opportunities as their peers.

It may seem obvious, but the most direct influence on a student's relationship

with school is their domestic environment. In particular their parent or guardian, though

other close family members such as siblings can play a major role as well. There is

plentiful literature regarding how parental influence can determine the path a student

takes and the specific nature of challenges those children face as they make their way

through school. Parental education status, both as an indicator of socio-economic status

and the degree of priority placed on education within the household, is a known factor

in both initial student success as well as the effectiveness of various remediation

intervention techniques. Taking that a step further, Teresa Jayroe outlines, in her article

"Family Members as Partners in an After-School and Summer Literacy Program", the

benefits of educators forming partnerships with parents to elevate the effectiveness of

reading skills development outside of normal school hours. As much as it is preferable to

involve educators, who are trusted by students and can operate relatively agnostically

to potentially difficult home lives, in interventions for struggling students, the resources

are not always available to do so to the extent needed by these children. From there,

one potential way to bridge the gap is to include parents directly and have them work at

home on some of the activities designed to assist their children. Doing so as an

extension of work being done within the school itself and being in consistent contact with the teachers throughout the process is a key to success in this endeavor as parents alone are not necessarily equipped to best identify the academic needs of their children, regardless of how well-intentioned they may be. Jayroe acknowledges that part of the issue with relying on this approach is that all too often, students who are struggling in school are not in home environments that are especially conducive to turning that trajectory around. Jayroe's approach seeks to give students additional resources not just to help them but to open up a line of communication with parents who might just be ill-equipped to proactively manage their child's educational needs, rather than being incapable or unwilling. and help them work with teachers to allow both parties to better serve the needs of the students.

In another article, "Purchasing Power: One School District's Decisions to Purchase Three Reading Programs", Theresa Jayroe and co-author Devon Brenner delve into an interesting situation that occurred in the Thomas School District in Georgia during the 2000-2001 school year involving the unusual use of funding, largely due to the No Child Left Behind program, to purchase three separate third party supplementary literacy programs. The programs themselves, the McGraw Hill Breakthrough to Literacy vocabulary books meant to be completed at home, the Open Court scripted reading phonics workbooks, and the Lightspan Adventures interactive literacy development discs compatible with the Sony PlayStation game console, were all designed to be taken home by students identified as not meeting the school system's criteria for reading skills and help them meet benchmarks. On the surface these seem

like potentially effective remedial resources, but there were a number of criticisms regarding the decision-making and implementation of these third-party methods. Chief among these complaints was the near-total lack of coordination with educators regarding their recommendations for additional resources. Teachers were not given an opportunity to weigh in on the specific programs being ordered, nor were they effectively included in the implementation of them, instead having the students take these books and discs home with the expectation that time is spent working on them, either independently or alongside parents. A number of issues, predictably, arose from this approach as often the students who had fallen behind in school did not come from domestic environments that were well-suited to incorporate this added schoolwork. In some cases, specifically with the Lightspan Adventures discs, socio-economic barriers became evident as many students in need did not have access to the video game console required to utilize the materials, regardless of willingness to do so or levels of parental involvement. All told, the primary lesson to take away from this situation is that, while allocating funding for the benefit of wayward students is a positive, educators must be included in the decisions and implementations because they interact with these children daily and are best suited to recognize and address their needs. There is plenty of merit to third-party remedial materials, including the three central to this somewhat disastrous circumstance, ,but in many cases, the effectiveness of these in practice is highly variable based on how students were introduced to them and supported while working through the programs.

Looking further into comparisons between specific remedial methods, in this case without the same critical bent regarding the wisdom of acquisition, Virginia Berninger and colleagues examine various reading supplement options available through Weschler and Woodcock Reading in her article "Comparison of Three Approaches to Supplementary Reading Instruction for Low-Achieving Second-Grade Readers". The approaches in this study being compared for efficacy are the Woodcock Reading Mastery Test-Revised (WRMT-R) Word Identification and Word Attack subsets as well as the Vocabulary subset of the Weschler Intelligence Scale for Children-Third Edition (WISC-III). In each case, a portion of the sample student population, which was established via referral from educators who identified these students as at-risk during routine skill checks, was given a pre-test to determine their level going into the study and then given instruction consistent with a given instructional method. After the instruction was complete, they were tested again, and those post-test results were compared against an untreated control group as well as normalized to be measured against the other methods in question. Word identification is a technique by which students are taught to determine the context of a word by replacing the word in sentence with the word "blank" and then making efforts to sound it out phonetically. In word attack, unfamiliar or, in some cases, pseudo words are given to students who then go through letter by letter making the corresponding sound before blending the sounds into the complete word. In both cases of the Woodcock Reading Mastery Test, phonics plays a significant role. Interestingly phonics, which was phased out to an extent in reading education, has begun to rise in popularity again in recent years. The Weschler

test was more focused on improving student vocabulary directly through exposure and study. In each case, the data showed a significant improvement in reading skills for these students as compared to the control group. The WRMT-R subsets in particular had very promising results and were close when compared with one another. Important to note, regarding this study, was that these evaluations and interim lessons were conducted within the school system by trusted educators. No true reliance on the home environment, or other potentially confounding factors allows educators an opportunity to really help these students or provide cleaner data for the purposes of the study.

A less commonly seen remediation method, but one with merit, involves the utilization of university graduate students and often of university resources to assist in critical skill development. Bruce Saddler and Merry Staulters, in their article "Beyond Tutoring: After-School Literacy Instruction", discuss a successful after-school reading project that identified struggling readers and paired them with local university graduate students to help develop their skills as well as their confidence in reading. The study outlines several factors that can contribute to students struggling with literacy, including socio-economic and health factors as well as cultural barriers. Going further, it is outlined how working through a university with graduate students provides those at-risk students with excellent opportunities to improve their skills without the hindrances of the domestic environment or the often-limited resources available in public school systems. Another benefit outlined in the study is the demonstration of value in active community participation, less directly related to the expressed needs of the students but a valuable lesson nevertheless, and one that is increasingly overlooked in our

society. The tutors also benefit from this relationship, as utilizing this time when resources from the university allow them to work directly with struggling students can better prepare these future educators for managing students facing similar challenges in their classrooms. The symbiosis of this dynamic is perhaps the most compelling attraction to this particular methodology, working to address problems in real time while simultaneously working to minimize the difficulties future students will face by preventing them from ever falling behind in the first place. Clearly there are challenges to attaining those lofty goals, as certain domestic and health-related contexts cannot simply be avoided, and addressing their impacts of them is problematic.

Illness-related impacts on school success are well documented, but the reality for the subset of students suffering from severe chronic health conditions is that elements beyond absences and class disruptions for medicine access dictate their academic standing, though the "normal" factors are certainly still at play. One such example of this extreme challenge is detailed by Dr. Lauren Daniel in her article "Lessons Learned from a Randomized Controlled Trial of a Family-Based Intervention to Promote School Functioning for School-Age Children with Sickle Cell Disease", published in the *Journal of Pediatric Psychology*. In this article, Dr. Daniel outlines a group of students who suffer from Sickle Cell Disease and participate in a study called "Families Taking Control" (FTC) which is designed to improve school success and quality of life via "family-based group problem solving." FTC itself involved a full-day workshop, with three booster calls as follow-ups. Unfortunately, after the completion of the program, there was very little difference between the performance and quality of life for the

students who took part in the intervention and the control group of delayed-intervention students. When identifying effective methodologies for remediation, it is important to acknowledge the failures as well as the successes, both to understand what works and what does not as well as establishing a basis for future studies by theorizing why the failed attempts were ineffective. Students experiencing more intense disruptions to their education are naturally going to have problems that are more relatively complicated to solve.

Socio-economic status has a clear impact on the academic success for students, and it is especially pronounced in the early elementary ages as students develop their baseline math and reading skills as well as their attitude toward education as a whole, which can have cascading effects on the efficacy of any remedial efforts required in the future. Understanding which specific intervention techniques poorer students tend to be responsive to is important for successfully turning around any deficits that do arise as they move forward in their careers. In his article "When a Little Bit Means a Lot: The Effects of a Short-Term Reading Program on Economically Disadvantaged Elementary Schoolers", Richard Luftig compares two short-term summer school programs designed to assist at-risk elementary school students with reading skills. One of the programs was a school-based program operated by the school itself while the other was a for-profit company's program for enhancing student achievement. Both programs were conducted over a three weeks, and both programs proved to be very effective at improving these fundamental skills when compared to a control group. When compared to one another, there was a comparable impact on student learning objectives. There

was, however, a considerable gap in the contact hours and especially the cost of the

programs. The school-based program was dramatically cheaper, and therefore far more

practical to implement on a larger scale to address the needs of the maximum number

of at-risk students. There was certainly merit to the for-profit program, but without a

significant edge over the much cheaper school-based program, it is difficult to

recommend without additional research.

The Helping One Student to Succeed (HOSTS) program is a language arts

volunteer tutoring program discussed by Matthew Burns in his article "The Effectiveness

of the HOSTS Program in Improving the Reading Achievement of Children At-risk for

Reading Failure". The program operates by comparing pre-and post-intervention scores

on standardized measures of literacy skills and works in five-month intervals for tests

and retests. In the particular iteration of this program outlined by Burns, a group of 129

students identified as at-risk ran through a five-month cycle of the program and were

found to have significant improvements in reading fluency, comprehension, initial sound

fluency, and overall literacy skills compared to a control group of a similar size and initial

testing scores. Again, we find that community involvement, in case in the form of

volunteers for the program, can play a positive role in remediation techniques. Literacy

is an important indicator for overall academic standing, and a shockingly high 36% of

fourth graders read below their basic grade level. Additionally, 74% of students who

were unsuccessful readers in third grade will remain unsuccessful by the ninth grade.

Indeed, the issues facing a poor reader will compound as they continue in their

schooling and will begin to impact other subjects to a greater degree, as the curriculum

will assume an appropriate reading level, which may be beyond the capacity of those students. These figures make it clear that students are neither receiving the attention they need when they are younger and beginning to fall behind nor being presented with acceptable remedial projects as they move into later grades. Both of these deficiencies must be addressed to give students who fall behind long before they are responsible for their own education from losing long-term opportunities.

An as-of-yet underexplored recent development to the overall educational concerns facing students, due to the sheer recency, is how COVID-19 and the subsequent upheaval to school functionality for the majority of 2020 and 2021 has impacted students. Anecdotal evidence along with the scant literature that does exist, indicates that the online school experience brought on by the pandemic hindered student academic achievement significantly. For many students, the zoom classroom setting affected them very similarly to chronic absenteeism, leading to many students falling far behind schedule with academic benchmarks, especially in math and language arts. The full impact of the pandemic on students will take years to fully understand but, in the meantime, finding ways to mitigate the damage done and get students back on track as best as possible should be a very high priority.

In "A Survey of Contexts for Successful Literacy Tutoring" by Dorothy Leal, a hierarchy of educational influences is established. Unsurprisingly, the prime influence on a student's academic achievement and attitude towards school is their home environment, and the educational level and socio-economic status of their parents or guardians can set the stage for some of the advantages or disadvantages these students

will contend with during their education. Second in terms of impact, and considerably

more flexible and able to be incorporated into remediation, are the trusted educators

who students interface with daily. These teachers have an incredible ability to help

students make positive changes and experience breakthroughs if provided with the

appropriate resources and opportunities. Third-party programs and community-driven

projects, such as those ran through local universities, have merit and a place within the

remedial ecosystem as well, and have a diverse spread of tutoring methods at work will

help reach the largest number of at-risk students.

Ultimately, there is a mountain of factors to consider when identifying the

causes behind students falling behind in school and slipping through the cracks of

established systems. Additionally, a similar breadth of options when looking to help

those students get back on track and prevent future students from suffering similarly

exists and serves to complicate the decisions school districts face when developing

approaches. In order to best serve students whose challenges sprout from varied health

indicators, absenteeism, behavioral hurdles, socio-economic status, and other factors, it

is critical to properly allocate resources for remediation. School-based programs,

especially those directly involving teachers, are especially impactful and should form the

baseline for remedial approaches, with additional projects outside of the school system

serving a supporting role for students with particular needs. A broad approach designed

to cover the largest swath of at-risk students, and equipped to be modular or flexible as

necessary for unusual situations, is the most effective means of helping smart kids get

the help they need to have the same chance at life as their peers who do not face

challenges outside of their control.

Bibliography

Abbott, S. P., & Berninger, V. W. (1999). It's never too late to remediate: teaching word recognition to students with reading disabilities in grades 4-7. *Annals of Dyslexia*, 49, 223–250. https://doi-org.libproxy.eku.edu/10.1007/s11881-999-0025-x

Akyol, H., & Boyaci-Altinay, Y. (2019). Reading Difficulty and Its Remediation: A Case Study. *European Journal of Educational Research*, 8(4), 1269–1286.

Ansari, A., & Purtell, K. (2017). Absenteeism in Head Start and Children's Academic Learning. *Child Development*, *89*(4), 1088-1098. doi: 10.1111/cdev.12800

Ashcroft, L. (2004). Preventing School Failure by Enhancing Reading and Social Skills. *Preventing School Failure*, 48(2), 19–22. https://doi-org.libproxy.eku.edu/10.3200/PSFL.48.2.19-22

Berninger, V., Vermeulen, K., Abbott, R., McCutchen, D., Cotton, S., & Cude, J. et al. (2003). Comparison of Three Approaches to Supplementary Reading Instruction for Low-Achieving Second-Grade Readers. *Language, Speech, And Hearing Services In Schools*, *34*(2), 101-116. doi: 10.1044/0161-1461(2003/009)

Bethell, C., Forrest, C., Stumbo, S., Gombojav, N., Carle, A., & Irwin, C. (2012). Factors Promoting or Potentially Impeding School Success: Disparities and State Variations for Children with Special Health Care Needs. *Maternal & Child Health Journal*, 16, 35–43. https://doi-org.libproxy.eku.edu/10.1007/s10995-012-0993-z

Blom, L. C., Alvarez, J., Lei Zhang, & Kolbo, J. (2011). Associations between Health-Related Physical Fitness, Academic Achievement and Selected Academic Behaviors of Elementary and Middle School Students in the State of Mississpppi. *ICHPER -- SD Journal of Research in Health, Physical Education, Recreation, Sport & Dance*, 6(1), 13–19.

Burns, M., Senesac, B., & Symington, T. (2003). The effectiveness of the hosts program in improving the reading achievement of children at-risk for reading failure. *Reading Research And Instruction*, *43*(2), 87-103. doi: 10.1080/19388070409558406

Daniel, L., Li, Y., Smith, K., Tarazi, R., Robinson, M., Patterson, C., Smith-Whitley, K., Stuart, M. and Barakat, L., 2015. Lessons Learned from a Randomized Controlled Trial of a Family-Based Intervention to Promote School Functioning for School-Age Children With Sickle Cell Disease. *Journal of Pediatric Psychology*, 40(10), pp.1085-1094.

Gottfried, M., Stiefel, L., Schwartz, A., & Hopkins, B. (2019). Showing Up: Disparities in Chronic Absenteeism between Students with and without Disabilities in Traditional Public Schools. *Teachers College Record: The Voice Of Scholarship In Education*, *121*(8), 1-34.

Hancock, K. J., Gottfried, M. A., & Zubrick, S. R. (2018). Does the reason matter? How student-reported reasons for school absence contribute to differences in achievement outcomes among 14–15 year olds. *British Educational Research Journal*, 44(1), 141–174. https://doi-org.libproxy.eku.edu/10.1002/berj.3322

Hancock, K. J., Lawrence, D., Shepherd, C. C. J., Mitrou, F., & Zubrick, S. R. (2017). Associations between school absence and academic achievement: Do socioeconomics matter? *British Educational Research Journal*, 43(3), 415–440. https://doi-org.libproxy.eku.edu/10.1002/berj.3267

Ippolito, J., & Schecter, S. R. (2012). Using Institutional Structures to Promote Educational Equity: A Tale of Two Schools. *Elementary School Journal*, 112(4), 607–626.

Jayroe, T. B., & Brenner, D. (2005). Family Members as Partners in an After-School and Summer Literacy Program. *Reading Horizons*, 45(4), 235–253.

Jayroe, T., & Brenner, D. (2002). Purchasing Power: One School District's Decisions to Purchase Three Reading Programs. *Reading Horizons*, *42*(4), 307-325.

Karakonstantaki, E. S., Simos, P. G., Michalis, V., & Micheloyannis, S. (2018). Assessment and conceptual remediation of basic calculation skills in elementary school students. *British Journal of Developmental Psychology*, 36(1), 78–97. https://doi-org.libproxy.eku.edu/10.1111/bjdp.12214

Kim, J. S., Samson, J. F., Fitzgerald, R., & Hartry, A. (2010). A randomized experiment of a mixed-methods literacy intervention for struggling readers in grades 4-6: effects on word reading

efficiency, reading comprehension and vocabulary, and oral reading fluency. *Reading & Writing*, 23(9), 1109–1129. https://doi-org.libproxy.eku.edu/10.1007/s11145-009-9198-2

Leal, D., Mowrer, C., & Cunningham, J. (2002). A Survey of Contexts for Successful Literacy Tutoring. *Reading Horizons*, *43*(2), 127-139.

London, R. A., Sanchez, M., & Castrechini, S. (2016). The Dynamics of Chronic Absence and Student Achievement. *Education Policy Analysis Archives*, 24(112).

Luftig, R. L. (2003). When a little bit means a lot: The effects of a short-term reading program on economically disadvantaged elementary schoolers. *Reading Research and Instruction*, 42(4), 1–13. https://doi-org.libproxy.eku.edu/10.1080/19388070309558393

Miller, D., Topping, K., & Thurston, A. (2010). Peer tutoring in reading: The effects of role and organization on two dimensions of self-esteem. *British Journal of Educational Psychology*, 80(3), 417–433. https://doi-org.libproxy.eku.edu/10.1348/000709909X481652

Morrissey, T. W., Hutchison, L., & Winsler, A. (2014). Family income, school attendance, and academic achievement in elementary school. *Developmental Psychology*, 50(3), 741–753. https://doi-org.libproxy.eku.edu/10.1037/a0033848

Ohlund, L. S., & Ericsson, K. B. (1994). Elementary school achievement and absence due to illness. *Journal of Genetic Psychology*, 155(4), 409. https://doi-org.libproxy.eku.edu/10.1080/00221325.1994.9914791

Pijl, E. K., Vanneste, Y. T. M., de Rijk, A. E., Feron, F. J. M., & Mathijssen, J. (2021). The prevalence of sickness absence among primary school pupils - reason to be worried? *BMC Public Health*, 21(1), 1–8. https://doi-org.libproxy.eku.edu/10.1186/s12889-021-10193-1

Roberts, M. S., & Wilson, J. D. (2006). Reading Attitudes and Instructional Methodology: How Might Achievement Become Affected? *Reading Improvement*, 43(2), 64–69.

Roby, D. E. (2004). Research on School Attendance and Student Achievement: A Study of Ohio Schools. (Undetermined). *Educational Research Quarterly*, 28(1), 3–14.

Ruijsbroek, A., Wijga, A. H., Gehring, U., Kerkhof, M., & Droomers, M. (2015). School Performance: A Matter of Health or Socio-Economic Background? Findings from the PIAMA Birth Cohort Study. *PLoS ONE*, 10(8), 1–17. https://doi-org.libproxy.eku.edu/10.1371/journal.pone.0134780

Saddler, B., & Staulters, M. (2008). Beyond Tutoring: After-School Literacy Instruction. *Intervention In School & Clinic*, *43*(4), 203-209. doi: 10.1177/1053451207310341

Sanderson, D. R. (2003). Setting Up a Successful After School Tutorial Program: One District's Journey. *Reading Improvement*, 40(1), 13–20.

Wilson, R. (2014). Student Absences and Student Abscesses: Impediments to Quality Teaching. *The Urban Review*, *46*(5), 831-845. doi: 10.1007/s11256-014-0305-6