

Teacher Absenteeism and Student Reading Growth and Achievement

by

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Abstract

This study aims to explore the association between teacher absenteeism and student achievement. Specifically, this study aims to determine if an association exists between teacher absenteeism and elementary student reading growth and achievement. Further, it seeks to identify student and teacher factors that impact teacher absenteeism, including gender, ethnicity, socio-economic status, class size, and experience. Considering high rates of teacher absenteeism, early indications of burnout, and replacement with less-effective substitutes, this study intends to gain a precise understanding of how these trends impact students and how they may differentially impact populations most likely to be exposed to chronically absent teachers. To do so, I employ a correlational design, evaluating the association between teacher absenteeism and student reading achievement, as well as, student reading growth, which is measured at multiple time points. The results indicate that teacher absenteeism has a significant negative effect on student reading growth and achievement, and that effect is more pronounced when teachers are chronically absent. Further, these effects are more pronounced for students that are black or of low socioeconomic status. Because of this, school leaders should consider ways to increase teacher attendance and be aware of student populations that are impacted differently than their peers in order to provide needed support.

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CHAPTER 1. INTRODUCTION

Providing equitable learning opportunities for students is a crucial focus for educators. One of the most important and influential factors is access to effective instruction through a skilled and well-qualified teacher (Northern & Petrilli, 2017). The prolonged absence or inconsistent presence of a qualified teacher can have potentially disastrous effects on students' ability to build their foundational reading skills. The impact of a consistent, qualified teacher's stabilizing force in the classroom is inextricably linked to student outcomes (Miller, 2012).

Each year, considerable emphasis is placed on the importance of student attendance in the classroom. School districts around the United States allocate resources in the way of data collection and monitoring, family and community engagement, wrap-around services for chronically absent students, and the implementation of social and emotional learning supports (Knoster, 2016, p. 6). The primary driver for attendance supports for students is the understanding that children benefit from the structure provided by daily school attendance. Community stakeholders, specifically Family Court systems, are also often involved in the ongoing effort to secure consistent student attendance.

However, an issue that is rarely discussed is teacher attendance and the impact that teacher absenteeism has on students and student achievement. Teachers miss work for a variety of reasons, both voluntary and involuntary. Teacher attendance is not uniform, and the average of days missed do not always tell the whole story. There is a wide range of missed days among teachers, and the majority of absences come from a small percentage of teachers (Joseph, Waymack & Zielaski, 2014). Factors such as age,

gender, school climate, and psychological correlates serve as predictors of absenteeism. To reduce teacher absenteeism, school districts often implement attendance policies and interventions. These policies' content can vary greatly and include incentives, absence reporting requirements, and other mixed success interventions.

Teacher absenteeism carries with it myriad consequences, including a tangible financial impact on school districts. Bidwell (2014) notes that Nancy Waymack of the National Council on Teacher Quality [NCTQ] found an individual school-district during the 2012-13 school year that spent \$424 million on substitute teachers. This level of financial strain directly related to covering teacher absenteeism can cause other valuable learning resources to go underfunded or unfunded altogether. Previous research linking teacher absenteeism and student achievement, particularly literacy development, is sparse. Those who have studied the issue have taken a more global approach to the issue. For instance, Finlayson (2009) noted that the more days a teacher is out of the classroom, the lower their students tend to score on standardized tests. While this is helpful in establishing correlation, the subject of literacy is specifically underrepresented.

With literacy having been established as a primary metric for student growth and achievement, the issue of access to quality education serves as a concern for all community stakeholders. Sargard et al. (2019) noted that there exists an enormous gap in financial resources provided throughout the United States, leading to inequities in terms of access to needed literacy resources. Students perform better academically when they have a regularly present teacher at school (Cantrell, 2003). This is especially true for young students (Rivkin, Hanushek, & Kain, 2005), who depend on their teachers to facilitate their learning foundation.

Statement of the Problem

Teachers play a critical role in the classroom, and their consistent presence in the learning environment is essential to student reading achievement. The Office of Civil Rights within the United States Department of Education reported that 28% of teachers are chronically absent, missing more than ten days of school annually (2018). In the United States, about 6.5 million students attend schools where more than 50% of teachers were chronically absent. With teachers being "the single most powerful instrument that schools have to boost student learning" (Northern & Petrilli, 2017, p. 4), it is essential to understand the scope of teacher absenteeism to ensure equitable learning opportunities for all students.

Purpose of the Study

The purpose of this research is to gain a greater understanding of the association between teacher absenteeism and student achievement. More specifically, this study aims to determine if an association exists between teacher absenteeism and elementary student reading growth and achievement. Further, it seeks to identify student and teacher factors that impact teacher absenteeism, including gender, ethnicity, socio-economic status, class size, and experience. Considering high rates of teacher absenteeism, early indications of burnout, and replacement with less-effective substitutes, this study intends to gain a precise understanding of how these trends impact students and how they may differentially impact populations most likely to be exposed to chronically absent teachers. Using panel data covering individual-level student reading achievement across four years, this study will explore these relationships alongside implications for district

policies regarding absenteeism and discuss leadership strategies for reducing chronic absenteeism.

Significance of the Study

Students should be provided with equal educational opportunities, including having access to consistent, high-quality instruction. Given the importance of literacy and its role in continued academic achievement, every factor must be considered when serving students' needs. In this study, I intend to explore how teacher absenteeism affects student achievement, specifically students building their foundational reading skills in first grade. While some research focuses on the consequences of teacher absenteeism, little research exists on the impact of teacher absenteeism on student reading achievement (Roby, 2013). No studies to date observe this at multiple time points during a student's reading development. For these reasons, I propose the following questions below.

Research Questions

1. What is the association between teacher absenteeism and elementary student reading growth and achievement?
2. To what extent do student and teacher characteristics explain the association between teacher absenteeism on reading growth and achievement?
3. To what extent does chronic teacher absenteeism impact student reading growth and achievement?

Assumptions

The following assumptions were made in formatting and planning this research:

- A. Teacher attendance data is accurate and reliable.
- B. Teacher data regarding years of experience is accurate and reliable.

- C. Student assessment data is accurate and reliable. This research's assessment data are results from the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) assessment.

Definition of Terms

1. Teacher – Teachers included in this study are full-time school employees certified by the State of Alabama Department of Education. Additionally, teachers in this study teach general education first grade.
2. School Leader – School leaders referenced in this study include a full-time school employee working in an administrative capacity within the school environment.
3. Absence – A period of at least one-half day that a teacher is not present in the classroom.
4. Involuntary Absence – An absence that is typically unavoidable, such as an absence due to illness. This type of absence is often considered unpredictable and hard to control from an employer standpoint (Avey, Patera & West, 2006).
5. Voluntary Absence – An absence that is unnecessary and usually avoidable, such as vacation and personal leave. Employees may also be absent from work voluntarily and take sick days (Avey, Patera & West, 2006).
6. Chronically Absent - Teachers are considered chronically absent when they miss more than ten days of school in an academic year (Office of Civil Rights, 2018).

Organization of this Study

This study is organized into five chapters. The first chapter describes teacher absenteeism, its role in student achievement, and an overview of the research itself. The

problem statement, purpose, research questions and significance of the study are all explained in this chapter. The second chapter is a review of applicable literature that provides information regarding the scope of teacher absenteeism, reasons for absences, predicting factors, and consequences associated with teacher absenteeism. The consequence of focus is the impact of teacher absenteeism on student achievement. Additionally, policies and interventions for teacher absenteeism are included in Chapter Two. Chapter Three explains the methods employed to answer the research questions outlined in Chapter One. The research design, sample, instrumentation and data collection process are explained. Data analysis and research limitations are also explained in Chapter Three. The fourth chapter presents findings from the study, including the data collected. The findings are clearly formatted as a response to the research questions. Based on the data analysis, Chapter Five offers conclusions for the study, including policy implications aimed at improving teacher attendance. Also presented in Chapter Five are suggestions for future research.

CHAPTER 2. LITERATURE REVIEW

In 2016, the Office of Civil Rights in the United States Department of Education (2016) reported that 28 percent of teachers are chronically absent, missing more than ten days of school annually. In the United States, about 6.5 million students attend schools where more than 50% of teachers were absent in excess of 10 days per year (Office of Civil Rights, 2016). "Teachers' attendance is influenced by both organizational practices and by attendance barriers" (Hammond & Onikama, 1997, p. 3). With teachers being "the single most powerful instrument that schools have to boost student learning" (Northern & Petrilli, 2017, p. 4), it is essential to understand teacher absenteeism's scope and impact to ensure equitable learning opportunities for all students. Specifically, it is critical to understand how teacher absenteeism affects reading achievement, which is a fundamental building block of the educational process.

A teacher's tendency to accept absenteeism, which feeds into the school culture at large, is commonly referred to as absenteeism acceptance (Shapira-Lishchinsky & Raftar-Ozery, 2016.). Absence from the classroom can be contagious among teachers within a school. Not only can absences prove transmissible, but the idea of them being widely accepted can increase the likelihood and prevalence of absences among teachers. If the school culture tolerates absenteeism, teachers are more likely to be absent (Bradley, Green, & Leeves, 2007). The acceptance of absenteeism by their peers is a better predictor of absences than general attitudes at work (Shapira-Lishchinsky & Ishan, 2013). When teachers move or transfer, their absence rate shifts to match that of the average of their new school (Ost & Schiman, 2017). This shows that the issue is one that can be

improved and that school culture, more so than individual attitudes, hold the potential to prioritize teacher presence in the classroom.

In schools where teacher absenteeism is excessive, some point to the fact that teacher retention rates continue to decline, thus giving teachers perceived leverage to engage in behaviors not commiserate with professional standards. Garcia and Weiss (2019) found that many schools, specifically those in impoverished areas, struggle to retain and attract credentialed teachers. Of note, Garcia and Weiss (2019) point to working conditions as one of the main reasons teachers switch schools or exit the profession altogether. For those who remain teaching in schools where working conditions are suboptimal, teachers are incentivized to utilize vacation and personal days because they know they are needed, and the pool of credentialed teachers is suffering a shortage. School systems' struggle to retain teachers lends itself to a culture where school administrators have little recourse against teachers who are excessively absent from the classroom, even when the absences are permitted by school board policy.

Reasons for Absences

Teachers are absent from the classroom for myriad reasons. Regardless of the reason for the absence, the students ultimately suffer the loss of instructional time. By understanding why teachers are absent, school systems can implement strategies to prevent excessive teacher absenteeism and ensure that students are provided equitable and meaningful educational opportunities (Miller, 2012). Illness and personal leave are common reasons for teachers not to be in the classroom. However, research has identified many other factors that contribute to teacher absenteeism.

For the 2012-2013 school year, Joseph et al. (2014) requested teacher attendance data from the 50 largest cities in the United States. Using data from 40 of those cities, including 234,031 teachers, a report was generated for the National Council on Teacher Quality (NCTQ) outlining the prevalence of teacher absenteeism and examined the reasons for those absences. According to their report, Joseph et al. (2014) found that from the 40 reported cities, sick leave accounts for 39 percent of teacher absences, personal leave for 32 percent, professional leave for 20 percent, and the remaining 9 percent was attributable to other leave categories.

A study of approximately 1,200 teachers in Virginia from 2005-2008, Pitts (2010), showed differing results. Similar to Joseph et al. (2014), sick leave accounted for the most absences; however, it was found that there was a much wider gap between sick leave and personal leave, with sick leave accounting for 62.3 percent of absences and personal leave for 12.1 percent. In Pitts' (2010) research, it is evident that sick leave accounts for the vast majority of leave taken.

Even with different findings regarding the prevalence of sick leave among teachers, it is still a leading reason for teacher absence. This stands to reason when considering school environment. When working in a school setting, teachers are often exposed to a wide variety of germs within their classrooms because they interact with hundreds of children on a daily basis. Miller et al. (2008) stated that this is a contributing factor to teacher illness due to "teachers' daily exposure to large numbers of children, some of whom are carriers for infectious diseases" (p. 183). Continuous exposure to infectious diseases increases the likelihood of teachers to contract these diseases.

Teachers utilize sick leave not only for personal illness but often family member illnesses as well, increasing the amount of days they miss from work. According to United States Census Bureau Public Use Microdata Sample (PUMS) (2018), 78.5% of elementary and middle school teachers were female, with an average age of 42.7 years old. This provides insight into the use of sick days for familial reasons, as the profession is predominately populated with women who often have their own children that may require adult supervision when ill. Teachers with small children of their own are also cognizant of the responsibility in transmission of disease from inside their own home to the students in their classroom, which may lead to absences extending beyond those of other professions.

Additionally, teachers may take sick leave because of stress-related causes. On-the-job stress and pressure contribute to teacher sick leave absences because those experiencing stress are more likely to report stress-related illnesses like the common cold and are more likely to be unmotivated to come to work (Gørtz & Andersson, 2010). According to Kipps-Vaughan (2013), 20 to 25 percent of teachers report being frequently stressed, contributing to an adverse school climate and increased teacher absenteeism. Novice teachers are the most vulnerable to stress and report experiencing stress from work more regularly than their experienced peers (Fisher, 2011). Unaddressed stress in young teachers in particular can prove to be problematic in terms of retention related to both switching schools and leaving the profession altogether.

Teachers often have to face the reality of balancing work and family responsibilities (MacLeod, 2015). The Family and Medical Leave Act (FMLA) gives employees the opportunity to take long-term unpaid leave for a maximum of twelve

weeks for specific medical or family reasons (*Family and Medical Leave Act, 2020*). Teachers are eligible employees that are entitled to take FMLA leave for qualifying reasons including personal illness, the birth of a child, or to take care of a family member. Teachers who take long term leave for FMLA present a unique challenge for school administrators, who are required by law to allow teachers to take the family and medical leave to which they are they are entitled. Complicating matters, administrators are also responsible for ensuring that students are receiving quality instruction when their regularly assigned teachers are absent from the classroom. (Wyld, 1995). This complicates matters, as even a long-term substitute teacher is unlikely to have a proportionate impact on student learning, specifically in the area of literacy, as the assigned classroom teacher.

Apart from classroom absence due to illness, teachers are often required to be out of work for professional related absences. Professional absences are those that are “related to an employee’s regular responsibilities that are directed or approved by the organization or school” (Frontline Institute, 2017, p. 4) Professional absences include continued learning opportunities through professional development, field trips, and other school business that requires the teacher to be out of the classroom. When considering fiscal consequences, it is generally less expensive for school systems to pay for a substitute teacher when a teacher misses a day of work during the school year than it is to add days onto the teacher's contract. Therefore, teachers are compelled to perform professional development activities during the time when classes are in session. While it is assumed that professional development is crucial in the teaching profession, forcing

teachers to perform these activities during the school takes teachers away from the classroom. (Miller, 2012).

According to the Frontline Institute (2017), absences due to professional development events are typically scheduled weeks in advance but unfortunately, over 30% of those absences are attempted to be filled by a substitute with less than four days notice. This contributes to lower instances of the position being filled by a substitute, resulting in a less than favorable learning environment for students. The policy of having teachers perform professional development during the school year is predominantly driven by fiscal considerations. However, equal consideration should be given to the loss of quality instructional time that is an unintended consequence of such policies.

Some studies bring into question the overall effectiveness of professional development for teachers in its current forms. Missing classroom days with students is supposedly justified because professional development aims at making teachers more effective professionally. "The purpose of providing teachers with conference, visitation, and professional days is to increase their effectiveness in the classroom" (Ehrenburg, Ehrenburg, Rees, & Ehrenburg, 1991, p. 72). Professional development aims to inform teachers of educational trends and reinforce best practices for them to then use in their classroom and improve student outcomes. However, professional development is not always linked to increased instructional effectiveness and student achievement in the classroom. In their study, Garet et al. (2016) measured the effectiveness of teacher professional development and found that while it did increase pedagogical knowledge in teachers, it did not result in better outcomes for students.

Predicting Factors of Teacher Absenteeism

Multiple factors independently contribute to teacher absenteeism. Some of these factors serve as sound predictors of absenteeism and provide school districts with information that proves valuable towards crafting strategies that keep teachers in their classrooms. There exists situational overlap with some predictors, but all play a part in increased teacher absenteeism rates.

School Setting

School settings and student populations may have an impact on levels of teacher absenteeism. In regards to the first type of school setting, public school teachers are nearly three times more likely to be absent from the classroom when compared to their charter school peers (Griffith, 2017). Specifically, "teachers are absent from traditional public schools more than 10 times per year at a rate that is 15.2 percentage points higher than in charter schools" (Miller, 2012, p 2).

The increased teacher attendance levels in charter schools may be explained by higher pay and more desirable benefits that often make charter school jobs more appealing and competitive in the job market (Miller, 2012). Charter school student populations as a whole are often different than their public-school counterparts, which serves as an additional explanation for differences in teacher attendance. Specifically, charter school students are less likely to qualify for free and reduced lunch, English language learning, and special education programs (Angrist et al., 2013).

A comparison of public and private school teacher attendance shows private school teachers have higher attendance rates, particularly in Catholic private schools (Cheng, 2014). Of note, private school teachers typically have lower salaries and have

access to less benefits than their public-school peers. A major difference seen nationwide between public and private schools are lower minority populations, higher rates of parent involvement and higher student family income rates (Goldring & Phillips, 2008) for private schools. However, enrollment differences among minority families, as compared to white families, may have more to do with an income gap rather than race itself. In recent years, fewer middle and low income families are choosing to send their children to private schools, while higher income student enrollment has remained stable (Murnane et al., 2018).

Research shows that teacher absenteeism can often be predicted by days of the week. Sick leave is often used by teachers in conjunction with a weekend, with many teachers taking sick leave on Fridays (Pitts, 2010). Pitts (2010), also reported that very little leave is taken on teacher work days and professional development days. Miller (2012) agreed that the day of the week contributes to absences, reporting that teachers are more likely to be absent before or after a weekend on Mondays and Fridays. According to the Frontline Institute (2017), Fridays were the most frequently missed days by credentialed teachers and were also statistically the day of the week that was most difficult to fill the absence with a substitute teacher. Tuesdays and Wednesdays are the most attended days and also the easiest days to find a substitute. In order to prioritize instructional time and avoid classroom disruption, Frontline Institute (2017) recommends “scheduling professionally related absences on low-absence days such as Tuesday and Wednesday” (p. 1).

Student Composition

Student age is also a factor when it comes to teacher absenteeism. Teachers who work with elementary age students are more likely to be satisfied with their job (Fresko,

Kfir & Nasser, 1997). Elementary school teachers have higher self-efficacy and are more confident in their ability to engage students in learning (Lee et al., 2013). Teacher self-efficacy, their belief in their own abilities to be effective educators, contributes to increased job satisfaction (Skaalvik & Skaalvik, 2010). This idea of building self-efficacy will be discussed later as a suggested intervention of focus for school leaders to implement in an effort to increase teacher attendance and decrease chronic absenteeism.

When considering student age, it should be noted that younger students in the classroom does not always mean the teacher is more satisfied or willing to come to work. It is reported that middle school teachers are more likely to be absent than high school or elementary school teachers (Miller, 2012). Middle-school students, in particular, experience many changes unrelated to academic performance. According to Borman et al. (2019), many middle-school students experience a decreased sense of belonging in school, thus exacerbating other physical and emotional changes they are experiencing. Lack of motivation is a specific behavior concern as students reach middle school age (Wigfield et al., 2015). These behavior problems make for a more stressful work environment. Teachers often have to deal with disruptive and aggressive students and can get trapped in heated conflict situations. These situations are not only disruptive to the learning environment, but can contribute to high stress environments for teachers who are not properly trained to handle escalating behavior (Walker et al., 2003). This, in turn, makes teacher absenteeism more likely. Student behavior can be a major contributing factor to the stress level teachers face in the classroom. When teachers are exposed to chronic disruptive, truancy or bullying behavior in their classrooms, they are more likely

to take short-term sick leave (Ervasti et al., 2012). The result is that middle school students are less likely to have a regularly present teacher in the classroom.

Furthermore, teacher absences are more concentrated amongst the most vulnerable student populations. "Where students were poorest and failing the most, their teachers were absent the most" (Pitkoff, 1993, p. 42). Low income students as a whole perform at lower levels than their peers (Morrissey et al., 2014). Students, especially those that are in the cycle of poverty, need their teachers to be at work as much as possible (Pitkoff, 1993). Research has shown that rates of teacher absences increase significantly in schools serving larger populations of low-income students (Clotfelter, Ladd, and Vigdor, 2007). Unfortunately, these students often do not have support structures at home to compensate for inconsistent teacher attendance. Often, children from low income families have unstable home environments and face developmental challenges that may require additional support (Dahl & Lochner, 2012).

Given that these students are less likely to have access to quality teachers and leadership in the first place (Carver-Thomas & Darling-Hammond, 2019), effects of absenteeism may be more pronounced in under-resourced populations that often require specialized supports. However, the students that need quality instruction from a qualified teacher the most are more likely to receive instruction from a substitute teacher (Bruno, 2002). Research has supported this notion, whereby the depressive effect of absences is more pronounced amongst low-income, rural, and historically underserved populations (Miller et al., 2008; Porres, 2016).

Teachers are more likely to be absent from schools that have high rates of poverty among students and the majority of the student population is minority (Pitkoff, 1993). In

fact, teachers are 3.5% more likely to be absent if they work at a school with a high population of black students and 3.2% more likely if they work at a school with a large population of Hispanic students than their peers with low minority populations. (Rogers & Mirra, 2014). Miller (2012) reported similar results. Schools that have a high minority population report increased teacher absenteeism (Miller, 2012). Specifically, if a school is predominately African American, teachers are more likely to be absent from school (Miller, 2012). This can possibly be explained by difficult working conditions having a negative impact on teacher attendance. Teachers that work in urban schools where the population tends to have increased populations of minority students, for example, report a more stressful working environment and tend to take an increased amount of sick days compared to their peers working in nonurban settings (Bruno, 2002).

Individual Factors

Research is mixed in regards to the association of gender and teacher commitment and absenteeism. Pitts (2010) reported that women are more likely to be absent than men. Fresko, Kfir & Nasser (1997) did not find a correlation between gender and teacher commitment. Similarly, Bermejo-Toro & Prieto-Ursúa (2014) concluded that while there is not a difference between the amount of absences among men and women, there is a difference in the reasons that male and female teachers are absent. The most telling difference between those reasons is that female teachers are more likely to miss work because of psychological stress.

Women may also be absent from work more because they are often tasked with family responsibilities more often than their male peers (Miller, 2012). Family responsibilities and can be a direct conflict with work responsibilities in varying job

industries. In their study of banking and pharmaceutical employees, Ghayyur and Jamal (2012) found that conflicts between work and family cause increased employee turnover. Payne, Cook, and Diaz (2012) surveyed 316 university employees with non-school age children and found that as satisfaction with childcare decreased among employees, turnover and absenteeism increased. While little research could be found regarding the relationship between teacher absenteeism and family conflicts, one could expect similar results as other employment industries.

Age is a noted, but unreliable, predictor of teacher absence. Some research suggests that the older teachers get, the more likely they are to be absent from work (Bradley, Green, & Leeves, 2007). However, a more recent study indicates that increased age leads to reduced absences (Pitts, 2010). Years of experience may be more important than years of age. Both Gellatly (1995) and Chaudhury et al. (2006) found that employees with more experience, who also happened to be older, were absent from work more than their younger co-workers.

Compensation and Working Conditions

Teacher salary and pay structure can predict teacher attendance rates both domestically and internationally (Lee et al., 2015). In many instances, teacher salary is based on a minimum salary schedule that is set by the state in which the employing school district is located. The schedule and amount of pay a teacher receives is typically based on two factors: level of education completed and years of teaching experience (Hendricks, 2015). In some countries, teaching is not a well-respected profession, resulting in low salaries and low moral for teachers. In these countries, like Nigeria, the

low salaries give little incentive for teachers to come to work regularly (Iriemi Ejere, 2010).

Teacher's monetary compensation, working and living conditions, and social and cultural responsibilities can all have an impact on teacher attendance. This is especially noted in countries outside of the United States. How much of an impact these factors have can be different depending on the location of the school. "The nature of working conditions at a school, such as the culture of the school, its physical condition, and responsibilities or expectations assigned to teachers, can influence absence rates" (Lee, Goodman, Dandapani, & Kekahio, 2015, p. 6).

School climate may also be a contributing factor to teacher absenteeism. In their research, Imants and Zoelen (1995) found that "school climate characteristics turn out to be strongly related to absenteeism scores at the school level" (p. 77). "If teachers find their work environment to be more pleasant and more conducive to promoting student learning, they are less likely to avoid it" (Rogers & Vegas, 2009, p. 25). "A positive company culture helps to promote job satisfaction and job satisfaction is one of the most important factors in reducing absenteeism" (Kocakulah, Kelley, Mitchell, & Ruggieri, 2016, p. 93).

Psychological Correlates of Teachers

Levels of teacher burnout may also be predictors of absenteeism. Swider and Zimmerman (2010) describe burnout as consisting of "emotional exhaustion, depersonalization, and a sense of reduced personal accomplishment" (p. 499). Reported teacher stressors include increased demands of time, energy, and resources (Hansen & Sullivan, 2003). In her study of 167 teachers in Ohio, Rumschlag (2017) measured

factors associated with teacher burnout and found that teacher burnout is a cause of increased absences and decreased instructional effectiveness, negatively impacting students. Similarly, in their research, Swider and Zimmerman (2010) concluded that high levels of burnout are positively related to teacher absenteeism, turnover, and on-the-job performance. Teacher stress caused by poor safety conditions, unsupportive school administration, and lack of self-efficacy coupled with poor coping skills often result in teacher burnout (Haberman, 2005).

However, increased job workload and responsibilities do not necessarily lead to burnout or absences. In fact, Ost and Schiman (2017) in their research of North Carolina teachers from 1995 to 2007, reported that teachers with increased workloads missed work less than their peers. Further, they found that "Teachers are less likely to be absent when they are teaching larger classes, have new grade assignments or have fewer years of experience" (p. 20). This speaks to the fact that many educators entered the profession to make a difference in the lives of the children they serve and can feel a sense of duty, to their students and peers, to be present at school when workload increases. The sense of shared responsibility and duty is reflected in the culture of the school in which they teach. This helps to explain why, as Ost and Schiman (2017) note, when teachers switch schools, they tend to gravitate to the mean absence rate of their new school. We have learned that if a teacher's new school has a culture of low rates of teacher absenteeism, then the new teacher will assimilate to that standard. This seems to be contradictory to Hansen and Sullivan's (2003) identified stressors, indicating that research results in this area are inconsistent.

Employee turnover and absenteeism can be predicted by the level of organizational commitment among employees. Attitudes and behaviors among employees are implications associated with employee commitment (Mowday, Steers & Porter, 1979). According to Mowday, Steers and Porter (1979) "significant relationships were found between organizational commitment and absenteeism" (p. 22). Organizational commitment can be attributed to the ethical climate of the school. If teachers perceive the climate to be ethical, they are more likely to follow school rules and less likely to be absent (Shapira-Lishchinsky & Rosenblatt, 2010).

Employees that are more committed to their work, as measured by their emotional attachment and organizational involvement, were less likely to be absent from work than their less-committed peers (Gellatly, 1995). "Affective commitment emerged as the sole predictor of turnover and absenteeism and, in conjunction with normative commitment, was positively related to intent to remain" (Somers, 1995, p. 55). When teachers feel successful at their job, they are more likely to enjoy doing it. If teachers are satisfied with their job, they are more likely to be committed to doing it (Fresko, Kfir, & Nasser, 1997) and are therefore less likely to miss work.

It is unclear if a firm relationship exists between teacher job satisfaction and absenteeism. In their exploration of employee absenteeism in the general business industry, Kocakulah et al. sought to identify the leading causes of absenteeism and the effectiveness of interventions. Kocakulah, et al., (2016) found that "a positive company culture helps to promote job satisfaction and job satisfaction is one of the most important factors in reducing absenteeism" (p. 93). While their research also focused on employees in private companies rather than teachers in schools, Hammond and Onikama (1997)

found similar results among teachers. They found that teachers that have high job satisfaction and are involved within the school are less likely to be absent from work (Hammond & Onikama, 1997).

Focusing specifically on teachers' desire to leave the teaching profession and absenteeism, Green (2014) surveyed 252 public school teachers from New York state. This study gathered self-reported data regarding teacher characteristics, work-related stress levels, self-efficacy, depression and job satisfaction and looked for correlations between these factors and a desire to leave the profession as well as absenteeism. As a result, Green (2014) found a positive correlation between low teacher job satisfaction due to stress and an increased desire to request sick leave.

Contrarily, Bridges (1980) found a weak relationship between teacher job satisfaction and absenteeism. However, he found that when teachers reported that there is a high level of job interdependence at their school and they were dissatisfied with their job, they were more likely to be absent. When looking at job satisfaction, the most important subcategories in regards to teacher absenteeism were satisfaction with school administration and satisfaction with co-workers. Perhaps since more recent studies point to a stronger relationship between job satisfaction and absenteeism among teachers and employees in general, it may indicate that employee needs and reasons for absences have changed over time.

Avey, Patera & West (2006) found that there is a stronger relationship between psychological capacity and involuntary absenteeism than organizational commitment and involuntary absenteeism. Psychological capacity, or lack of positive psychological capacities, is a stronger predictor of involuntary rather than voluntary absenteeism.

Positive psychological capacities include, confidence, hope and resilience (Bayramoğlu & Şahin, 2015). Teaching-related stress and burnout may be contributed to reduced psychological capacity. "Teachers have demanding, stressful jobs that often include long hours outside the normal school day. Their job requires that they always be "on" regardless of how well they feel" (Joseph et al., 2014, p. 2). When coupled with the findings by Bermejo-Toro & Prieto-Ursúa (2014) regarding female teacher absenteeism, a clearer picture emerges surrounding some of the more specific causes of teacher absenteeism.

Consequences of Teacher Absenteeism

In addition to compromised student reading achievement, teacher absenteeism has far-reaching consequences. The scope of those affected by teacher absenteeism exist on a continuum. Consequences may be incurred by individual students, entire classrooms, schools, and school districts. The issue is unique in that the greater the culture of absenteeism, the more pronounced crippling effects tend to be.

Loss of Resources

Fiscal consequences associated with teacher absenteeism make up a large portion of school system budgets. "With 5.3 percent of teachers absent on a given day, stipends for substitute teachers and associated administrative costs amount to a minimum of \$4 billion annually nationwide. Additional financial costs tied to teacher absence include payouts of accumulated, unused leave and annual awards designed to discourage unnecessary absences" (Miller, 2012, p. 4). "Besides disrupting the learning process, it seems that the economic effects of teacher absences could also be substantial. On the one hand, there are

teachers that are paid but who do not perform any work; on the other hand, substitute teachers must also be paid" (Usman, Akhmadi & Suryadarma, 2004, p. 2).

When the classroom teacher is absent, resources that school systems spend money on are not likely to be utilized to contribute to student learning. "Because of high levels of teacher absence and the extensive use and reliance on substitute teachers to deliver instructional programs there is a strong attenuation or a lessening of the impact of school resources that are devoted to instruction" (Bruno, 2002, p. 3). In other words, the effectiveness of substitute teachers in no way compares to the effectiveness of full-time teachers when they are present in their assigned classrooms. Substitute teachers often lack appropriate training and are simply charged with ensuring students have an adult present in the classroom. Because of this, they are not equipped to fully utilize learning resources effectively.

Substitute Teachers

While the most commonly considered consequence of teacher absenteeism is associated costs, it is not the only consequence or, arguably, even the most troubling. Porres (2016) argued that "the problem is not only the escalating monetary costs of teacher absenteeism, but also the difficulty of finding qualified substitute personnel and the impact that teacher absenteeism has on students" (p. 4). Substitute teachers are often not adequate substitutes for certified classroom teachers. Because of this, there are negative consequences associated with the level of quality instruction that students receive. "Teacher quality variables appear to be more strongly related to student achievement than class sizes, overall spending levels, teacher salaries (at least when unadjusted for cost of living differentials), or such factors as the statewide proportion of

staff who are teachers" (Darling-Hammond, 2000, p. 32). Teachers are the most important resource that students have in the classroom. When they are absent, their education suffers.

Substitute teachers do not possess the skill set or knowledge of their students, which makes it extremely difficult for them to meet the needs of students through differentiated instruction (Miller, Murnane & Willett, 2008). "The class, sensing this lack of educational challenge through the mundane class work left for the substitute teacher to fulfill, reverts to entertaining each other. This may lead to the eventual breakdown of the academic structure" (Woods & Montagno, 1997, p. 309). This can also lead to a breakdown in discipline if the regular teacher is absent for an extended period. When the teacher does return, this can lead to increased stress which can result in more teacher absenteeism.

Productivity

Teacher absences have a significant impact on productivity. Substitute teachers are not nearly as productive as the teacher. All absences, health and non-health related, have similar impacts on productivity. When teachers are absent on the day of an assessment, it has a greater negative impact on students than non-assessment days (Hermann & Rockoff, 2012). In fact, "extremely little production appears to take place when a teacher is absent for a single day, despite the presence of a paid temporary substitute" (Herrman & Rockoff, 2012, p. 750). Instructional plans left for substitute teachers to carry out in the absence of the classroom teacher may not be high quality (Womack, 2014).

Unplanned absences may have a bigger impact on student learning and achievement than absences that are anticipated. This is because teachers with unplanned absences do

not have time to adequately prepare for quality instructional activities for students to complete in their absence (Womack, 2014), thus causing a loss of instructional time for students. The effects of well-prepared teachers on student achievement can be stronger than the influences of student background factors, such as poverty, language background, and minority status" (Darling-Hammond, 2000, p. 33). However, many substitute teachers are not well-prepared to provide quality instruction in the absence of the classroom teacher, especially when the absence is unplanned.

Teacher Absenteeism and Student Achievement

Teachers are models for their students. While this is obvious and desired during instruction, there are often times that teachers are unintentional models for their students. Banerjee, King, Orazem & Paterno (2012) in their research found a strong correlation between teacher attendance and student attendance. If students are absent from school often, their teacher is also more likely to be absent. If a teacher is repeatedly absent from school, students are more likely to be absent. "Higher teacher absentee rates may reduce students' motivation to attend school and further lead to higher student absentee rates" (Ehrenburg, Ehrenburg, Rees, & Ehrenburg, 1989, p. 7).

School systems strive to provide students with resources to support their academic success. Teachers are perhaps the most valuable and most effective resource for students within a school when it comes to the impact they make on students. This takes on additional importance when it comes to reading achievement on the elementary school level. "Teachers have a powerful, long-lasting influence on their students. They directly affect how students learn, what they learn, how much they learn, and the ways in which they interact with one another and the world around them" (Stronge, 2018, p. 3).

However, not every teacher provides the same amount of influence on their students. Araujo et al. (2016) explain that teacher quality is often measured through student learning outcomes and assessment scores, as well as, the relationships that teachers build with students. Teacher quality is something to consider when measuring the connection between teachers and student outcomes. Teacher quality is significantly positively correlated to student success and achievement (Rockoff, 2004).

Quality teachers are stronger indicators of student achievement than socio-economic status, home language, and ethnicity (Darling-Hammond, 2000). Additionally, an overall high-quality teacher makes a bigger positive impact on academic achievement for young students than years of teacher experience and even the highly sought-after smaller class sizes (Rivkin, Hanushek, & Kain, 2005). "Despite conventional wisdom that school inputs make little difference in student learning, a growing body of research suggests that schools can make a difference, and a substantial portion of that difference is attributable to teachers" (Darling-Hammond, 2000, p. 2).

While Ehrenburg et al. (1991) found that student absenteeism has a greater impact on achievement than teacher absenteeism, more recent studies suggest that teacher attendance is a leading factor in student achievement. According to Griffith (2017), "teachers are the single most powerful instrument that schools have to boost student learning. When teachers miss school, students miss out on education" (p. 4). In fact, Cantrell (2003) reported that "students in classes taught by teachers with the lowest absence rates outperformed their peers in classes taught by teachers with the highest absence rates" (p. 7).

"The consistent presence of the teacher in the classroom is of supreme importance to provide effective instruction to students" (Porres, 2016, p. 6). When teachers are absent from school, their students are less successful academically (Pitkoff, 1993). The curricular pace of instruction is interrupted when teachers are absent and simple classroom routines are off, causing students to suffer. "When a qualified teacher is absent from the classroom, student achievement is negatively affected. Teachers are the educational leaders in the classroom and their roles cannot be compromised" (Woods & Montagno, 1997, p. 314).

"Student achievement, to a large degree, depends on the continuity of instruction" (Hawkins, 2000, p. 5). Continuity of instruction depends not only on the presence of an instructor, but also their qualifications. Teacher qualifications and level of education have a positive relationship with student achievement. The higher ranked the college program attended and the higher a prospective teacher scores on licensure assessments, the better students tend to do in that teacher's classroom (Wayne & Youngs, 2003). However, the average American public-school student spends the equivalent of one year under the guidance of a substitute teacher (Glatfelter, 2006). Many substitute teachers do not possess higher education degrees and most are not certified teachers.

Present concerns on the quality of substitute on overall student achievement (Miller et al. 2018; Porres, 2016), replacement with uncertified substitutes has shown to have a greater detrimental effect on achievement than certified substitutes (Clotfelter, Ladd, and Vigdor, 2007). Full-time classroom teachers generally confirm that many substitutes are ill-equipped to manage a classroom, lack curricular knowledge, and are less competent with instructional strategies (Glatfelter, 2006). Herman and Rockoff (2012) report that

"extremely little production appears to take place when a teacher is absent for a single day, despite the presence of a paid temporary substitute" (p. 750).

"Because of high levels of teacher absence and the extensive use and reliance on substitute teachers to deliver instructional programs there is a strong attenuation or a lessening of the impact of school resources that are devoted to instruction" (Bruno, 2002, p. 3). This level of exposure to substandard instruction is particularly critical in the area of literacy. Moore et al. (2016) noted that "reading comprehension is as critical for beginning readers as it is for proficient, skilled readers; therefore, reading comprehension skills need to be taught and reinforced in all stages" (p. 21). When the idea that early reading comprehension is critical to development is coupled with the notion that substitute teachers are often underqualified, it becomes crucial to better understand the impacts of absenteeism on student literacy development, particularly at the early stages.

As teacher absences increase, student achievement scores go down. (Finlayson, 2009, p. 3). In their study of Ohio school teacher absenteeism and student achievement, Roby (2013) found that the schools that performed the best on assessments of academic standards also had the highest rates of teacher attendance. These high performing schools reported that over 91 percent of their students were meeting expected academic standards. The lowest performing schools had the lowest teacher attendance rates with only 20 percent of students meeting academic standards expectations.

External Factors Impacting Achievement

While this study explores the relationship between teacher absenteeism and student reading achievement, it is recognized that many other factors contribute, positively and negatively, to student outcomes. Prior research indicates that many issues

affecting achievement are indicated simultaneously, and often co-occur with teacher absenteeism.

Teacher Experience

A review of applicable literature suggests some dynamics outside of a student's personal circumstance may influence achievement. One such factor is a teacher's years of experience, and results are inconsistent. Teacher pay is based on years of experience, but it is not always tied to overall effectiveness and positive student outcomes. In their study of middle school student achievement, Ladd and Sorenson (2017) found that students of experienced teachers have higher test scores and have less reported behavior incidents than their peers paired with less experienced teachers (Ladd & Sorenson, 2017). However, Rice (2010) argues that "the impact of experience is strongest during the first few years of teaching; after that, marginal returns diminish" (p. 1). In this case, Rice (2010) explains that experience matters in regards to instructional effectiveness at the beginning of a teacher's career, but then begins to even out after a few years instead of continuing to increase with continued years of service.

Class Size

Class size and student-to-teacher ratio are valued considerations in regards to building a classroom environment conducive to an optimal learning experience for students. Smaller classes are highly desired among stakeholders when considering ideal learning environments and access to instructional benefits for students, especially in elementary grades. While it is a fiscally costly reform, class size reduction is tied to overall positive student outcomes, including increased student achievement

(Schanzenbach, 2014). Smaller class sizes have been linked to educational quality and better working and learning conditions within schools (Chingos, 2013).

Woods (2015) found that smaller classroom sizes improve grades for younger learners. An important detail that Woods (2015) also uncovered is that support for smaller class sizes exists with teachers, unions, and parents. This level of support from various stakeholder groups is important to recognize, as it reduces the likelihood that factions of disparate agendas emerge. It also shows near-universal recognition that greater attention from a present, qualified teacher ultimately benefits the students in the classroom.

School Funding

Economic factors are also notable when examining the relationship between school funding and student achievement. According to the Learning Policy Institute (2018), inequities in school funding create disparities in student achievement, particularly for students of color. Kreisman and Steinberg (2019) found in a study of a school district in Texas that a 10% increase in per-pupil spending led to a 0.7 standard deviation increase in reading achievement. This provides hope that a small increase in funding has the ability to noticeably affect literacy in the classroom.

Increased funding also provides a nexus for both teacher retention and student achievement, which positions it as a key component in the complex system of public education. Dodge (2018) examined the issue of school redistricting as it relates to reducing the link between economic and educational inequality. In her review of several landmark court cases discussing the matter, Dodge (2018) found that through extensive

research linking school district wealth, educational opportunities, and educational outcomes, that school funding matters.

Districting

Encapsulating factors like demographics and funding is the issue as to where the school is geographically located. Reardon (2016) notes a strong relationship between school district socioeconomic status and student achievement. School districting is politically charged, as students receiving free and reduced lunch, funding allocation, and transportation costs are all part of the cause and effect cycle of geographical school location. Bouzarth et al. (2018) identified that “ Several studies have found that students' academic achievement is as much determined by the socioeconomic composition of their school as their own socioeconomic status” (p. 1). This finding underscores that while individual socioeconomic factors affecting students should be considered, it is the districting and financial resources of the school system that can impact learner outcomes.

Student Characteristics Impacting Achievement

Each learner brings with them to the classroom innate characteristics that require adaptation on the the part of the teacher. Considerations of the learner's race, gender, and economic background should be made in order for instruction to be wholly effective. These static factors underpin the importance of a consistent, qualified teacher being present in the classroom. A teacher with an understanding of each student's background provides the foundation for a safe learning environment and benefits the student by providing a consistent adult who understands their specific circumstances.

Race/Ethnicity

It is widely known that an academic achievement gap persistently exists between white and black students in the United States (Barton & Coley, 2010). This achievement gap is especially pronounced when considering literacy measures, where African American students perform lower than any other racial subcategory (Pittman, 2017). Pitre (2014) argues that the achievement gap can be explained by unequal educational opportunities for minority students. She explains that minority students, specifically African American students do not have equal access to quality instruction and are often at a disadvantage because of structural inequities (Pitre, 2014).

The issue of race and reading achievement is particularly dire in certain regions of the United States. For example, Levin (2017) notes the alarming fact that “three of four African-American boys in California classrooms failed to meet reading and writing standards on the most recent round of testing.” (para. 1). This highlights how easily external factors co-occur to create a complex portrait of needs that require attention when examining the issue of reading achievement and teacher absence.

Gender

When students are paired with a teacher of the same gender, both boys and girls perform higher academically (Dee, 2007). Dee (2006) examined existing research and concerns related to teacher gender and student gender. In his final analysis, Dee (2006) found that “simply put, girls have better educational outcomes when taught by women, and boys are better off when taught by men” (p. 71). When linked with information regarding hiring and retention of teachers, we are able to better understand the

challenges, and importance, of male teachers as it pertains to the educational outcomes of male students.

Girls tend to outperform boys in both reading and writing (Reilly, Neumann & Andrews, 2019). This is supported by Levin's (2017) reporting, where he not only examined the achievement gap that exists between races in California but also found "more than half of black boys scored in the lowest category on the English portion of the test, trailing their female counterparts. The disparity reflects a stubbornly persistent gender gap in reading and writing scores that stretches across ethnic groups" (para. 3).

Socioeconomic Status

Historically, students of low economic status do not perform as well academically as their peers (Reardon, 2013). The economic achievement gap has widened in the past thirty years, matching the growing income gap in the United States as a whole. (Reardon, 2013). Destin et al. (2019) looked deeper into not only the achievement disparities that occur with economic inequity but also the psychological factors that sometimes remain unseen as the bridge between socioeconomic status and educational outcomes.

According to Destin et al. (2019), students from an economically disadvantaged background show a predisposition towards a fixed mindset that produces limiting beliefs about education and thus negatively influences their ability to learn. Conversely, students with college educated parents and greater socioeconomic standing enjoy a mindset that embraces education and is colored by their access to new experiences and views outside of the classroom (Destin et al., 2019). The psychological factors of economic disadvantage as they relate to educational outcome provides a unique opportunity for recognition and intervention by a present classroom teacher.

Limitations of Prior Studies

While there is some research linking teacher absenteeism with student achievement, it is still unclear how it impacts early reading growth and development and how the aforementioned teacher and student characteristics play into this. The issue is complex and layered. Ultimately, it is generally understood that having a consistent, qualified teacher present in the classroom is beneficial for students, but little is known regarding the relationship between teacher absenteeism and early literacy skills, if one exists. Additionally, while educational researchers have examined both personal and external factors that influence student academic achievement, it is not yet known how these factors impact the effect of teacher absenteeism on student outcomes.

Prior studies have not thoroughly addressed student level data and characteristics that may alter the impact of teacher absenteeism on student achievement. While the studies do illuminate teacher absenteeism and its associated consequences, they fail to link how student achievement is directly impacted when the teacher is not consistently in the classroom. Specifically, there is a dearth of information regarding reading achievement. Previous research, coupled with current literacy tests, point to the importance of mastery of early childhood literacy skills. What is unknown is to what degree those skills diminish as teacher absenteeism rates increase. Additionally, prior research did not address longitudinal data, which may be useful information regarding the impact teacher absenteeism over multiple years. Future research is needed to determine if a relationship exists between teacher absenteeism and student reading achievement accounting for student and teacher factors using longitudinal data. The gaps in the

literature demonstrated here motivate the research questions and methodological approach outlined in Chapter 3. as this represents a gap in the reviewed literature.

CHAPTER 3: RESEARCH METHODOLOGY

As the issue of teacher absenteeism has garnered national attention, school districts have been tasked with exploring the consequences associated with teacher absenteeism and finding creative solutions to help increase both teacher retention rates and keep teachers in the classroom during the course of the school year. A study of areas of education impacted by teacher absenteeism revealed that students suffered negative consequences when their teacher was chronically absent (Griffith, 2017). As noted in the prior chapter, little research focuses on the impact of teacher absenteeism and student reading achievement, and even less of that research employs a quantitative methodology. There is a gap in the literature regarding teacher absenteeism and student reading growth and achievement. This gap represents an opportunity for teacher absenteeism and student reading growth and achievement to be explored. For this reason, I have designed this study in the manner detailed in this chapter.

Purpose of the Study

The purpose of this study is to gain a greater understanding of teacher absenteeism and student achievement. More specifically, this research aims to determine if an association exists between teacher absenteeism and elementary student reading growth and achievement throughout an academic year. Further, I am seeking to identify student and teacher factors that impact the effect of teacher absenteeism on student achievement, including gender, ethnicity, socio-economic status, class size, and teacher's years of experience.

Method

This exploratory study is intended to answer the following research questions:

1. What is the association between teacher absenteeism and elementary student reading growth and achievement?
2. To what extent do student and teacher characteristics explain the association between teacher absenteeism on reading growth and achievement?
3. To what extent does chronic teacher absenteeism impact student reading growth and achievement?

To do so, I employ a correlational design, evaluating the association between teacher absenteeism and student reading achievement, as well as, student reading growth, which is measured at multiple time points. Below, I outline the details of the sample used, followed by the analytical approach and model specifications. Before turning to the results, I consider the model assumptions and limitations.

Sample

In order to explore the research questions, I employ first-grade data from a primary public school in Alabama that covers the 2015-16 to 2018-19 academic years. These data are held in the Chalkable database, including individual longitudinal records of each student across 18 teachers for 4 years, including gender, race/ethnicity, and socioeconomic status. These data were merged with the mClass Amplify student achievement database, which includes reading achievement at three time points during the academic year. These data were then matched with teacher level data from the Frontline Education database including gender, race, years of experience, certification level, and number of absences.

The school that is included in the study is an urban public primary school in Alabama. The school houses grades kindergarten and first, with an enrollment of 524 students. There are 25 homeroom teachers employed at the school with an additional 8 teachers that work in educational resource areas. The school is currently classified as a Title I school, serving a student population that is approximately 28% low income.

The sample includes student level data, longitudinal data with multiple measures throughout the academic year, data on teacher characteristics, and classroom characteristics. Student level data is gathered and included in order to provide insight into reading achievement and growth for the students as a whole and then in subgroups. Longitudinal data with multiple measures are included in order to show the rate of reading growth among individual students in each given school year. By including this data, it can be determined whether the teacher absenteeism impacts the rate of reading growth among students. Data on teacher characteristics and classroom characteristics are included to examine if characteristics outside of student level data make a difference when measuring the impact of teacher absenteeism on student reading growth and achievement.

Table 1 describes the sample, including the number of teachers included in the study each year, the amount of absences in each given year, and the teachers' years of experience. The student sample is also included, listing the number of students in the study each year along with applicable demographic information.

Table 3.1 - Teacher and Student Sample Characteristics

	<u>Panel Average</u>	<u>15-16</u>	<u>16-17</u>	<u>17-18</u>	<u>18-19</u>
Teachers	18 (total)	9	10	11	12
Absences per year	9.83 (SD=11.04)	5.6	7.2	17.3	9.2
Years of Experience	10.3	13.2	11.2	7.7	9.1
Students	748 (total)	168	198	167	215
Female	47%	46%	43%	51%	48%
Male	53%	54%	57%	49%	52%
African American	28%	25.80%	32.90%	19.50%	33.60%
Asian	9%	7.80%	7.20%	11.70%	9.40%
White	59%	65.20%	55.30%	63.90%	51.70%
Two or More	4%	1.20%	4.60%	4.90%	5.10%
FRL	26%	27%	28%	19%	34%
Paid Lunch	74%	73%	72%	81%	66%

Notably, across the sample, teachers averaged just under 10 absences per year, but the standard deviation of 11.04 demonstrates that there is considerable variance in absences by individual teachers.

Variables

The variables of interest are Dynamic Indicators of Basic Early Literacy Skills (DIBELS) achievement and reading growth data. DIBELS benchmark data is often used as an indicator in regards to whether or not a student is meeting grade level expectations in reading and to identify if a student needs additional instructional support (Good, Gruba & Kaminski, 2002). DIBELS reading growth scores indicate the level of growth an individual student has made at three standardized testing points in an academic year. Consensus on the validity of DIBELS as a consistent measure of reading growth is not unanimous (Kamii & Manning, 2009).

Dependent Variable 1: Achievement. Dynamic Indicators of Basic Early Literacy Skills (DIBELS) assessment data for reading were collected along three testing periods for each school year studied. Based on standardized benchmark recommendations, students are recorded as either meeting or not meeting benchmark.

Students were assessed by a trained school staff member outside of their homeroom teacher at the beginning, middle, and end of the school year. While students are administered several subtests, one of the more reliable measures of phonemic awareness and overall reading ability is the nonsense word fluency subtest. The nonsense word fluency subtest measures an individual student's letter-sound correspondence and ability to blend those sounds into words. The nonsense word fluency is assessed as follows:

“The student is presented an 8.5" x 11" sheet of paper with randomly ordered VC and CVC nonsense words (e.g., sig, rav, ov) and asked to verbally produce the individual letter sounds in each word, or read the whole word. For example, if the stimulus word is "pov" the student could say /p/ /o/ /v/ or say the word /pov/ to obtain a total of three letter-sounds correct. The student is allowed one minute to produce as many letter-sounds as he/she can, and the final score is the number of letter-sounds produced correctly in one minute. Because the measure is fluency based, students should receive a higher score if they are phonologically recoding the word, as they will be more efficiently producing the letter sounds, and receive a lower score if they are providing letter sounds in isolation. The intent of this measure is that students are able to read unfamiliar words as whole words, not just name letter sounds as fast as they can. The NWF measure takes about 2 minutes to administer (dibels.uoregon.org, 2020).”

The nonsense word fluency subtest is used in this study to determine students' growth over the three assessment points. DIBELS data was collected from the mClass Amplify Learning Platform, using benchmark assessment reports.

Dependent Variable 2: Growth. As a second indicator, growth scores for DIBELS achievement were calculated on the above test, to track individual level reading growth at

three time points in the academic year. These measures were taken in September, December, and March. Individual level differences are recorded at each time point.

Covariates

Teacher Absenteeism: An independent variable of interest is teacher absences, which is a continuous variable. Teacher absences are recorded as sick or personal leave for a half day or full day. Teachers are replaced by a district appointed substitute on a day in which they are absent.

Chronic Teacher Absenteeism: Teacher absenteeism is considered chronic if a teacher misses 10 or more days in a given school year (Office of Civil Rights, 2018). This variable is categorical, as a teacher is chronically absent or is not chronically absent.

Student Covariates: As per Table 1, student covariates include gender, race, and socio-economic status. Each of these variables are categorical.

Teacher Covariates: Similarly, in Table 1, I include controls for teacher years of experience.

Analysis Plan

Research Question 1 is approached with a correlational analysis to establish the baseline relationships between teacher absenteeism and student reading growth and teacher absenteeism and student reading achievement. Descriptive statistics will be provided as a means to understand the data and visualize the relationships. First, a table will be included that presents the number of cases in the study, the minimum, maximum, mean and standard deviation for student achievement scores, growth scores, and teacher absences. Histograms will be presented as a visual representation of the distribution of the data for student reading growth scores, student reading

achievement scores, and teacher absences. Next, a table representing the average growth scores on the DIBELS Nonsense Word Fluency (NWF) subtest will be included. Mean scores will be presented for all students and then broken down by gender, racial demographics, and socioeconomic status. A similar table will follow with average student achievement scores. Further, a line graph will be presented as a means to visually represent the association between teacher absenteeism and reading growth. A table representing mean achievement scores will then be presented for all students and then by the appropriate subcategories. A line graph representing the association between teacher absenteeism and student reading achievement will be included. Finally, scatterplots will be provided to assess if a linear correlation between the variables exists.

Research Question 2: In order to determine the impact of covariates in the relationships between teacher absenteeism and reading growth and teacher absenteeism and reading achievement, research question 2 will be explored using OLS regression models. I estimate the association between teacher absences and student achievement holding student and teacher factors constant. I use the general model:

$$\gamma Achievement_s = \alpha + \beta_1 Absences_t + B_2 Gender_s + B_{3-6} Race_s + B_7 SES_s + B_8 Years Experience_T + \varepsilon$$

whereby s represents student and t represents individual teachers. First, a model using individual student achievement is run, followed by a model estimating student growth.

Research question 3 explores the association between chronic teacher absenteeism and student reading growth and achievement. Here, the variable of teacher absences is

considered a categorical variable, distinguishing between chronic and non-chronic teacher absenteeism, defining chronic absenteeism as any teacher with 10 or more absences (Office of Civil Rights, 2018). The relationships between chronic teacher absenteeism and student reading growth and chronic teacher absenteeism and student reading achievement will then be approached with a t-test and ANCOVA test. First, I run a t-test to see if there is a statistically meaningful difference between chronic teacher absenteeism and reading achievement and growth. Next, I utilize an ANCOVA model to determine if a statistically significant difference exists in the case of students with teachers that are chronically absent as compared to those who are not chronically absent on student reading end of the year achievement scores controlling for the beginning of the year achievement scores. The student and teacher covariates will also be included in the analysis to determine their impact on the relationships.

Research Limitations

This study has potential limitations to be discussed. First of all, this study aims to determine if teacher absenteeism is associated with lower student reading growth and achievement rather than to identify if teacher absenteeism causes lower rates of student growth and achievement. There are many student and teacher factors that may influence student reading growth and achievement that are not investigated in this study, meaning spurious or endogenous factors cannot be fully controlled for. For example, teachers that are absent more frequently may have unobserved conditions that impact both their absentee rate and the quality of their teaching (e.g., serious illness, personal issues), meaning that increases in absenteeism may not necessarily be the mechanism affecting student achievement or growth. Factors such

as school climate, school leadership, and teacher burnout may also influence teacher absenteeism and student growth and achievement and therefore may influence the outcome of the analysis. While it is a complex issue with multiple possibilities, this study could serve as starting point for determining one factor that might be associated with student reading growth and achievement.

There are also limitations of generalizability given the parameters of the study. The data included in the study were collected from a single public elementary school in Alabama. The school community is in a unique environment. A large university is in close proximity to the school, resulting in a highly educated surrounding area. Outside of teacher years of experience, teacher factors were not taken into account that may have had a bearing on the amount of teacher absences as well as their resulting association with student growth and achievement. Given these limitations, inferences should be taken with caution.

CHAPTER 4: RESULTS

Chapter 4 presents the results of the statistical analysis for each of the research questions presented above. For research question 1, descriptive statistics are presented for the variables of interest. Histograms are provided as a visual representation of the data. One-way ANOVA analyses will be completed in order to determine if there is a significant difference in the means of the variables across each school year included in the study. For research question 2, multiple regression analysis is conducted to examine the relationship between teacher absenteeism and student growth and achievement. Student growth is measured by the difference between beginning of the year DIBELS Nonsense Word Fluency subtest scores and end of the year scores of the same subtest. Student achievement is measured by the end of the year scores of the DIBELS Nonsense Word Fluency subtest. Student and teacher factors and their impact on results were analyzed. For research question 3, a t-test and ANCOVA model is used as a means to control for beginning of the year scores when considering chronic teacher absenteeism and student reading achievement.

Research Question 1

What is the association between teacher absenteeism and elementary student reading growth and achievement?

Research question 1 aimed to explore the relationships between teacher absenteeism and elementary student reading growth and teacher absenteeism and elementary student reading achievement. Descriptive statistics are provided for the variables of interest. Table 4.1 below presents the number of cases included in the study, the minimum, maximum, mean and standard deviation for student achievement scores,

growth scores, and teacher absences. Histograms (Figure 4.1, 4.2, and 4.3) are provided to show the distribution of the data for each variable.

Table 4.1

	<u>N</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Mean</u>	<u>SD</u>
Achievement Scores	748	0.0	50.0	27.7	14.9
Growth Scores	748	-9.0	50.0	19.4	12.5
Teacher Absences	748	1.0	18.0	8.2	3.8

Figure 4.1 is a histogram presenting the frequency of student achievement scores from all four years included in the study. The lowest score recorded was a 0 and the highest score was a 50. Fifty is the highest possible score on the assessment. The mean score for all years was 27.69 with a standard deviation of 14.95. The distribution appears to be random, with no apparent pattern. It is noted however, that the most common score was a 50 in regards to student achievement, with another peak in the less than 20 range.

Figure 4.1

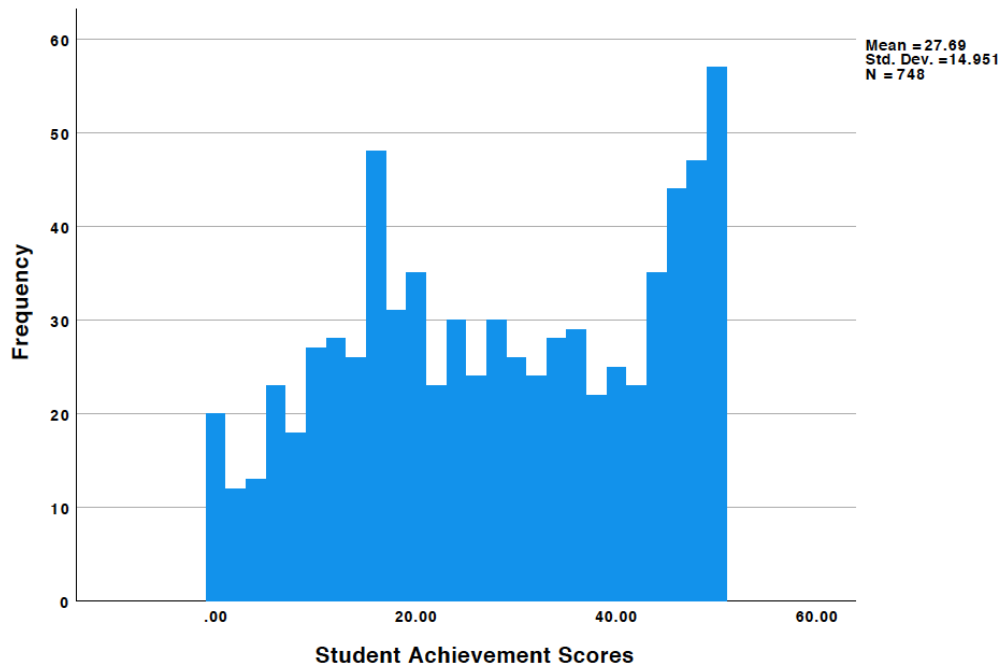


Figure 4.2 below presents the distribution of student growth scores. The mean growth score for all students in the four years included in this study is 19.41 with a standard deviation of 12.55. The lowest scores were negative, meaning that a student received a lower score at the end of the year than at the beginning. The highest score was a 50, indicating that a student started the year with a score of 0, and then scored a 50 at the end of the year assessment, as 50 was the highest possible score. The distribution here appears to be skewed slightly right.

Figure 4.2

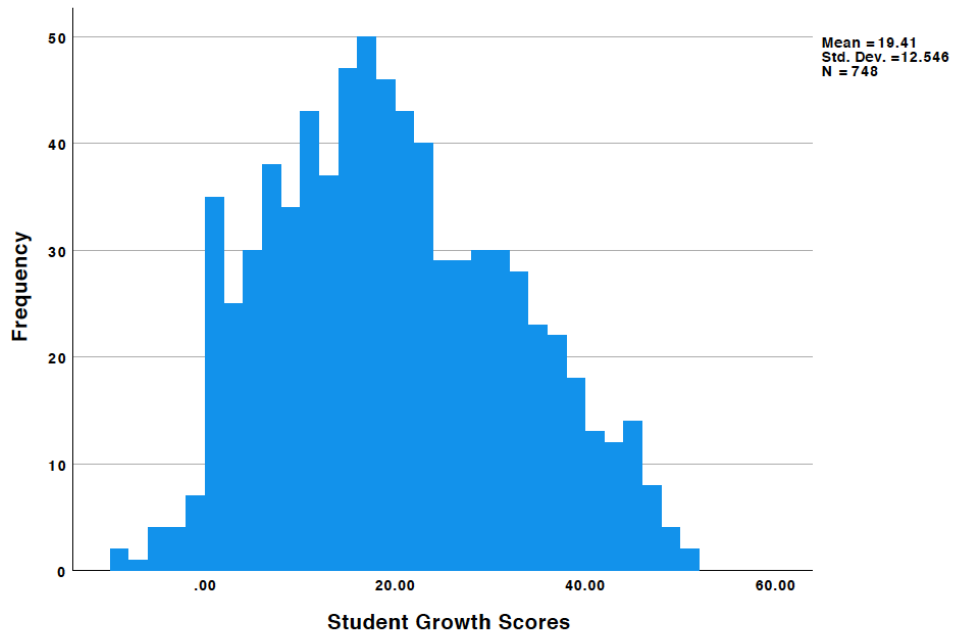


Figure 4.3 below represents teacher absences by student. The mean number of teacher absences for a given student during the four years included in this study were 8.20 with a standard deviation of 3.78. The distribution is again skewed slightly right.

Figure 4.3

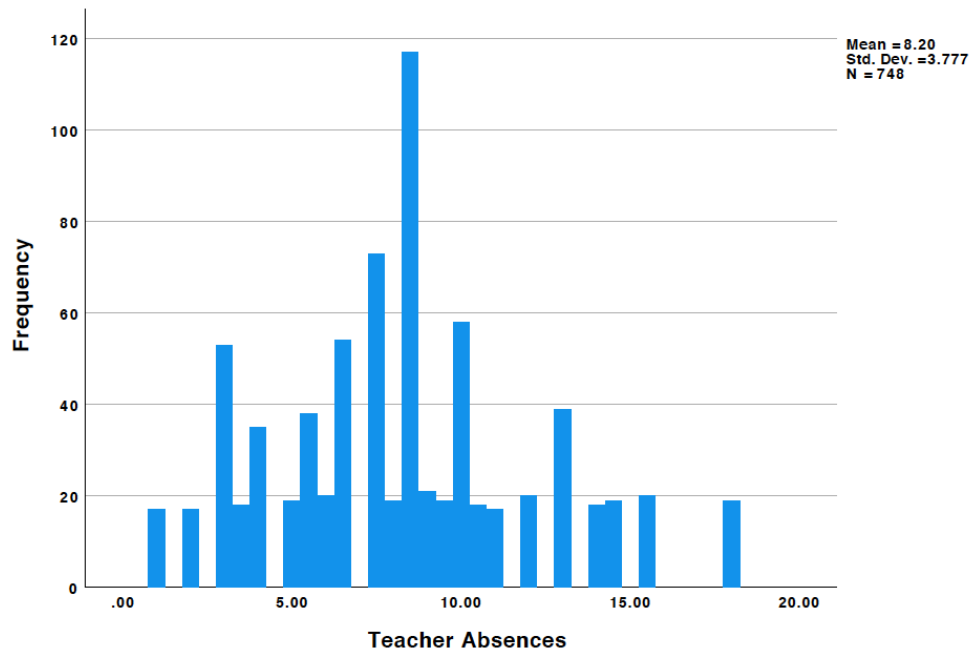


Table 4.2 below presents the average teacher absences by student in each academic year included in the study. A one-way between subjects ANOVA was conducted to compare the mean teacher absences by student in each academic year. The results indicated there was a significant difference between the means in the four academic years included in this study ($F(3,744)=26.91, p<.001$). Post hoc comparisons using the Tukey HSD test indicated that the mean teacher absences by student for 2017-2018 ($M=8.82, SD=9.45$) and 2018-2019 ($M=9.67, SD=4.11$) were higher than 2015-2016 ($M=6.73, SD=3.33$) and 2016-2017 ($M=7.33, SD=2.67$) by roughly 2 absences, a statistically significant difference.

Table 4.2 – Teacher Absences by Student

	<u>N</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Mean</u>	<u>SD</u>
Teacher Absences Total	748	1.0	18.0	8.20	3.78
15-16	169	1.0	11.0	6.73	3.33
16-17	199	3.5	13.0	7.33	2.67
17-18	165	2.0	15.5	8.82	9.45
18-19	215	3.0	18.0	9.67	4.11

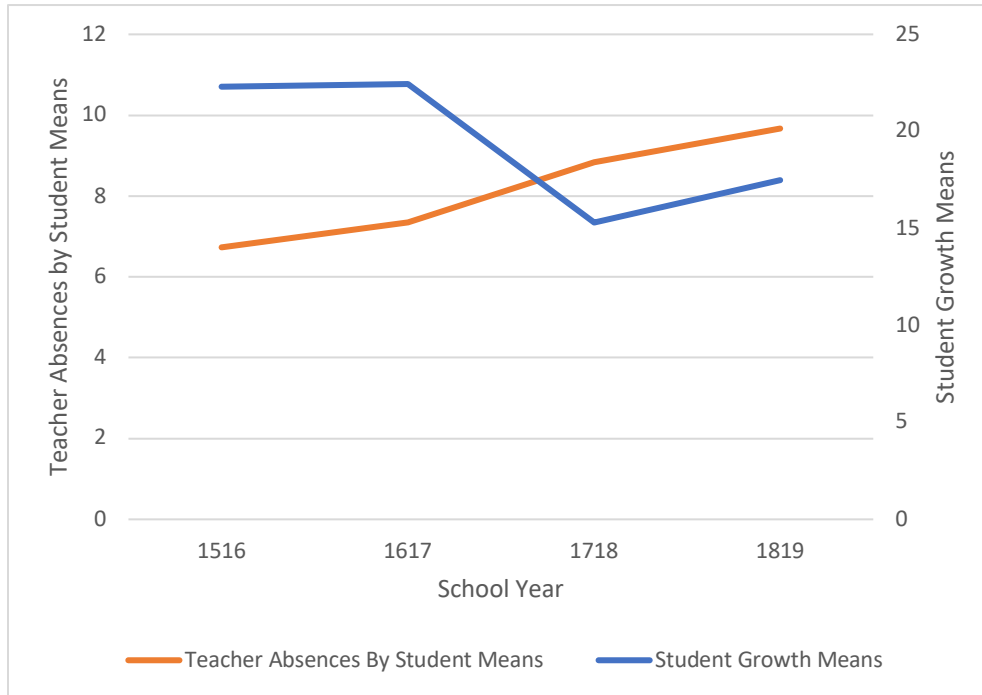
Table 4.3 below presents the average growth scores on the DIBELS Nonsense Word Fluency (NWF) subtest. Average scores are presented for all students and then broken down by gender, racial demographics, and socioeconomic status. As we can see, growth scores declined in the 17-18 and 18-19 years for all students. A one-way between subjects ANOVA was conducted to compare the mean growth scores in each academic year. The results indicated there is a significant difference between the means in the four academic years included in the study ($F(3,744)=15.313, p<.001$). Post hoc comparisons using the Tukey HSD test indicated that the mean growth score for 2017-2018 ($M=15.30, SD=11.82$) was significantly less than 2015-2016 ($M=22.31, SD=13.18$) and 2016-2017 ($M=22.44, SD=12.56$). Further, the mean growth score for 2018-2019 ($M=17.48, SD=11.32$) was also significantly less than 2015-2016 ($M=22.31, SD=13.18$) and 2016-2017 ($M=22.44, SD=12.56$). Female students tended to have slightly higher growth scores than male students, however, the difference is not statistically significant. Students identified as receiving free and reduced lunch (FRL), had lower growth scores than their paid lunch peers, with the exception of 17-18. Again, this is a statistically insignificant difference.

Table 4.3 – Average Student Growth Scores on DIBELS NWF

	<u>15-16</u>	<u>16-17</u>	<u>17-18</u>	<u>18-19</u>
All Students	22.3	22.4	15.7	17.4
Female	22.3	23.2	15.9	17.8
Male	22.3	21.9	15.5	17.0
African American	20.1	21.4	16.9	14.7
Asian	15.3	17.9	12.1	17.7
White	24.4	23.6	16.0	18.9
Two or More	11.0	24.6	15.6	17.9
FRL	19.8	20.2	17.7	17.3
Paid Lunch	23.3	22.5	15.5	18.6

Figure 4.4 below is a line graph that shows the association between student reading growth and teacher absences. As stated before, the years 2017-2018 and 2018-2019 have significantly lower student growth scores than the previous school years included in this study. The years 2017-2018 and 2018-2019 also have significantly higher teacher absences.

Figure 4.4



Next, we turn to table 4.4, which presents the percentage of students meeting DIBELS NWF benchmark expectations. Here, we see that while students in the two or more races category had lower growth scores, a higher proportion of them met benchmark expectations. Similarly, Asian students had lower growth scores than most of their peers in each academic year, however, 90% or more of them met benchmark expectations every year. In most academic years included in this study, a higher percentage of female students met benchmark than their male peers.

Table 4.4 - Students Meeting Benchmark on DIBELS NWF

	<u>15-16</u>	<u>16-17</u>	<u>17-18</u>	<u>18-19</u>
All Students	86%	87%	75%	74%
Female	87%	85%	78%	75%
Male	86%	89%	73%	74%
African American	79%	78%	65%	57%
Asian	100%	100%	92%	90%

White	88%	90%	76%	81%
Two or More	100%	100%	70%	82%
FRL	80%	80%	61%	59%
Paid Lunch	89%	89%	79%	82%

Table 4.5 below presents the mean number of student achievement scores in each academic year included in this study. For all students and for most subcategories, achievement scores dropped in the years 2017-2018 and 2018-2019. For two or more races, achievement scores increased in 2018-2019, however, there were a small number of students included in this category during that academic year (N=1). A one-way between subjects ANOVA was conducted to compare the mean achievement scores in each academic year. The results indicated there is a significant difference between the means in the four academic years included in the study ($F(3,744)=8.23, p<.001$). Post hoc comparisons using the Tukey HSD test indicated that the mean achievement scores for 2017-2018 ($M=25.85, SD=15.30$) and 2018-2019 ($M=24.40, SD=14.45$) were significantly less than 2016-2017 ($M=31.06, SD=14.66$). Further, the mean growth score for 2018-2019 ($M=24.40, SD=14.45$) was also significantly less than 2015-2016 ($M=29.67, SD=14.55$).

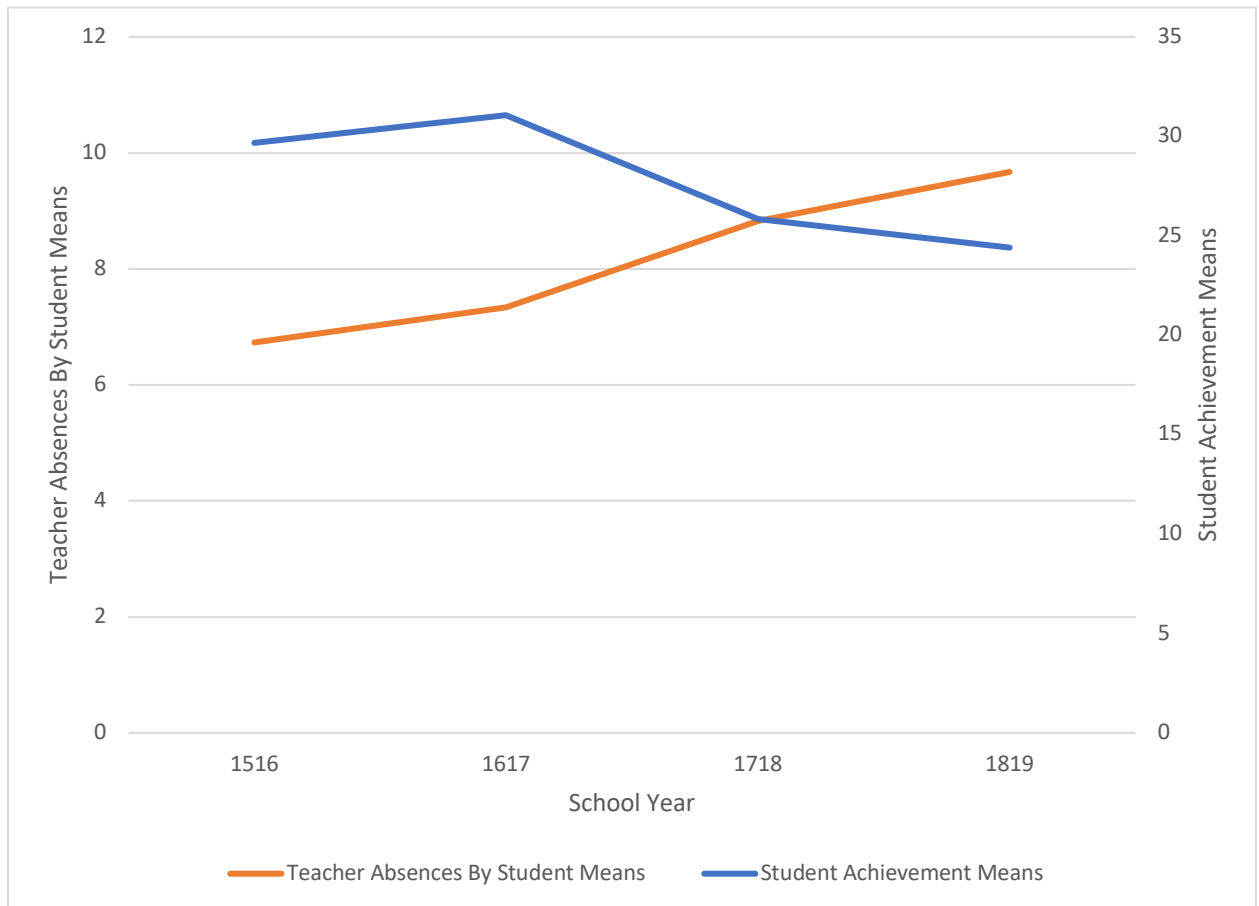
Table 4.5 – Average Student Achievement Scores on DIBELS NWF

	<u>15-16</u>	<u>16-17</u>	<u>17-18</u>	<u>18-19</u>
All Students	29.67	31.06	25.85	24.40
Female	28.45	31.77	24.84	24.63
Male	30.85	30.50	27.01	24.20
African American	24.72	25.09	20.45	18.26
Asian	39.92	37.07	34.00	31.25
White	31.03	33.42	26.59	26.43

Two or More	12.00	18.50	18.56	29.09
FRL	24.09	26.25	20.97	17.81
Paid Lunch	31.76	32.94	27.03	27.87

Figure 4.5 is a line graph that shows the association between student reading achievement and teacher absences. As stated above, the years 2017-2018 and 2018-2019 have significantly lower student achievement scores than the previous school years included in this study. The years 2017-2018 and 2018-2019 also have significantly higher teacher absences.

Figure 4.5



Next, I look to assess the extent to which teacher absenteeism, growth, and achievement are correlated. Below, I present two figures. Figure 4.6 presents a scatterplot of the association between student reading growth and teacher absences. For figure 4.6, the correlation is nonlinear and not statistically significant, $r(746) = -.028$, $p = .450$.

Figure 4.6

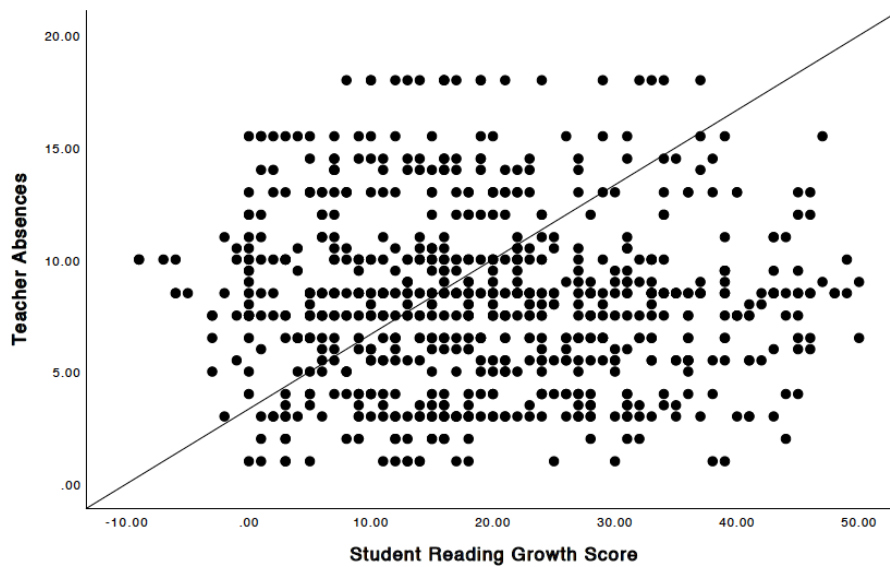
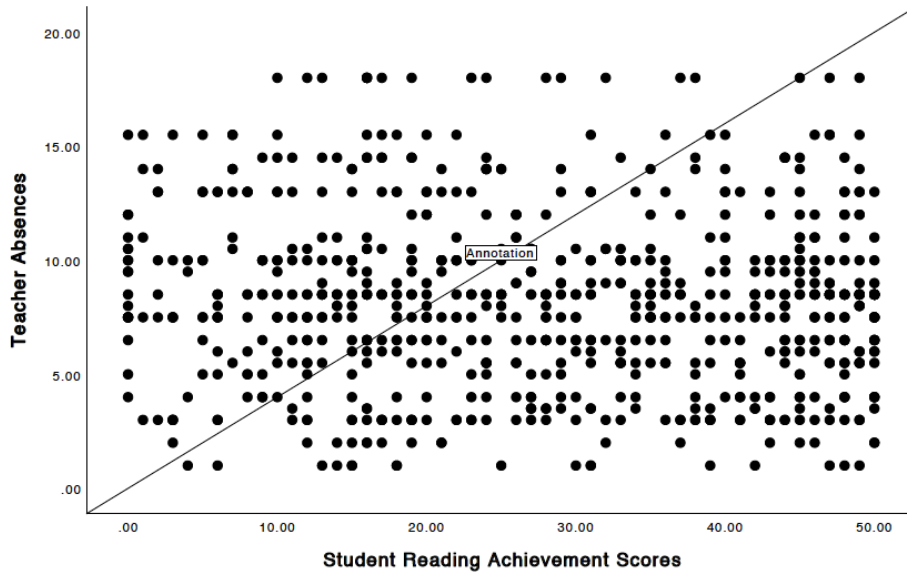


Figure 4.7 presents a scatterplot of student reading achievement scores and teacher absences. Teacher absences and student reading achievement scores were not statistically significant, $r(746) = -.075$, $p = 0.41$.

Figure 4.7



Research Question 2

To what extent do student and teacher characteristics explain the association of teacher absenteeism on reading growth and achievement?

Research Question 2 aims to determine the extent that student and teacher characteristics explain the association between teacher absenteeism and student reading achievement. I include student gender, ethnicity, socioeconomic status and teacher years of experience in estimating the association between teacher absenteeism and student reading growth and achievement. I present the results from a linear regression model estimating the association between teacher absenteeism and student achievement and student growth. First, results indicate that increases in teacher absences are associated with a reduction in overall reading achievement, holding all other factors constant. For a one unit increase in teacher absence, there is a 0.44 point reduction in overall student achievement, a statistically significant result. There is a significant interaction effect

between socioeconomic status and teacher absences for student reading achievement. Additionally, there is a significant interaction effect between ethnicity and teacher absences. There was not a significant interaction effect between gender or teacher experience and teacher absences.

Increases in teacher absences also had a significant effect on student reading growth based on multiple linear regression. For each additional teacher absence, reading growth is expected to be lower by .27 points. There was a significant interaction effect between teacher experience and teacher absences on student reading growth. There was not a significant interaction effect between teacher absences and any of the other variables and reading achievement.

Table 4.6: OLS Regression of Teacher Absences on Reading Growth and Achievement

	Reading Growth	Reading Achievement
Teacher Absences	-.269* (.132)	-.440** (.155)
Teacher Experience	.202** (.048)	.082 (.056)
Student Characteristics		
Female	.350 (.919)	-.757 (1.092)
FRL	-1.824 (.075)	-7.948** (1.183)
Black	-2.598* (1.050)	-7.279** (1.212)
Asian	-5.014** (1.651)	5.823** (1.906)
Two or More	-1.917 (2.326)	-1.076 (2.685)
Gender*Teacher Absences	.044 (.834)	.029 (.865)
SES*Teacher Absences	.216 (.642)	3.995* (.046)
Ethnicity*Teacher Absences	1.520 (.181)	2.861* (.014)

Teacher Experience*Teacher Absences	9.647** (.002)	.575 (.449)
Observations	748	748
R-Squared	.001	.006

** p<0.01, * p<0.05.

Research Question 3

To what extent does chronic teacher absenteeism impact student reading growth and achievement?

Next, given the body of research on chronic absenteeism, I construct an indicator of chronically absent teachers and examine its association with achievement and growth. The 228 students who were in a classroom with a chronically absent teacher (M=17.26, SD=12.12) compared to the 520 students who had a teacher that was not chronically absent (M=20.35, SD=12.62) had significantly less growth, $t(746) = 3.12, p = .002$. Below, I present the results from a linear regression model estimating the association between chronic teacher absenteeism and student achievement and student growth. The results indicate that chronic teacher absenteeism has a statistically significant negative relationship with both reading growth and achievement. Students with a chronically absent teacher have a 3.09 point reduction in reading growth and a 3.680 in reading achievement, both are statistically significant. The interaction effect for ethnicity and chronic teacher absenteeism on student reading achievement was statistically significant. Socioeconomic status and chronic teacher absenteeism also had a statistically significant interaction effect on student reading achievement. For reading growth, teacher experience and chronic teacher absenteeism had a statistically significant interaction effect.

Table 4.7: OLS Regression of Chronic Absenteeism on Reading Growth and Achievement

	<u>Reading Growth</u>	<u>Reading Achievement</u>
Chronic Absenteeism	-3.095*	-3.680*
	(0.991)	(1.181)
Female	-0.345	-.763
	(0.913)	(1.088)
FRL	-1.913	-8.050**
	(1.017)	(1.178)
Black	-2.520*	-7.217**
	(1.040)	(1.203)
Asian	-4.631**	6.216**
	(1.642)	(1.900)
Two or More	-1.358	-0.597
	(2.313)	(2.677)
Teacher Experience	0.188	0.046
	(0.044)	(.053)
Gender*Chronic Absenteeism	.067	.252
	(.936)	(.777)
SES*Chronic Absenteeism	.380	3.474*
	(.684)	(.031)
Ethnicity*Chronic Absenteeism	1.299	2.740**
	(.233)	(.004)
Tch Exp*Chronic Absenteeism	8.654**	.758
	(.000)	(.469)
Observations	748	748
R-Squared	.050	.096

** p<0.01, * p<0.05

Finally, I run a one-way ANCOVA to determine if a statistically significant difference exists in the case of students with teachers that are chronically absent as compared to those who are not chronically absent on student reading end of the year achievement scores controlling for the beginning of the year achievement scores. The ANCOVA model indicates that when we control beginning of the academic year scores, the effect of chronic teacher absenteeism on student reading achievement is significant,

$F(1,745)=11.62, (p=<.001)$. When students are placed with a teacher that is chronically absent, they average 11.62 less points on their DIBELS NWF end of the year assessments.

Summary

The findings from research question 1 indicate that the correlation between teacher absenteeism and student reading achievement is nonlinear and not statistically significant. As the association between teacher absenteeism and student reading growth was explored, it was found that the correlation is also nonlinear and not statistically significant. Research question 2 was a linear regression model estimating the association between teacher absenteeism and student achievement and student growth. The results indicated a significant effect on reading achievement and growth, with statistically significant interaction effects for teacher absences and socioeconomic status and ethnicity for reading achievement and teacher experience for reading growth. Research question 3 examined the association of chronic teacher absenteeism and student reading growth and achievement. The results indicate that chronic teacher absenteeism has a statistically significant negative relationship with both reading growth and achievement. Again, with statistically significant interaction effects for chronic teacher absenteeism and socioeconomic status and ethnicity for reading achievement and teacher experience for reading growth. The ANCOVA model indicated that when we control for beginning of the academic year scores, the effect of chronic teacher absenteeism on student reading achievement is significant. The next chapter will interpret these results in light of the literature and provide policy recommendations.

CHAPTER 5: DISCUSSION AND CONCLUSIONS

In order to explore the association between teacher absenteeism and student reading growth and achievement, teacher attendance data and student reading assessment data were obtained from a public elementary school over a four-year span from 2015-2019. Teacher attendance was measured in two ways. First, total days of teacher absences were calculated. Full days and half days were included. Second, teachers were determined to be either chronically absent or not chronically absent. A teacher is considered chronically absent if they miss more than 10 days in an academic school year (U.S. Dept. of Education, 2018). Extended absences where a certified teacher acted as a substitute, such as a maternity leave, were not included in this study.

There were 748 students included in this study. Student characteristics were included as demographic data and as independent variables of interest used to determine if they can explain associations between teacher absenteeism and first grade student reading growth and achievement. Those characteristics included gender, race and socioeconomic status. Of the 748 students, 47% were female and 53% were male. In regards to race, 59% percent of students were white, 28% African American, 9% Asian, and 4% were listed as two or more races. Socioeconomic status was determined by whether or not a student qualified for free or reduced meals at school. Twenty-six percent of students included in this student were eligible for free or reduced meals and were therefore categorized as socioeconomically disadvantaged as compared to their peers. Seventy-four percent of students did not qualify for this designation.

Eighteen teachers were included in this study. Teachers in this study averaged 9.83 absences per year with a standard deviation of 11.04. Teacher years of experience was

included as another variable of interest. Across the four-year timespan, teachers included in this study had an average of 10.3 years of experience.

The dependent variables in this study were DIBELS nonsense word fluency scores that were obtained at three data points in each of the four academic years included in the study. Growth scores were determined by finding the difference between the beginning of the academic year and end of the academic year scores. Achievement scores were the end of the academic year scores for the same nonsense word fluency assessment.

Based on the data analysis related to the research questions, teacher absences reduce overall reading growth and achievement, and the effect is prominent when considering socioeconomic status and ethnicity. Teacher experience also has a significant interaction effect with teacher absences in regards to student growth, suggesting that teachers with increased years of experience are better able to compensate for increased teacher absences in regards to instruction. The ANCOVA results indicate that there is a significant effect of chronic absenteeism on student reading achievement after controlling for the effect of beginning of the year scores.

Conclusions

Chronic versus Not Chronic Absenteeism

As in any profession, 100 percent attendance is not the expected norm for any employee. The teaching profession is no different in this regard. However, chronic absenteeism is a major problem in many schools. In their study for the National Council for Teacher Quality (NCTQ), Joseph et al. (2014) 16 percent of teachers in this report were considered to be chronically absent from school, missing 18 or more school days. These chronically absent teachers accounted for nearly a third of all reported absences in

these districts (Joseph et al., 2014). Chronic absenteeism, rather than absenteeism in general, is a concern in regards to student early literacy growth and achievement. The data in this study indicate an association with teacher absenteeism and student reading growth and achievement. The effects were even more prominent for students with chronically absent teachers.

Students of Low Income Households

Students of low economic status historically do not perform as well academically as their peers (Reardon, 2013). Based on the results of this study, students that are socioeconomically disadvantaged are impacted by chronic teacher absenteeism more than their peers. Because these students often have access to less resources at home, they often rely on receiving quality instruction at school. Socioeconomically disadvantaged students need their teachers on a daily basis in order to have the opportunity to reach their educational goals.

Policy Implications and Interventions

"You can revise curriculum, toughen graduation requirements, and sing the song of excellence until you're hoarse: If teachers fail to show up for work, all your good intentions will wither on the boardroom floor" (Freeman, & Grant, 1987, p. 31). Most full-time professional employers allot sick leave days to their employees, along with a certain number of vacation days. However, because teachers have a different annual work schedule than most other professions, their leave allotment is different (NCTQ, 2012). According to NCTQ (2012), teachers, on average, are provided with 11 sick days and 4 personal days per year.

Teacher leave policies vary between states and often between school districts. For example, some school districts, such as those in the cities of Los Angeles and New York, do not permit teachers to take sick leave for anything other than personal illness. Family illness, in these school districts, are not acceptable reasons to take sick leave (NCTQ, 2012). In North Carolina, teacher sick leave policies are less restrictive. Teachers in North Carolina are able to take sick leave not only for personal illness, but also illness of an immediate family member (*North Carolina Public Schools, 2020*). In Alabama, local school boards can request an excuse from a physician to verify sick leave, only if they have probable cause to believe that the employee is misusing sick leave (*Employee Leave Laws for Alabama Public School Employees, 2012*).

Rates of teacher absenteeism also vary greatly between states. In 2014 for instance, teachers in Indianapolis, Indiana missed an average of 6.1 per school year, making it the lowest average for teacher absences among major cities in the United States. In contrast, Cleveland, Ohio had the highest, with teachers missing an average of 15.6 days (Joseph et al., 2014). Differences in attendance rates among teachers across states could be partially attributed to the policies regarding leave in states and local school systems. Miller (2012) notes that "teachers' leave provisions in some states may be too permissive, elevating rate of absence and incurring the financial liability of accumulated, unused leave" (p. 3). According to Smith (2001), "higher expectations of teachers, increased awareness of absenteeism effects, and motivating rewards for outstanding teacher attendance encourage lower teacher absenteeism" (p. 16).

As mentioned previously, childcare availability and satisfaction is a barrier to work attendance. Payne, Cook, and Diaz (2012) reported that when parents are more

satisfied with their children's childcare during the workday, they are less stressed and have reduced family and work interference. Kocakulah et al. (2016) suggest that providing childcare for employees can reduce absenteeism significantly. In their exploration of the benefits of employer provided childcare services, Hipp, Morrissey, and Warner (2016) found that the employer and employee mutually benefit from the childcare service because of increased employee commitment and a reduction of stress in the workplace.

Positive support and policies that reward teachers for regular attendance rather than punish for excessive absences may be an alternate solution for reducing absenteeism among teachers. However, it is important to make sure that rewards are attainable without making them too easy to earn. "Finding a balance between these two extremes appears to be critical in incentivizing teacher attendance, empowering educators who abstain from absenteeism without disenfranchising them by rewarding less-proactive colleagues" (Knoster, 2016, p. 14). Jacobson (1990) found that monetary compensation as a reward for high attendance for teachers made a significant change in absence behaviors. In this study, teachers with the highest attendance rates got the largest compensation, while those with the lowest received no monetary rewards. This positive incentive policy increased teacher attendance and decreased excessive absenteeism (Jacobson, 1990).

One of the most common positive support policies for reducing teacher absenteeism is allowing teachers to carry over unused sick leave from year to year (Joseph et al., 2014). Allowing teachers to keep their unused days, is a way to remedy the "use it or lose it" attitude that some teachers may have if they cannot carry over days (Knoster, 2016). However, the National Education Association (NEA) has historically

been opposed to teacher incentive programs, often fighting to keep the traditional teacher salary schedule. Policies that reward teachers for coming to work may not be the answer. Even if teacher incentive programs have short-term positive outcomes, there is a concern that "the crowding out of intrinsic motivation over time may reduce effort, self-esteem, and originality to the point of negatively affecting teacher and school productivity" (Springer, 2009, p. 7).

Another example of a positive incentive program for improving general employee absenteeism is a lottery system. Hassink and Koning (2009) investigated the effectiveness of a lottery system in a Dutch manufacturing firm. In this instance, employees that had perfect attendance for a month, were entered into a lottery for a chance to win money. Once they won, they were no longer eligible. Hassink and Koning (2009) concluded that the program was effective in reducing absenteeism, even though the effect tended to wear off after employees won the lottery.

State and district policies are not the only avenue for combating excessive teacher absenteeism, workplace norms and interventions can either encourage voluntary absenteeism or reduce it. Employees often look to their leaders' behaviors and attitudes about workplace attendance. Interventions like requiring teachers to contact their principal by phone on the day of an absence has proven to decrease teacher absenteeism (Miller, 2012). Voluntary absences reported as sick leave can gain legitimacy if supervisors do not require employees to turn in physician's notes or other forms of absence verification (Jacobson, 1990).

Sick leave taken because of illness is not always avoidable. In some cases, however, instances of chronic illness and stress-related health problems can be reduced

through better health practices. Some employers have recognized this and taken steps to provide their employees with health programs aimed at reducing absenteeism. In their review of literature related to health promotion programs, Aldana and Pronk (2001) found mixed results in terms of the effectiveness of these programs but commented that if they are implemented and participated in correctly, health promotion programs can offset employee absenteeism costs and reduce health related absences.

Recommendations

Considering the literature regarding teacher absenteeism and policy interventions, it is evident that there are no clear answers or quick fixes. However, the results of this study suggest that teacher absenteeism, especially chronic teacher absenteeism, is an issue that demands consideration from school and district leaders. The first step in reducing chronic teacher absenteeism is building a school culture that makes teachers feel supported and appreciated. School leaders should thoughtfully consider the needs of their teachers and implement practices that lighten their workload, rather than continually add to it. One way to accomplish this is through strategic scheduling. Ensuring that both instructional and planning times are protected within the school day is a way to provide teachers with valuable time to complete work tasks and take a break in the day if needed. Further, a supportive school culture should include teachers supporting each other. If a teacher is going to miss work, a peer teacher could step in to support the substitute or be available to provide small group instruction and needed interventions for struggling students. If this is not a feasible solution, school leaders should consider ways to train substitute teachers to increase their effectiveness and productivity in the classroom in the absence of a certified teacher.

Along with creating a supportive school environment, school leaders should establish clear, high expectations for their teachers in order to encourage regular attendance. Misuse of sick leave should be highly discouraged. If a teacher is out of work for more than three days in a given month, a physician's excuse should be provided to the principal stating the reason for their absence. Further, if a teacher is going to absent from school, they should have to directly communicate that with their principal. Not only will this hopefully discourage excessive absences, but also ensure efficient communication. Incentive programs, such as monetary rewards for regular attendance, are an option for rewarding teachers for meeting the high expectations of their school leaders in regards to attendance. Leaders should also consider that increasing teacher attendance could have a negative impact on school culture and climate. Teachers should feel supported and take time off when needed. While it may be difficult, it is critical that school leaders find the balance of empowering teachers and encouraging attendance at work, while not having a negative impact on school culture and climate.

Suggestions for Future Research

Little research exists on teacher absenteeism and its impact on students. While this study focused on the relationship between teacher absenteeism and elementary reading growth and achievement in a first grade year, no research to date explores longitudinal impacts of teacher absenteeism on students. Future research could be dedicated to exploring how high rates of chronic teacher absenteeism in a school system impact graduation and literacy rates for students. Further, it would be interesting to explore if having a chronically absent teacher causes deficits in student achievement that are quickly recovered after having consecutive years of not chronically absent teachers.

Student absenteeism is also an area of concern for many school districts, and it further research could examine if an association exists between student absenteeism and teacher absenteeism. There are tremendous opportunities for future research in the area of teacher absenteeism and its relationship with student growth and achievement.

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