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# Relating Teacher Attendance to Student English Language Arts and Math Achievement

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## Walden University

College of Education

This is to certify that the doctoral study by

## Daryl Kubilus

has been found to be complete and satisfactory in all respects, and that any and all revisions required by the review committee have been made.

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Walden University 2018

#### Abstract

Relating Teacher Attendance to Student English Language Arts and Math Achievement

by

Daryl Kubilus, Jr.

MA, University of Akron, 2001

BA, University of Akron, 1993

Project Study Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Education

Walden University

April 2018

#### Abstract

On average, teachers in the United States are absent for 9.6 days of student instruction per school year, while in this study's rural Northeast Ohio school district, teachers averaged 16.2 absences in the 2015-16 school year. Teacher absence is a concern because the classroom teacher is often considered the most crucial school-related influence on student achievement. Guided by Bowlby's attachment theory, the purpose of this study was to examine the possible predictive relationships between teacher absences for sick/personal and professional leave as well as other teacher-related variables, including teaching experience, teacher education level, and teacher evaluation results, with the outcome variables of student achievement in 4th through 8th grade English language arts and math. In this quantitative correlational study, data from 36 4th through 8th grade English language arts and math teachers were examined using simple and multiple linear regression models. Results indicated that none of the 5 teacher-related variables were significantly predictive of student achievement. Despite these non-significant results, the district's Board of Education expressed concerns about the public's perception of the district's teacher attendance rate. To address the Board's concern, a 3-day professional development program was created for the Board, administrators, and teachers to collaborate and recommend strategies to increase teacher attendance. The knowledge gained from implementing this project will promote positive social change by offering this and other school districts a variety of options to support the consistent attendance of teachers, which may, in turn, enhance student-teacher relationships, student-teacher engagement, and potentially student achievement over time.

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#### Dedication

I dedicate this paper to my lovely wife and world-class educator, Bonnie, for her unconditional love, support, and encouragement of my doctoral journey. I also dedicate this paper to my children, Dylan, Nolan, and Molly for their love and understanding as Dad spent so many mornings at Panera working on his paper. I hope the three of you always keep the importance of education close to your heart as Mom and I have tried to instill its virtue in you. You three continually make us proud! My parents, Pat and Daryl Kubilus, didn't make college a choice for me; rather, they made it an expectation. Thank you, Mom and Dad for instilling the value of education in me as a child. Thank you as well to my in-laws, Linda (rest in peace, 8/29/17) and Jim Kelly, for your encouragement of my studies and your help getting our children to their baseball/softball practices and games while I have tried to balance their activities with my doctoral work obligations. Finally, I would like to dedicate this study to my grandmother, Helen Kubilus. Although she is not here to enjoy the celebration of my doctorate degree, I know she is smiling from heaven as she is gloating to her dear friends Felice, June, and Martha about her grandson, Dr. Kubilus!

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I would like to acknowledge my administrative colleagues at the "focus" school district of this study. I am continually inspired by your advocacy for student learning. Your leadership and dedication to the students of our school district have greatly contributed to our district's success. I am proud and humbled to be your superintendent. I would also like to acknowledge my dear friend, Dr. Bruce Armstrong, for his mentorship of me as a school administrator. When I became an assistant principal in 2003, he told me it is "better to be productive than right". I have done my best to live by those words in my personal and professional life. Thank you for inspiring me, Dr! I am grateful to Dr. Andrea Wilson whose work as a quantitative methodologist was very helpful to me. Finally, I would like to give a very special acknowledgement and huge "thank you" to my chair, Dr. David Weintraub, for his exemplary leadership during my study. His advocacy for me and availability to me made this journey both memorable and professionally fulfilling.

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#### Section 1: The Problem

#### Introduction

One significant goal of the No Child Left Behind (NCLB) Act of 2001 and the subsequent Every Student Succeeds Act (ESSA) of 2015 is that student achievement will be improved through school district accountability. This accountability is measured through high stakes standardized assessments that provide data to determine if schools are meeting achievement standards (Johnson, 2011) set by individual states in conformance with the federal legislation. An additional goal of the legislation is that all students will be taught by highly qualified teachers (NCLB, 2002). There are currently 3.1 million teachers in the United States (U.S. Department of Education, National Center for Education Statistics, 2016). These teachers are the most important influence on student educational success and district improvement initiatives (Chetty, Friedman, & Rockoff, 2013; Duncan, Gurria, & Van Leeuwen, 2011; Goldhaber, Liddle, & Theobald, 2013; Stronge, Ward, & Grant, 2011).

Although NCLB and ESSA require teachers to be highly qualified, the legislation does not create parameters for teacher attendance. In Ohio, legislation requires that teachers receive 15 sick days per contracted year (Ohio Revised Code, 1976/2012). Additionally, boards of education typically grant teachers three personal days to be used according to provisions of locally developed negotiated agreements. Another cause for teachers to miss instructional time with their students is professional development (PD). The amount of time teachers are absent due to PD is governed by local school district policies and procedures.

District administrators feel pressure for their students to perform well on standardized tests (Brown, Jones, & Schuenemann, 2012). However, when elementary school teachers miss 10 or more days of instruction per year, students suffer a significant loss in achievement (Miller, Murnane, & Willett, 2008). When reviewing the 30 highest and 30 lowest performing school districts in Ohio, the state where this study occurred, Roby (2013) found that teacher attendance was far better in high performing districts than in low-performing ones. While teachers miss one day per month on average, the substitute teachers who fulfill the teaching responsibilities during those absences are often not required to have a teaching license or teacher training before substituting (Kronholz, 2013). In short, some literature suggests that the more often a teacher is absent from the classroom, the greater the potential for student achievement to be negatively affected.

There is little evidence that teacher education beyond a bachelor's degree is correlated to student achievement (Badgett, Decman, & Carman, 2014; Chingos & Peterson, 2011; Luschei & Chudgar, 2011; Winters, Dixon, & Greene, 2012). In Ohio, 53% of teachers hold a master's degree or higher. The increased pay teachers receive for acquisition of master's degrees results in a 2.70% (\$243 per student) increase in Ohio's total education expenditures (Roza & Miller, 2009) with no appreciable student achievement gains. Teacher experience, on the other hand, does positively correlate to student achievement, especially in the first few years of a teacher's career (Harris & Sass, 2011).

In 2011, the Ohio legislature enacted a law directing the Ohio Department of Education to derive a standards-based state framework for the evaluation of teachers (Ohio Revised Code, 2011/2012, 2013, 2014). This legislation resulted in the creation of the Ohio Teacher Evaluation System. This legislation represented the first legislative effort in Ohio to standardize the evaluation of teachers throughout the state.

#### **The Local Problem**

The focus district for this study did not have enough revenue to pay its bills in the 2011-12 school year. As a result, the state took over the fiscal operation of the school district by placing it into fiscal emergency in January 2012. After several failed levy attempts, the district eventually passed an operations levy in May 2014. The successful levy resulted in the state releasing the district from fiscal emergency in January 2015. During its time in fiscal emergency, the students in the district performed quite well on the state report card. In fact, during the 2012-13 school year, the district became the first in the state to receive a report card rating of "Excellent with Distinction" while simultaneously in fiscal emergency.

Despite the district's "Excellent with Distinction" designation during the initial phases of fiscal emergency, by the time the district was released from state fiscal receivership, student progress toward achievement was not at a passing level on the 2015-16 state report card (Ohio Department of Education, 2016c). Performance-based accountability measures such as state report cards can have negative consequences for school districts. Such accountability can affect public opinion and support in a negative way leading to funding and operations problems (Hamilton, Schwartz, Stecher, & Steele,

2013). Although the district's Board of Education made a campaign promise to its voters that it would not seek additional revenue from a ballot initiative until sometime after the 2019-20 school year, continuing to fail measures of state accountability in the future may have negative long-term fiscal consequences for the school district.

Although the state of Ohio has consistently implemented additional assessment measures to its report card over the 14 years of its existence, the 2015-16 school year represented the culmination of the state's attempt to quantify its comprehensive overhaul of student assessment reporting by applying component grades to six categories of student achievement measures. During the same 2015-16 school year, the focus district had a decline in teacher classroom attendance due to sick/personal and professional leave. As noted in Table 1, when accounting for sick/personal leave and professional leave, teacher attendance is lower than student attendance at the focus district and is trending lower each year. Tingle et al. (2012) found a negative relationship between student achievement on standardized tests and individual teacher absences. The more teacher absences, the lower the students' standardized achievement scores.

Table 1

Teacher and Student Attendance by Year

Year	Teacher attendance (%)	Student attendance (%)
2013-14	94.4	95.5
2014-15	94.1	95
2015-16	91.2	95.6

#### Rationale

#### **Evidence of Problem at the Local Level**

In the 2015-16 school year, at the focus district, teachers averaged 9.6 days of annual sick/personal leave and 6.6 days of annual professional leave for an average total of 16.2 missed instructional days. This number of absences is above the 9.4 day national average for teacher absences in the United States reported by Kronholz (2013). Kronholz (2013) advises that districts count teacher absences different ways, with some acknowledging professional development in their reporting and others not.

In the focus district, teacher sick/personal leave was similar in the 2014-15 and 2015-16 school years. However, professional leave was far more in 2015-16. Combining sick, personal, and professional leave, average teacher attendance was lower than student attendance in both school years as shown in Table 2.

Table 2

Mean Absence Days of Teachers and Students, By Year.

	Sick/personal leave days absent	Professional leave days absent	Total days absent
2014-15 Teachers	9.5	1.4	10.9
2014-15 Students	9	NA	9
2015-16 Teachers	9.6	6.6	16.2
2015-16 Students	7.9	NA	7.9

As shown in Table 3, when compared with the average of other Ohio school districts, the teachers in the focus district in this study had fewer years of service in the 2015-16 school year (Ohio Department of Education, 2016b). In that same year, teacher evaluation ratings were relatively high in the focus district. No teacher received the lowest rating of *Ineffective*. Only 1% of teachers received a rating of *Developing* with 18% receiving a rating of *Skilled* and 76% receiving the highest rating of *Accomplished* (Ohio Electronic Teacher and Principal Evaluation System, 2017).

Table 3

2015-16 Focus District Teacher Experience

Years of experience	Focus district	Ohio average
0-4 Years	44.3%	29.08%
5-10 Years	22.15%	17.67%
Over 10 Years	33.54%	53.25%

Most public school districts in Ohio grant teacher salary increases based upon graduate credit hours and degrees earned (Ohio's State Employment Relations Board, 2018). The focus district recognizes five categories of degree/credit hour attainment. Those categories are Bachelor's degree (BA), BA plus 15 credit hours, Master's degree (MA), MA plus 15 credit hours, and MA plus 30 credit hours. In the 2015-16 school year, 23.7% of teachers were at the BA education level, 7.9% were at BA +15, 38.1% were at MA, 19.1% at MA+15, and 11.2% at MA+30.

In the 2015-16 school year, only 65.3% of the district's fourth grade students and 78% of its fifth grade students tested proficient in English language arts (ELA) while 87.6% of its fourth grade students and 86.4% of its fifth grade students tested proficient in math (Ohio Department of Education, 2016c). Although these proficiency percentages from two grade levels merely represent a snapshot of the focus district's student performance, the overall "progress" measure (academic growth of all students based on their past performance) for the district in the 2015-16 school year on the state report card was an "F" (Ohio Department of Education, 2016c). In this study, I investigated the relationship of five teacher-related variables to student achievement. These variables include teacher absence for sick/personal leave, teacher absence for professional leave, teacher experience, teacher education level, and teacher evaluation results.

#### **Evidence of the Problem From the Professional Literature**

With over 3.1 million teachers in the United States (U.S. Department of Education, National Center for Education Statistics, 2016), researchers have concluded that the most important school-related factor in the achievement of students is the classroom teacher (Coleman, 1966; Goldhaber et al., 2013; Konstantopoulos, 2011; Ronfeldt, Loeb, & Wyckoff, 2013). The average teacher absence rate in the United States is 9.4 days per school year (Kronholz, 2013). After 10 years of service, the average number of paid sick days granted for professional, technical, and related employees is 9.9 days per year (United States Bureau of Labor Statistics, 2015). Although allocations vary from state to state, teachers are granted a combination of 12.7 sick and personal days per year, on average. As a result, districts spend an average of \$1,800 per teacher per school

year to cover the costs associated with absent teachers (Nithya, Waymack, & Zielaski, 2014). Teachers in Ohio, the state of this research study, are legislatively granted 15 sick days per year (Ohio Revised Code, 1976/2012).

Multiple studies have concluded there is a negative relationship between the number of days a teacher is absent and the academic achievement of students (Banerjee, King, Orazem, & Paterno, 2012; Miller et al., 2008; Roby, 2013; Rothstein, 2010; Tingle et al., 2012). In a study of large metropolitan areas of the United States, Sawchuk (2014) found that 16% of teachers were chronically absent (18 days or more), and 16% were absent 3 days or less. There are other teacher-related absence factors that contribute to student achievement (Rothstein, 2010). These factors include quality and availability of substitute teachers, subject areas where the absences occur, the quality of the teacher, and the reasons for the absence.

Another factor affecting the classroom attendance of teachers is PD. Teacher PD is not all the same. PD can be categorized on a continuum from highly adaptive to highly specific (Koellner & Jacobs, 2015). Although it can remove teachers from the classroom, multiple studies have cited student achievement gains due to teacher PD (Akiba & Liang, 2016; Althauser, 2015; Desimone, Smith, & Phillips, 2013; Shaha & Ellsworth, 2013; Shymansky, Tzu-Ling, Leonard, Yore, & Everett, 2012; Yoon, Duncan, Lee, Scarloss, & Shapley, 2007). Telese (2012) found that teachers who receive a minimum level of PD had higher student achievement than those teachers who received a moderate to extensive level of PD. In summary, the above authors noted that the amount and type of

professional development activities administered to students affects student achievement in differing ways.

The experience level of teachers is another factor that affects student achievement. Harris and Sass (2011) define experience as on-the-job training. Teachers have their largest quality gains in their first few years of teaching. However, there is evidence to support that gains in teacher quality continue after 5 years of teaching experience (Harris & Sass, 2011). Shuls and Trivitt (2015) found that the positive effects of teacher experience improving student achievement are exhausted after 6-9 years of teaching. Other researchers, however, have concluded that experience has little or no effect on student achievement (Çakir & Bichelmeyer, 2016; Jacob, 2012).

Teacher evaluation also has the potential to affect student achievement. Although Ohio's teacher evaluation instrument and training of principals to administer the evaluation are now standardized, principals vary greatly in their ability to assess teacher behaviors consistent with increased student achievement (Harris & Sass, 2014). Therefore, the quality of the principal may determine the relevance of using teacher evaluation as a method to effectively increase student achievement. Strong, Gargani, and Lu (2011) found that principals could not reliably determine which teacher behaviors lead to student achievement gains. Lavigne (2014) found no evidence of teacher evaluation improving student achievement.

#### **Purpose of the Study**

The purpose of this study was to examine the relationship between teacher absences, both for professional development and personal/sick leave, and student

achievement at the local site. Additionally, I desired to examine the relationship of other teacher-related variables to student achievement. These variables included years of teaching experience, teacher education level, and teacher evaluation results.

#### **Definition of Terms**

*High-stakes assessment:* Any test used to make important decisions about students, educators, schools, or districts, most commonly for the purpose of accountability (High-Stakes Test, 2014).

Ohio Achievement Assessment: Standardized state tests administered in Grades 3-8 that reveal how well students are advancing in knowledge and skills articulated in Ohio's learning standards (Ohio Department of Education, 2016).

Personal leave: Agreement negotiated in each school district that includes a definition of personal leave within the teacher bargaining unit. For purposes of this study, the operational definition of personal leave from the focus district's certified employee negotiated agreement includes teachers' days off for personal matters that cannot be conducted by the teacher during nonschool hours. The leave is not used for matters covered by other contractual leave provisions, such as recreation, accompanying a spouse on a business trip, vacation, or working at other employment.

Professional leave: All teacher leave designed for teacher professional development or district obligations that occur during the student instructional day as determined by the focus district's certified employee negotiated agreement's operational definition.

*Proficiency:* The percentage of students in a given grade and in a tested subject who scored at or above the proficient level on the Ohio Achievement Assessment. This percentage is then used to determine if the district met the minimum standard for each subject/grade level test on the state report card (Ohio Department of Education, 2016).

Sick leave: The absence of a teacher due to personal illness, injury, exposure to contagious disease and/or the illness, injury, or death of an immediate family member as determined by the focus district's certified employee negotiated agreement's operational definition. For this study, sick leave records are maintained by the central offices of the local site.

*Teacher:* For this study, only full-time classroom teachers and intervention specialists as determined in the recognition clause of the focus district's certified employee negotiated agreement as the operational definition.

Value-added model: A measurement designed to determine the amount of value a teacher adds to or detracts from students' academic growth as evidenced through standardized testing (Amrein-Beardsley, Pivovarova, & Geiger, 2016).

## **Significance of the Study**

The knowledge gained from this study enabled me, as the district superintendent, to plan PD initiatives that remove teachers from the classroom in a better way. The information also helped me determine priorities for the school district in the negotiation of leave provisions in the teacher contract. Additionally, this study may have implications for a broader audience of superintendents and district-level administrators as they

consider the effects of teacher attendance on the achievement of students in their school districts.

A linear regression analysis revealed the relationship of teacher sick/personal and professional leave to student achievement at the local site. In addition to analyzing the relationship of teacher sick/personal and professional leave to student achievement, another intention of this study was to examine the relationship of teachers' years of experience, level of education attainment, and evaluation results to student achievement. Understanding the relationship between teacher evaluation and teacher performance as it pertains to student achievement enables principals to align their evaluations to reflect teacher behaviors that result in increased student achievement. Understanding the relationship between teacher years of experience and education attainment enabled district-level leaders to establish priorities for hiring practices at their local sites. Judging the relevancy of the relationships of these five predictor variables to the criterion variable of student achievement in this study better enables district-level leaders to implement any needed changes that may positively affect student achievement.

## **Research Questions and Hypotheses**

Due to the frequency of teacher absence from the classroom at the local site for sick/personal and professional leave, the development of research questions focused on the potential relationship of teacher absence for sick/personal and professional leave to student achievement. An additional focus of this study was to examine the relationship of other teacher-related variables on student achievement. These other variables include teacher experience, teacher education level, and teacher evaluation results.

RQ1: What is the relationship of teacher sick/personal leave absences to student achievement at the local site?

 $H_01$ : There is no statistically significant relationship between teacher sick/personal leave absences and student achievement.

 $H_a$ 1: There is a statistically significant relationship between teacher sick/personal leave absences and student achievement.

RQ2: What is the relationship of teacher professional leave absences to student achievement at the local site?

 $H_02$ : There is no statistically significant relationship between teacher professional leave absences and student achievement.

 $H_a2$ : There is a statistically significant relationship between teacher professional leave absences and student achievement.

RQ3: What is the relationship of teaching experience, teacher education level, and teacher evaluation results to student achievement at the local site?

 $H_03$ : There is no statistically significant relationship between teaching experience, teacher education level, or teacher evaluation results, and student achievement.

 $H_a$ 3: There is a statistically significant relationship between teaching experience, teacher education level, or teacher evaluation results, and student achievement.

#### **Review of the Literature**

In my review of the literature, I summarized resources addressing teacher absences for sick/personal time, and professional leave, as well as the relationship of those absences to student achievement. I also included resources that emphasize strategies districts can utilize to decrease the number of teacher absences from daily instruction. To compare the relationship of other teacher-related variables to student achievement, I also include resources pertaining to the experience, education, and evaluation results of teachers to student achievement.

To obtain resources for this literature review, I used ERIC, Education Source, SAGE Premiere, and ProQuest Digital Dissertations data bases through the Walden University Library portal. Additionally, I used Google and Google Scholar to obtain additional resources on teacher variables influencing student achievement. Other resources that were valuable to my research on teacher absence included the Ohio Department of Education, U.S. Department of Education, National Center for Educational Statistics, and the United States Bureau of Labor Statistics websites. An exhaustive list of keywords were searched including teacher absence, teacher attendance, sick leave, personal leave, absenteeism, measuring the effect of teacher absenteeism, student achievement, math achievement, ELA achievement, professional leave, professional development, teacher evaluation, teacher credentials, teacher quality, effect of teacher evaluation, evidence of student learning, pressure to perform well on state assessments, teacher years of experience, school district accountability, district report cards, Ohio Teacher Evaluation System, and Ohio report card.

To begin the literature review, I discuss school district accountability measures and the importance of these measures in shaping public perception towards schools. Next, I show evidence verifying the importance of the classroom teacher to the academic success of students. From there, I show national statistics on teacher absence as well as rates of teacher absence allocations and chronic absence statistics. I then show the effects of teacher absence for sick/personal leave and professional leave on student achievement as well as recommendations districts can utilize to increase teacher attendance. I conclude with an examination of other teacher-related variables including teacher experience, education level, and evaluation results as well as the influence of these variables on student achievement.

#### **Theoretical Framework**

This study was grounded in attachment theory. At its inception, attachment theory was constructed upon concepts of ethological and developmental psychology (Bowlby, 1969, 1982). This theory was originally developed to explain attachment relationships between infants and their primary caregiver.

Ainsworth and Bell (1970) were the first researchers to provide empirical evidence of attachment theory. Through their research, they classified infants into one of three categories:

- Secure: when infants view their mother as a secure base and seek contact with her if separated;
- 2. anxious-ambivalent: when infants are not able to view their mother as a secure base and become angry and push her away when reunited; and,

3. anxious-avoidant: when infants fail to view their mother as a secure base and avoid their mother or approach her indirectly.

Most children direct their attachment behavior to more than one person. Children are, however, highly selective about those whom they choose as attachment figures. As a result, children tend to be attached to only a few people (Ainsworth, 1979).

Children are usually attached to family but may also be attached to nonfamily with whom they spend considerable time, such as school teachers. There are two ways in which attachment influences student success, attachment with parents as an indirect influence or attachment with teachers as a direct influence (Bergin & Bergin, 2009).

Although early attachment research focused on interactions that naturally occur between the teacher and student in an educational setting. In this relationship, the teacher demonstrates sensitivity and involvement toward the student on a frequent and ongoing basis (Bergin & Bergin, 2009). When a teacher is frequently absent, the likelihood of a teacher-student attachment relationship is decreased. With either a weak or nonexistent attachment relationship to their teacher, student achievement may be negatively affected. I utilized attachment theory to explain the impact of teacher absence on 4th through 8th grade student achievement in the disciplines of ELA and math. I hypothesized that frequent teacher absences adversely affect student achievement due to the lack of teacher-student attachment as a result of less frequent student interactions.

Teaching is difficult when there is not proper communication between the teacher and students. There is a need for teachers to monitor students consistently if teachers are to be aware of difficulties students may be having. Interaction between teacher and

students is vitally important for a successful relationship throughout the school year (Ahmad & Sahak, 2009).

## **Importance of Teachers to Student Academic Success**

Teachers educate 50.4 million students in the United States (U.S. Department of Education, National Center for Education Statistics, 2016). These students come to school with a variety of academic skills and abilities. Under the authority of the 1964 Civil Rights Act, sociologist James Coleman conducted one of the largest social science research projects in the history of the United States. In what would become known as the Coleman Report (1966), Coleman concluded that the characteristics of teachers account for the most variance in student achievement beyond any other factor. Since then, numerous researchers have studied the influence of teachers to the academic achievement of students and have concluded that the teacher is the most important factor outside the home pertaining to student achievement (Chetty et al., 2013; Duncan et al., 2011; Goldhaber et al., 2013; Jacob, 2012).

High-quality teachers have a significant effect on student achievement (Strong et al., 2011). In an analysis of studies from 10 different states, Hanushek and Rivkin (2010) compared teacher quality to student growth through use of a value-added metric. They found that when a teacher's quality level is one standard deviation above average, that teacher's students achieve .12 standard deviations above average in reading and .14 standard deviations above average in math (Hanushek & Rivkin, 2010). Comparing a teacher who is at the 85<sup>th</sup> percentile for effectiveness to a teacher who is at the 50<sup>th</sup> percentile for effectiveness is the same as comparing an average third-year teacher to an

average first-year teacher (Goldhaber, 2016). By examining data from 300 classrooms in 42 Tennessee school districts, Konstantopoulos (2011) concluded that students who have a teacher at the 85th percentile in student achievement effectiveness for three consecutive grades of K-2 experience have, on average, a 1/3 standard deviation increase in reading and math performance by 3rd grade. The effect of having a teacher of such quality is similar to a student who is educated in small class sizes in those earlier grades (Konstantopoulos, 2011). To further demonstrate evidence of the importance of the teacher to a child's academic achievement, students experience lower ELA and math achievement in 4th and 5th grade when they have frequent teacher turnover (Ronfeldt et al., 2013). Having a highly effective teacher has the potential to positively affect the achievement of students in a classroom. A lack of achievement of a district's students can have consequences for the perceptions of its constituents on whom school districts depend for support.

## **Public Perception**

The Elementary and Secondary Education Act of 1965 (ESEA) was reauthorized as the NCLB Act of 2001 (2002) and reauthorized as the ESSA (2015). The NCLB Act required the establishment of yearly testing and assessments of student performance, mandated the creation of state standards for and assessments of Adequate Yearly Progress (AYP), the identification of schools in need of improvement and corrective action, and the reporting to the public on school performance and teacher quality. NCLB also provided for public school transfer options for all students attending schools failing to meet AYP standards within established timeframes. Unlike legislation before NCLB, it

now seems evident that policy decisions, either via state regulations or local school district requirements, should at least partly be driven by empirical evidence rather than political or ideological perspectives (Cochran-Smith et al., 2012).

High stakes tests, as noted in the Definitions earlier in the chapter, are large-scale standardized assessments that provide data to determine whether or not schools are meeting achievement standards established through the NCLB legislation (Johnson, 2009). In Ohio, high stakes testing began in the 2003-04 school year with 16 different tests utilized between 3<sup>rd</sup> and 9<sup>th</sup> grade (Ohio Department of Education, 2016c). Since that first year of high stakes testing, Ohio has utilized between 16 and 33 different tests in any given year to test students in Grades 3-12. In the 2015-16 school year, Ohio administered high stakes tests in 29 academic areas from Grades 3-12 (Ohio Department of Education, 2016c). The results of these assessments are highly publicized by the media (Johnson, 2009) and, as a result, have increased the pressure on districts to succeed on these assessments to prove they are meeting statewide achievement standards (Brown et al., 2012). Such performance-based accountability measures can have negative consequences for school districts in both public opinion and support. Those consequences can also affect district operations and funding (Hamilton et al., 2013).

#### **Teacher Absenteeism**

Roby (2013) investigated the 30 highest and 30 lowest-performing school districts in the state of Ohio and discovered a relationship between teacher attendance and achievement in the studied districts. In the 30 highest achieving districts, the average teacher attendance rate was 97.83% while the 30 lowest achieving districts in the state

had a teacher attendance rate of 87.28%. In Ohio, teachers miss over 19 days more per year in its lowest achieving school districts than in its highest achieving districts.

From a sample of 56,837 schools in the 2009-10 school year, Ohio ranked 15<sup>th</sup> of 50 states for percentage of teachers with 10+ absences with an average of 40.9% of its teachers missing ten or more school days per year (Miller, 2012). In their study of 40 of the 50 largest metropolitan school districts in the United States, Nithya et al. (2014) found that if a teacher accumulates 10 days of absence in a school year, whether for personal or professional time, the decrease in student achievement is equivalent to the difference between having a first-year teacher versus a teacher with 2-3 years of teaching experience. The impact of teacher absence on student achievement is greater for experienced teachers than it is for newly hired teachers (Herrmann & Rockoff, 2012).

Nationally, chronically absent teachers, defined as teachers who miss 18 or more days per year, account for 16% of the teaching workforce but account for 33% of total teacher absences (Nithya et al., 2014). In an unrelated study of the largest metropolitan school districts in the country, Sawchuk (2014) also found that teachers had the same 16% chronic absence rate. Sawchuk also concluded that 16% of teachers missed three days or less with an average teacher absent rate of 11 days. Contrary to other studies, student poverty rates in the studied large metropolitan districts had no correlation to teacher absence (Sawchuk, 2014).

There are multiple factors that may contribute to teacher absenteeism. District pay structures, school management, teacher working conditions, teacher proximity to their school, as well as social/cultural conditions, such as illness and care of family members,

all contribute to teacher absenteeism (Lee, Goodman, Dandapani, & Kekahio, 2015). Ost and Schiman (2017) concluded that decreases in teacher workload leads to increases in teacher absence. Miller (2012) found that factors such as teacher gender, distance of daily commute, level of school in which the teacher is assigned (elementary, middle, or high), as well as the way administrators address employee absence, can also predict high teacher absence rates.

#### Factors Related to Teacher Attendance That Affect Student Achievement

Teacher absence does not affect all students equally. There are multiple ways in which teacher absence can affect student achievement. When a teacher is absent, the teacher is usually replaced with a substitute for the day's instruction. The quality and availability of these substitute teachers affect student achievement (Rothstein, 2010). Additionally, substitute teachers are not necessarily licensed in the subject area for which they are substituting and are not expected to prepare lessons like a teacher would (Roby, 2013) which also contributes to the potential of achievement loss. In rural areas, substitute teacher fill rates for absent teachers are 91% in medium-sized rural school districts. This results in no teacher being assigned to the classroom 9% of the time a teacher is absent ("When employees are absent," 2016).

There are some teacher variables that are beyond the scope of this limited study. Socioeconomic status, school culture, and demographics can exacerbate student achievement issues (Roby, 2013). However, a comparison of the student achievement effects of these variables to teacher attendance is beyond the scope of this study. Another teacher attendance factor related to student achievement is student attendance. Teacher

and student attendance are mutually reinforcing. Both teachers and students base their attendance on the predicted attendance of the other (Banerjee et al., 2012). The specific study of the effects of student attendance on student achievement is also beyond the scope of this study.

In a study of teachers in Chicago, Jacob (2012) analyzed the effects of new contract language the Chicago Teachers Association negotiated that grants principals the authority to dismiss teachers without cause or reason during a probationary period. The research concluded that principals make retention decisions based on the attendance of teachers in their probationary period and that the poor attendance is related to low achievement levels of its students. Related to administrative decision-making regarding teacher attendance, Grissom, Loeb, and Nakashima (2014) found that when teachers are involuntarily transferred, their absenteeism declines significantly in their new school. However, the achievement of their students does not necessarily increase as a result of the transfer.

## **Effects of Teacher Absence While Attending Professional Development**

Teacher PD has gained increased prominence in the current age of high stakes student testing. Avalos (2011) defines PD as "Teachers learning, learning how to learn, and transforming their knowledge into practice for the benefit of their students' growth" (p. 10). Through PD, teachers systematically investigate problems in practice to understand cause/effect connections between instructional plans and the outcomes for their students that lead to changes in teacher practice (Ermeling, 2010). Teacher PD is not all the same, nor does it influence student learning and achievement equally. School

district personnel are moving away from the traditional teacher in-service PD training model (Koellner & Jacobs, 2015). With a more individual and specified PD experience, PD is often scheduled during student instruction time, causing teachers to sacrifice time with students to increase their own expertise. Because the effects of teacher PD on instructional practice vary due to the prior knowledge of teachers (Minor, Desimone, Lee, & Hochberg, 2016), drawing conclusions about the effects of specific PD activities on teacher practice will not be part of this study.

PD can be categorized on a continuum from *highly adaptive* to *highly specific*. Highly adaptive PD is easily adapted to goals, resources, and circumstances of the PD context. Highly specified PD occurs when the goals, content, and facilitation materials are all predetermined as part of the PD experience. PD can lie at various points on this continuum (Koellner & Jacobs, 2015). Hitt and Tucker (2016) noted that building professional capacity through PD initiatives is one of the five most essential areas of effective leadership.

Job-embedded PD, which is grounded in teacher daily instructional practice, is intended to increase student learning (Hirsh, 2009). Sustained, job-embedded PD leads to student achievement gains (Althauser, 2015). Additionally, teachers who have a high rate of utilization of online PD also achieve significant student gains in achievement (Shaha & Ellsworth, 2013). However, not all research is conclusive about the amount of PD that is most effective at raising student achievement.

Dash, De Kramer, O'Dwyer, Masters, and Russell (2012) found that teachers who performed 70 hours of online PD over the course of three semesters had significantly

higher scores on measures of pedagogical content knowledge and pedagogical practices. However, the knowledge gained did not lead to student achievement gains. Similarly, Telese (2012) found that mathematics content knowledge gained through math courses has a greater effect on student achievement than math pedagogical knowledge. Yoon et al. (2007) found that teachers who had more than 14 hours of PD had a significant positive effect on student achievement. However, teachers with only 5-14 hours of PD showed no significant effect on student achievement. Students had a 21 percentile point gain when their teachers received substantial PD, an average of 49 hours per year (Yoon et al., 2007). Shymansky et al. (2012) also found a significant positive correlation between PD hours and student achievement gains on high-stakes science tests. With contrary results, Telese (2012) found that teachers who received only a minimum of PD had higher student achievement than teachers who received moderate or extensive levels of PD suggesting that more PD is not necessarily better.

Desimone et al. (2013) found that when elementary math teachers participate in PD focused on math content and instructional strategies, they are far more likely to instruct in ways that lead to student achievement gains. In a 4-year study of over 11,000 students, Akiba and Liang (2016) found that PD focused on teacher collaboration contributed significantly to student math achievement gains. Student achievement gains resulting from teacher participation in PD are far from conclusive, however. Harris and Sass (2011) found no consistent relationship between formal PD training and student achievement. When studying the effects of online math PD, Masters, DeKramer, O'Dwyer, Dash, and Russell (2012) found a small effect size. When observing teacher

behavior in classrooms after they had received a PD program, Tournaki, Lyublinskaya, and Carolan (2011) found the results to be far from dramatic. Similarly, Jacob, Hill, and Corey (2017) conducted a 3-year evaluation of a well-developed, commercially available math PD program. Their evaluation concluded that no student achievement gains occurred as a result of teacher participation in the program.

## **Strategies to Increase Teacher Attendance**

With teacher absence for sick/personal and professional leave having an influence on the achievement of students, districts need to consider strategies to increase teacher attendance. Districts administrators should assess the attendance problem and then create a plan of action (Brown & Arnell, 2012; Smith, 2012). Such a plan may begin by analyzing internal processes and procedures then devising a comprehensive plan for eliminating factors creating absenteeism. The plan needs to focus on the three most common factors related to decreased teacher attendance including job dissatisfaction, teacher burnout, and decreased teacher morale (Brown & Arnell, 2012).

Based on a study of teacher absenteeism, Smith (2012) recommended several possible actions for districts to consider in devising a comprehensive plan to increase teacher attendance. Districts should begin by reviewing their board policies and procedures. These policies should encourage regular teacher attendance due to the correlation that exists between school board policies and teacher absence rates. Districts should prepare both short and long-term improvement plans for teacher attendance. They should also involve teachers in the establishment of an attendance recognition plan. Districts should also consider buyback of unused personal and sick day allocations as part

of a collective bargaining strategy. Finally, districts should train administrators to emphasize teacher attendance in their professional dialogue and evaluation of teachers while holding administrators accountable for administering attendance policies and procedures. Utilizing Smith's strategies (2012) gives school districts an opportunity to focus on increasing teacher attendance without a large initial investment in time and fiscal resources. In a study of a small, rural district in North Carolina (Chamblee, 2015), when such a comprehensive plan focused on district needs was developed, the district realized a cost savings of 28% in 1 year from its substitute teaching budget.

Incentives to increase teacher attendance have varying degrees of effectiveness. At a different North Carolina school district than the Chamblee study, if building-wide standardized test scores improved by more than a pre-determined amount, teachers received supplemental salary payments of up to \$1,500 (Ahn & Vigdor, 2011). The incentive had a positive effect on teacher attendance as teachers took .6 fewer sick days after the supplemental payment plan was implemented. Individual incentives have a weaker effect than school-wide incentives. When compared to other improvement initiatives, such as reduced class sizes, incentives provide more than four times the improvement per dollar spent (Ahn & Vigdor, 2011).

Tingle et al. (2012) agreed that district administrators should explore policy incentives such as compensation for unused sick leave. They also recommend that districts should consider the negotiation of disincentives such as substitute salary payments to decrease teacher absence. Nithya et al. (2014) also recommend a combination of incentives and disincentives to increase teacher attendance. These

specific strategies include paying staff for unused sick leave at the end of the school year, rewarding excellent attendance with additional leave or compensation, restricting personal leave on certain dates (i.e., before or after a holiday), requiring medical certification for sick leave, and including teacher attendance as an evaluation measure.

State policymakers should also revisit teacher leave provisions legislatively because many states have leave provisions that are too permissive on reasons for teachers to take leave (Miller, 2012). Another way that teacher attendance can be improved is through the teacher candidate vetting process. Vixaysack (2011) suggested the best way for school districts to raise achievement is to hire people with a strong work ethic who are dependable and adhere to a work schedule.

It is not conclusive that incentives increase teacher attendance. In a study of 200 New York City schools, various teacher incentives were administered in a pilot program to increase teacher attendance (Fryer, 2011). Results indicated that teacher attendance did not increase, nor did student achievement. In another study, Taylor-Price (2012) found that the longevity of incentive programs may be questionable. When a 2-year teacher pay incentive program was administered, teacher attendance increased significantly in the first year of the program. However, in the second year of the program, teacher attendance reverted to its pre-incentive levels.

It is important for districts to consider strategies to increase teacher attendance. However, teacher absences for sick/personal and professional leave are not the only teacher-related variables that lead to student success. Other variables such as teacher

experience, teacher education level, and teacher evaluation results also have the potential to influence student achievement.

# **Teacher Experience, Education Level, and Evaluation Results**

**Teacher experience.** In the 2014-15 school year, 42.76% of the focus district's teachers had 10 or more years of experience (Ohio Department of Education, 2017). Two years later, in the 2016-17 school year, 60% of the district's teachers had 10 or more years of experience. Statewide, 55.95% of teachers had ten or more years of experience. Although the focus district's experience level of teachers with 10 or more years of experience increased to a level 4% above the state average in 2 years, the achievement of the district's students on the state report card did not (Ohio Department of Education, 2016b).

In a study from Sweden, Damber, Samuelsson, and Taub (2012) found that when controlling for socioeconomic status and language, there is no significant correlation between teacher experience and student performance in third grade for over or underachieving students in reading. Huang and Moon (2009) also found no statistically significant correlation between teacher experience and student achievement. However, they did find that teacher experience at a particular grade level does have a positive correlation with student achievement in reading. Additionally, Petty, Wang, and Adam (2013) found a positive correlation between teacher experience and student achievement specific to high school math.

Experienced teachers have a greater effect on elementary reading and math achievement than non-experienced teachers (Harris & Sass, 2011). The biggest gains in

teacher performance occur during the first three years of a teacher's tenure; however, teachers continue to improve after five years. Nearly 35% of a teacher's improvement in professional practice occurs after 10 years of experience (Papay & Kraft, 2016).

Ladd and Sorensen (2014) found that teachers develop long into their careers—including their second and third decades of experience. Beyond higher standardized test scores, experienced teachers also exhibit improved student behavior and attendance. Contrary to these findings, Wiswall (2013) found that teacher quality does not improve after the first few years of a teacher's experience when specific to ELA achievement; however, the author found high returns in later career experience in student math achievement. The research relative to the relationship between teacher experience and student achievement is far from conclusive.

**Teacher education level.** In Ohio, school district compensation for master's degree attainment equates to an average additional expenditure of \$443 per student. This amounts to 4.2% of total education expenditures for school districts in Ohio (Miller & Roza, 2012). However, 97% of teacher effect on student achievement is unrelated to teacher education level (Manhattan Institute for Policy Research, 2011).

In grades PK-6, teachers who hold a master's degree do not generally have a greater influence on student reading achievement than teachers who hold a bachelor's degree (Collier, 2013; Henry et al., 2014). Holding a master's degree does not correlate with elementary or middle school teacher effectiveness toward increased student achievement (Chingos & Peterson, 2011). Çakir and Bichelmeyer (2016) concluded that teacher education beyond a bachelor's degree has no correlation to student achievement.

Luschei and Chudgar (2011) reached the same conclusion in a study that included an analysis of teachers from 25 different countries.

There is, however, some evidence of master's degrees correlating to some student achievement gains in mathematics. In a study of 1,026 Texas school districts, Badgett, Decman, and Carman (2013) found that holding a master degree had a minimum of influence on student math achievement. Badgett et al. (2013) further opined, "when quantifying factors related to student achievement, it would be nearly impossible to control or even identify all influencing factors" (p. 4). Although Leak and Farkas (2011) found no correlation between advanced degrees and kindergarten reading and math achievement, they did acknowledge that specific elementary certification did have a significant positive effect on student math scores. Others, however, have found no correlation between teacher advanced degrees and student achievement (Jung, Brown, & Karp, 2014; Winters et al., 2012).

Teacher evaluation results. In the 2013-14 school year, Ohio adopted legislation that requires use a standards-based teacher evaluation framework for the state's teachers (Ohio Revised Code, 2011/12, 2013, 2014). The evaluation framework requires 50% of the teacher evaluation to be comprised of a student academic growth measure (Ohio Revised Code, 2011/12, 2013, 2014). The academic growth measure can be in the form of value-added, vendor assessment, or student learning objectives, depending upon the subject taught by the teacher (Ohio Department of Education, 2018). The other 50% of the evaluation is based upon evaluation of the teacher according to the Ohio Teaching Standards (Ohio Department of Education, 2018). The standards-based teacher evaluation

component consists of a teacher preconference, formal observation, and postconference which includes a written report to the teacher. This is followed by a preconference, formal observation, postconference, and final summative review conference (Ohio Department of Education, 2018). In all, there are 7 observations/meetings between the teacher and principal for every evaluation cycle. Until 2015, all teachers were evaluated on the cycle every year. Beginning in the 2015-16 school year, legislation changed the frequency of evaluations. Under the new legislation, evaluation frequency is determined by the teacher's evaluation the previous year (Ohio Revised Code, 2011/12, 2013, 2014). Higher ratings require less frequent evaluations.

The desire to use teacher evaluations for increasing student achievement is based more on policy than empirical results of effectiveness. There is little evidence that teacher evaluation is in an impactful improvement strategy (Hallinger, Heck, & Murphy, 2014). Lavigne (2014) concluded there is no evidence of teacher evaluation improving student achievement. In an experiment where experienced principals were asked to determine which teachers exhibited behaviors that lead to student achievement based on previous standardized achievement test scores, principals could not reliably determine such teacher behaviors (Strong et al., 2011).

The literature on the relationship between teacher evaluation and student achievement is not conclusive. The correlation between a principal's evaluation of a teacher and student performance indicators increases the longer the principal knows the teacher (Harris & Sass, 2011). Principals vary significantly in their ability to evaluate teachers consistent with their students' achievement results. Neither the tenure of the

principal in the school nor the administrative experience strengthens the correlation. It is important to note, however, that principals also assess non-cognitive teacher performance metrics such as motivation and enthusiasm that adds to the utility of the evaluation for teachers (Harris & Sass, 2011).

In a study of New York State's teacher evaluation system comprising 110 school districts, 30,000 educators, and 60,000 students, it was concluded that teacher evaluation has a weak and conflicting correlation to student achievement (Forman & Markson, 2015). The highest teacher rating of *highly effective* correlated positively with student achievement. However, the second highest rating of *effective* correlated negatively with student achievement. These conclusions suggest that principals may be over-identifying teachers in the *effective* category. It was further concluded that the strongest correlation to student achievement was poverty (Forman & Markson, 2015). Strunk, Weinstein, and Makkonen (2014) found that principal evaluations correlate consistently with teachers who have high student performance data. However, teachers who have lower value-added data are no more likely to receive a lower observational rating.

There is some evidence to suggest that the evaluation instrument used by principals for teacher observations can affect the accuracy of the principal's observational rating. Garrett and Steinberg (2015) found a positive correlation between student achievement and observational evaluation ratings when principals utilized the Charlotte Danielson Framework for Teachers (Adams, Danielson, & Moilanen, 2009). In Ohio, the framework for teacher evaluation was legislatively created in 2011 (Ohio Revised Code,

2011/2012, 2013, 2014). As a result, the flexibility for districts to create their own evaluation instruments is not impossible, but greatly limited by state regulation.

## **Implications**

The emphasis of this study was to examine the relationship of teacher absence for sick/personal and professional leave to student achievement. An additional emphasis was to examine other teacher-related variables related to student achievement. These other teacher variables included teacher experience, teacher education level, teacher evaluation results.

To improve student achievement, the subject district of this study must acknowledge that teacher absence from instruction for sick/personal and professional leave may be negatively related to the achievement of its students. Changes to the district's approach to release time for teacher professional development, negotiation of leave provisions in the teacher contract, and administrative accountability in the usage of available tools to counter poor attendance of some teachers are all strategies that should be considered by the district. Based on this review of the literature, if implemented with fidelity, these strategies have the potential to increase teacher attendance and, ultimately, student achievement. An additional implication of this study is whether or not teacher experience, education level, and evaluation results have more or less impact on student achievement than attendance. The reviewed literature does not lead to a conclusion regarding the specific impacts of these variables related to teacher attendance.

#### **Summary**

Teachers in the United States miss an average of 9.4 days per year for sick/personal leave (Kronholz, 2013). Additionally, with the emphasis on student testing and teacher evaluation inherent in the Every Student Succeeds Act (Every Student Succeeds Act of 2015-16, 2015), sustained, job-embedded teacher PD becomes increasingly important for districts to make student achievement gains (Althauser, 2015). Although PD is intended to increase teacher competency, the results regarding the amount and type of PD needed to increase student achievement is not conclusive (Dash, De Kramer, O'Dwyer, Masters, & Russell, 2012; Harris & Sass, 2011; Telese, 2012; Yoon et al., 2007).

The district for this study was a 2,600 student rural school district in northeast Ohio. The focus of this study was to determine the effects of teacher absence for sick/personal leave and professional leave. An additional focus of this study was to analyze the effects of teacher education level, experience, and evaluation results to determine the relationship of these variables to student achievement.

In Section 2, I describe the rationale for pursuing this research utilizing a quantitative multiple regression analysis methodology. In Section 3, I provide a detailed explanation of the project including its implementation and implications. In Section 4, I provide reflections on the project as well as conclusions. Additionally, I discuss the application of the project, limitations of my research, and provide direction for future research.

## Section 2: The Methodology

#### Introduction

The purpose of this quantitative study was to examine the relationships that exist among teacher absences, teacher experience, teacher education level, and teacher evaluation results on student achievement. In this correlational study, I used archival data to conduct a multiple regression analysis. The archival data utilized was publicly available from the subject school district and the Ohio Department of Education's Educational Management Information System (2016).

## Research Design and Approach

A correlational research design enables the researcher to examine two or more variables to determine if any significant relationships exist between them. In this design, the researcher seeks to discover and understand patterns that develop in correlational research. Since the focus of correlational research is on the relationships of variables, the term *predictor* variable is used in place of *independent* variable and *criterion* variable instead of *dependent* variable (Lodico, Spaulding, & Voegtle, 2010).

In this study, the predictor variables included teacher absence for sick/personal leave, teacher absence for professional leave, teacher years of experience, teacher evaluation results, and teacher education level. The criterion variable was student achievement. Ultimately, I desired to understand the relationships that exist between these teacher-related variables and student achievement. As I was only interested in the relationships between these variables and was not concerned about any causality between

the variables, a quantitative correlational research study methodology was a logical research method to use for this study.

Few phenomena are the result of a single cause (Lewis-Beck, 1980). To understand the level of prediction for a variable after removing the effects of all other variables, researchers use a multiple regression statistical analysis. Multiple regression is "a statistical procedure for examining the combined relationship of multiple independent variables on a single dependent variable" (Creswell, 2012, p. 350). Multiple regression is a way to understand the relationship of multiple predictor variables to a single criterion variable (Orme & Combs-Orme, 2009). Since I desired to understand the relationship of several teacher-related predictor variables on the criterion variable of student achievement, a multiple regression analysis was a logical statistical method to use. In this case, student achievement for each teacher was measured utilizing value-added data as a continuous variable on a 5-point scale with a score of 1 being least effective and 5 being most effective.

Other quantitative research methods were examined before ultimately determining that a correlational study was the most effective measure for the research I desired to conduct. One such method I analyzed was a descriptive design. Although a descriptive design can be quantitative or qualitative, the researcher seeks to describe the status of an identified variable by developing systematic information about a specific phenomenon (Grand Canyon University, Center for Innovation in Research and Teaching, 2017). The researcher is primarily interested in describing the "what is" of a topic that leads to hypothesis testing through analysis and synthesis of data (Spector, Merrill, Elen, &

Bishop, 2014). As it was my desire to understand relationships of variables beyond a description of the present state of variables, a descriptive design was not selected as a research method for this study.

Another potential quantitative research method for consideration was a causal-comparative research design. In a causal-comparative design, the researcher attempts to establish a cause/effect relationship between two or more variables in two groups (Lodico et al., 2010). Although an independent variable is determined, the variable is not manipulated. Groups are not randomly assigned; rather, groups are formed naturally or are preexisting. Identified control groups are then exposed to the treatment variable and are compared to groups that do not receive the treatment. In my research project, there was no intervention applied and there were no identified control groups. Accordingly, a causal-comparative design was not determined to be an appropriate method for my research.

An experimental design is a true experiment that utilizes the scientific method to determine cause/effect relationships among a group of variables in a research study (Grand Canyon University, Center for Innovation in Research and Teaching, 2017). In this design, the researcher attempts to control all variables except the independent variable that is being manipulated. The effects of the independent variable on the dependent variable are analyzed to determine the causality in the relationship. Like the causal-comparative design, the experimental design applies an intervention so the researcher can make a determination of the cause/effect relationship of independent variables to dependent variables. With no interventions being applied to independent

variables in my research project, an experimental design was not an appropriate methodology for this project.

# **Setting and Sample**

For this study, I sampled the data of teachers and students from Grades 4-8 in the disciplines of ELA and mathematics in the focus school district. As the data utilized for this study was archival in nature, there were no teacher participants. The reason I chose ELA and math was due to the prominence of both disciplines in the original NCLB legislation (2002) and its replacement legislation, the ESSA (2015). As a requirement of the ESSA, all 3rd through 8th grade students are administered standardized tests in ELA and math each year. The reason 3rd grade teachers and students were not included in this research study was due to the use of a value-added measurement as the student performance metric. Because 3rd grade is the baseline year for creating value-added student data in 4th grade, there is no value-added data available in 3rd grade.

The focus district of this study comprises a large geographic area of 119 square miles. The school district contains five townships and five villages. In the 2011-12 school year, the district consolidated three elementary schools into one elementary school. That school currently houses all of the district's 1,078 elementary school students in grades PK-5. During that same 2011-12 consolidation year, the district's 6th grade students were moved from the elementary level to middle school, which currently comprises 569 students in Grades 6, 7, and 8. With only one elementary school and one middle school in the district, the representative sample of teacher and student data for this study for each of the studied grade levels composed all available data for the entire school district.

Table 4 represents the number of teachers and students in this study. Creswell (2012) recommends 30 participants as a minimum number of individuals for a correlational study. Lodico et al. (2010) recommend that individuals for a correlational study should be randomly selected from a larger sample. Given that this study was limited to one focus school district, random sampling was not necessary because every regular education teacher in the disciplines of ELA and Math in 4th through 8th grade were used. There are 18 ELA teachers and 18 Math teachers for a total of 36 teachers.

Table 4

Number of Teachers and Students in Sample

Grade level	4 <sup>th</sup>	5th	6th	7th	8th
Number of ELA teachers	4	4	4	3	3
Number of math teachers	4	4	4	3	3
Number of students	173	191	177	186	206

To ensure that the sample size of this study was robust enough to produce valid results, a power analysis was conducted utilizing G\*Power software (Faul, Erdfelder, Buchner, & Lang, 2009). In a linear multiple regression with an effect size of .5, an alpha error probability of .05, a power level of .95 and five predictor variables, the power analysis revealed a needed sample size of at least 24 to produce valid results. With 36 teachers included, this study had more than the requisite minimum number of participants to ensure validity.

#### **Instrumentation and Materials**

Achievement as a single measurement of student learning does not adequately account for teacher influence on student learning over the course of a particular school

year. Therefore, for this study, I utilized a value-added student growth measurement from the 2016-17 school year to account for the influence of the teacher on student growth. In a value-added student growth measurement, a group of a teacher's students is measured for progress relative to their expected progress. The expectation of progress is based upon how students across the state perform. By using a value-added model, districts can compare the expected progress of a particular teacher's students with the actual progress. The model utilizes a statistically precise design that provides evidence as to whether or not a teacher's group of students made more than, less than, or about the same amount of academic progress that is expected (Ohio Department of Education, 2016a).

Value-added measurements lack reliability when used as a tool to rank teachers for evaluative purposes (Yeh, 2012). Although value-added has an important role in teacher evaluation, it should not be used as an exclusive instrument to guide high-stakes human resource decisions (Glazerman et al., 2010). For research that includes large groups of teachers and investigates the size and importance of teacher effects on student learning, value-added is superior to merely utilizing student standardized testing scores (Haertel, 2013).

#### **Data Collection and Analysis**

All data for this study was archival in nature, generated by either the focus school district or the Ohio Department of Education, and maintained by the school district as a matter of its routine operation. As a result, I conducted a secondary analysis of operations data from the focus district to answer the research questions for this study. A secondary analysis is an investigation to understand what is already known, as well as that which

remains to be known about a topic through the review of secondary sources and investigation of data others have previously conducted in a specific area of interest (Hakim, 1982). For researchers who maintain a position of authority in a school district, Walden University encourages the use of secondary analysis of operations data generated by subordinates instead of the use of interviews or focus groups (Walden University, 2017). The Walden University IRB approval number for this study was 07-26-17-0508243.

For each of the 36 teachers whose records were included in this study, ratio scale data for the predictor variables for the number of sick/personal days, the number of professional days, and years of experience were recorded. The predictor variable of teacher evaluation results was recorded on an interval scale with each teacher assigned the rating of *Accomplished (4)*, *Skilled (3)*, *Developing (2)*, or *Ineffective (1)*. The final predictor variable of teacher education level was also recorded in interval scale form in accordance with the multiple levels of degrees notated in the focus district certified teacher contract. These levels include BA (1), BA+15 (2), MA (3), MA+15 (4), and MA+30 (5) levels of educational attainment. The criterion variable of teacher value-added results was also recorded in interval scale form with each teacher receiving a composite value-added student score rating of *Most Effective (5)*, *Above Average (4)*, *Average (3)*, *Approaching Average (2)*, or *Least Effective (1)*. These value-added student composite scores were generated by the Ohio Department of Education and maintained by the focus school district.

Descriptive statistics were calculated for each of the teacher-related predictor variables for each teacher of math and ELA in Grades 4-8. These variables included both continuous and categorical variables. The continuous variables were teacher days absent for sick/personal reasons, days absent for professional leave, and total years of teaching experience for each teacher in the study. Categorical variables included teacher education level as well as teacher evaluation results. A value-added growth measure, standard error, and index were obtained from the Ohio Education Value-Added Assessment System (EVAAS) as the criterion variable for student achievement (Ohio Education Value-Added Assessment System, 2017).

Beta weight coefficients indicate the magnitude of prediction for a variable after removing the effects of all other predictor variables (Creswell, 2012). These beta weight coefficients range from -1.00 to 1.00 indicating the level and degree of positive or negative correlation. The closer the beta weight is to 1.00, the stronger the positive correlation of the predictor to the criterion variable. The closer the beta weight is to -1.00, the stronger the negative correlation of both variables. In this study, the beta weights for each of the predictor variables (personal/sick leave, professional leave, years of experience, the level of education attainment, and evaluation results) were calculated to determine their relationship to the criterion variable of student achievement. The stronger the association between the predictor and criterion variables, the less error is made in the prediction (Segrin, 2010).

#### **Research Questions**

RQ1: What is the relationship of teacher sick/personal leave absences to student

achievement at the local site?

 $H_01$ : There is no statistically significant relationship between teacher sick/personal leave absences and student achievement.

To either reject or fail to reject the null hypothesis, a simple regression analysis was utilized. SPSS statistical software was used to calculate Pearson correlation coefficient (r) to determine the strength, direction, and statistical significance of the relationship between the predictor and criterion variables.

RQ2: What is the relationship of teacher professional leave absences to student achievement at the local site?

 $H_02$ : There is no statistically significant relationship between teacher professional leave absences and student achievement.

Like the first research question, to reject or fail to reject the null hypothesis, a simple regression analysis was utilized. Like the first research question, a Pearson correlation coefficient (r) was calculated to determine the strength, direction, and statistical significance of the relationship between the variables.

RQ3: What is the relationship of teaching experience, teacher education level, and teacher evaluation results to student achievement at the local site?

 $H_03$ : There is no statistically significant relationship between teaching experience, teacher education level, or teacher evaluation results and student achievement.

To reject of fail to reject the null hypothesis, a multiple regression analysis was utilized. A Pearson correlation coefficient (r) was calculated to determine the strength, direction, and statistical significance of the relationship between the variables.

# Assumptions, Limitations, Scope, and Delimitations

## **Assumptions**

It was assumed that the reported sick, personal, and professional absences of subject teachers were aligned with the contractual provisions of the focus district's negotiated agreement with its teachers' association. It was also assumed that the teachers in this study were ethical in the reporting of their absences as sick, personal, or professional days to the focus district and that the district utilized protocols to ensure teacher adherence to the district's procedures for the proper reporting of the absences. Further, it was assumed that the professional development approved by the district for teachers was for activities intended for the professional betterment of its teachers. Because total teacher experience in the focus district and prior to working in the focus district was used in the calculation and reporting of teacher experience levels, it was also assumed that the focus district's personnel department accurately reported the previous experience levels of the subject teachers at the inception of their employment. An additional assumption is that the district conformed to the state's protocols in the proper and ethical administration of the Ohio Achievement Tests that were used in this study to measure student achievement.

#### Limitations

The results of quantitative research are widely acknowledged to be generalizable to a larger population (Polit & Beck, 2010). However, due to the small sample of the focus district at one point in time, caution should be used in generalizing the results of this research. A similar research method utilizing a larger sample size including multiple school districts would make the results of a similar study more generalizable. Reio (2017) suggests the results of non-experimental research should be used cautiously when making practice recommendations. Considering the non-experimental design of this study, such caution should be observed.

Teaching is a highly complex process with a plethora of teacher and student related variables contributing to student achievement. This study was merely a measure of the effects on five teacher-related variables on student achievement in a single school district in a single year. Considering the limited scope of this research gives further evidence of the need to exercise caution before generalizing findings from the research of this study to other school districts.

Another limitation of this study was the economic diversity of the students in the focus school district. With 33.9% of its student body identified as economically disadvantaged (Ohio Department of Education, 2016b), poverty affected a significant percentage of the student body. Multiple studies cite a correlation between poverty and low student academic achievement (Cedeno, Martinez-Arias, & Bueno, 2016; Lacour & Tissington, 2011; Murphy & Tobin, 2011; Neville et al., 2013). Because the academic

implications of poverty were beyond the direct influence of the classroom teacher, the detriment of poverty to student achievement was not accounted in this study.

An additional limitation of this study is that two classrooms in each grade level were co-taught—one in ELA and one in math. Coteaching is the sharing of instructional responsibilities by a general education teacher and special education teacher in a classroom that includes students with disabilities (Friend, Cook, Hurley-Chamberlain, & Shamberger, 2010). In this case, there were two teachers in each of the co-taught classrooms. In the event one is absent, a substitute is employed; however, the co-teacher leads the instruction of the classroom in such instances. As a result, it is possible that the effects of the absence of the general education teacher or intervention specialist on student achievement were minimized through the presence of the co-teacher in the classroom.

Although intervention specialists are in co-teaching classrooms to aid in the instruction of students on Individualized Education Programs (IEPs), the intervention specialists are not limited to instructing these students. It is possible that the intervention specialists have a positive influence on the learning of students who are not on IEPs. The potential for enhanced achievement of students not on IEP's in co-taught classrooms was not accounted for in this study.

Another potential limitation of the study was the influence of substitute teachers when the primary teacher was absent. Some substitute teachers have a teaching degree, and some do not. Some substitutes are certified in the subject area in which they are substituting, and some are not. Some substitutes are highly effective while others are not.

With all the variables associated with substitute teachers, the effects of the substitutes on student learning during the absence of the classroom teacher were not accounted in this study.

#### **Scope and Delimitations**

This study was limited to the curricular disciplines of ELA and math. Therefore, science and social studies were beyond the scope of this study even though many of the study participants taught in those curricular disciplines in addition to ELA or math. As a result, it is not known whether or not the studied predictor variables had a similar relationship to student achievement in curricular disciplines beyond ELA or math.

When teachers are absent from instruction in the focus district, they are not obligated to have any contact with students. However, teachers are also not precluded from contacting students utilizing technology such as e-mail or instant messaging and video. The number of interactions teachers may have had with their students during teacher absences is beyond the scope of this study.

## **Protection and Participants' Rights**

As the superintendent of the school district, I hold a position of authority over all teachers in this study. To ensure that I was not exposed to the identity of any students or teachers utilized in the data for this study, precautions were taken to assure the anonymity of all involved subjects. One such precaution was to require a third party to assemble the data in coded form so as to remove any identifying teacher information from the data.

After consultation with the focus district's Board of Education regarding this research project, the Board determined the school district's treasurer to serve as the data

records custodian through whom all data for this study was coded without names prior to being provided to me as the researcher. In the executive flow chart of the focus district's organizational framework, the treasurer is not a subordinate of the superintendent. Any perceived coercion from the superintendent to the treasurer was mitigated without the treasurer having a subordinate relationship to the superintendent. As a result of serving as the records custodian for this research project, the treasurer agreed to be the signatory to the Data Use Agreement.

An additional precaution is that the data for this study was from the 2016-17 school year. This study commenced after that school year. Therefore, I as superintendent could not have used my authority to influence the data in any way.

# **Data Analysis Results**

#### **Descriptive Statistics of Population**

The SPSS statistical software program was utilized to perform the statistical analysis of the data. A total of 36 math and ELA teachers in Grades 4-8 of the focus district were utilized for this study. Participant demographic data for the subjects taught as well as the predictor variables are included in Table 5. The average experience of the teachers in this study was 16.3 years (SD = 7.6). Only 19% of the sampled teachers had 0-10 years of teaching experience while 67% had 16+ years of experience. The teachers in this study had a high level of educational attainment with 78% of the sample holding a master's degree or higher. The evaluation results of the sampled teachers were very high with 88% of teachers receiving the highest evaluation result of Accomplished. The lowest

two evaluation categories of Developing and Ineffective had 0% of the sampled teachers evaluated at those levels.

The average teacher absence rate for sick/personal leave was 12.1 days (SD=14.6). Although 25% of the teachers missed 0-5 days for sick/personal leave, 42% of the sampled teachers missed more than 10 days. The average number of professional leave days for teachers was 6.7 days (SD=7.3). Teachers utilizing 6 days or less of professional leave accounted for 58% of the sample while 28% teachers were absent more than 9 days for professional leave.

Table 5

Teacher Demographic Data

Demographic       n       %         Subject       Math       17       47         ELA       19       53         Experience       0 to 5 years       7       19         6 to 10 years       0       0       11 to 15 years       14       39         16 to 20 years       10       28       28       20       28       28       25       14       39       25       31       10 to 28       30       38       10 to 28       38       38       10 to 33       30       10 to 10 to 15 days       12       33       33       10 to 15 days       12       33       30       10 to 15 days       12       33       30       8       20       25       15.1 to 20 days       3       8       8       22       5       14       30       8       3       8       8       22       6       6       17       13       36       3.1 to 6 days       3       8       22       6       14       14       39       39       25       14       14       39       4       14       39       16       18       18       16       17       18       18       18       18       18       18			
Math ELA       17       47 ELA         Experience       9       53         0 to 5 years       7       19 6 to 10 years       0       0         11 to 15 years       5       14 39 Over 20 years       10       28         Sick/personal leave absences       0       0       25         0 to 5 days       9       25         5.1 to 10 days       12       33         10.1 to 15 days       9       25         15.1 to 20 days       3       8         Over 20 days       3       8         Professional leave absences       3       8         0 to 33 days       3       8         3.1 to 6 days       3       8         2. 6.1 to 9 days       5       14         Over 9 days       5       14         Over 9 days       5       14         Education level         BA       6       17         BA + 15       2       6         MA       14       39         MA + 30       5       14         Evaluation Results       1       1       1         Ineffective       0       0       0 <t< th=""><th>Demographic</th><th>n</th><th>%</th></t<>	Demographic	n	%
Math ELA       17       47 ELA         Experience       9       53         0 to 5 years       7       19 6 to 10 years       0       0         11 to 15 years       5       14 39 Over 20 years       10       28         Sick/personal leave absences       0       0       25         0 to 5 days       9       25         5.1 to 10 days       12       33         10.1 to 15 days       9       25         15.1 to 20 days       3       8         Over 20 days       3       8         Professional leave absences       3       8         0 to 33 days       3       8         3.1 to 6 days       3       8         2. 6.1 to 9 days       5       14         Over 9 days       5       14         Over 9 days       5       14         Education level         BA       6       17         BA + 15       2       6         MA       14       39         MA + 30       5       14         Evaluation Results       1       1       1         Ineffective       0       0       0 <t< td=""><td></td><td></td><td></td></t<>			
ELA       19       53         Experience       0 to 5 years       7       19         6 to 10 years       0       0         11 to 15 years       5       14         16 to 20 years       10       28         Sick/personal leave absences       V         0 to 5 days       9       25         5.1 to 10 days       12       33         10.1 to 15 days       9       25         15.1 to 20 days       3       8         Over 20 days       3       8         Professional leave absences       3       8         0 to 33 days       13       36         3.1 to 6 days       8       22         6.1 to 9 days       5       14         Over 9 days       10       28         Education level         BA       6       17         BA +15       2       6         MA       14       39         MA +30       5       14         Evaluation Results       1       1       2         Ineffective       0       0       0         Developing       0       0       0         Skilled			
Experience  0 to 5 years 6 to 10 years 11 to 15 years 7 19 6 to 10 years 11 to 15 years 5 14 16 to 20 years 10 28  Sick/personal leave absences 0 to 5 days 5 5.1 to 10 days 10.1 to 15 days 9 25 15.1 to 20 days 9 25 15.1 to 20 days 9 25 15.1 to 20 days 10 as 8  Professional leave absences 0 to 33 days 13 36 3.1 to 6 days 3.1 to 6 days 4.1 to 9 days 5 14 0ver 9 days  Education level  BA			
0 to 5 years       7       19         6 to 10 years       0       0         11 to 15 years       5       14         16 to 20 years       14       39         Over 20 years       10       28         Sick/personal leave absences         0 to 5 days       9       25         5.1 to 10 days       12       33         10.1 to 15 days       9       25         15.1 to 20 days       3       8         Over 20 days       3       8         Professional leave absences       0       0       3       8         Query 20 days       13       36       3       8       22       6.1 to 9 days       5       14       0       28       Education level       8       22       6.1 to 9 days       5       14       0       28       Education level       8       22       6       6       17       17       18       14       39       39       25       14       14       39       14       14       39       14       14       39       14       14       14       39       14       14       14       14       14       14       14       14		19	53
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11 to 15 years       5       14         16 to 20 years       14       39         Over 20 years       10       28         Sick/personal leave absences       3       3         0 to 5 days       9       25         5.1 to 10 days       12       33         10.1 to 15 days       9       25         15.1 to 20 days       3       8         Over 20 days       3       8         Professional leave absences       3       8         0 to 33 days       13       36         3.1 to 6 days       8       22         6.1 to 9 days       5       14         Over 9 days       10       28         Education level         BA       6       17         BA A + 15       2       6         MA       14       39         MA + 30       5       14         Evaluation Results       5       14         Ineffective       0       0         Developing       0       0         Skilled       4       12	0 to 5 years		
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Over 20 years       10       28         Sick/personal leave absences       9       25         0 to 5 days       9       25         5.1 to 10 days       12       33         10.1 to 15 days       9       25         15.1 to 20 days       3       8         Over 20 days       3       8         Professional leave absences       5       14         0 to 33 days       13       36         3.1 to 6 days       8       22         6.1 to 9 days       5       14         Over 9 days       10       28         Education level         BA       6       17         BA + 15       2       6         MA       14       39         MA + 15       9       25         MA + 30       5       14         Evaluation Results       1       1         Ineffective       0       0         Developing       0       0         Skilled       4       12	11 to 15 years	5	14
Sick/personal leave absences       9       25         5.1 to 10 days       12       33         10.1 to 15 days       9       25         15.1 to 20 days       3       8         Over 20 days       3       8         Professional leave absences       3       8         0 to 33 days       13       36         3.1 to 6 days       8       22         6.1 to 9 days       5       14         Over 9 days       10       28         Education level         BA       6       17         BA +15       2       6         MA       14       39         MA +15       9       25         MA +30       5       14         Evaluation Results       1       5       14         Evaluation Results       0       0       0         Developing       0       0       0         Skilled       4       12	16 to 20 years	14	39
0 to 5 days       9       25         5.1 to 10 days       12       33         10.1 to 15 days       9       25         15.1 to 20 days       3       8         Over 20 days       3       8         Professional leave absences	Over 20 years	10	28
0 to 5 days       9       25         5.1 to 10 days       12       33         10.1 to 15 days       9       25         15.1 to 20 days       3       8         Over 20 days       3       8         Professional leave absences	Sick/personal leave absences		
10.1 to 15 days       9       25         15.1 to 20 days       3       8         Over 20 days       3       8         Professional leave absences       3       8         0 to 33 days       13       36         3.1 to 6 days       8       22         6.1 to 9 days       5       14         Over 9 days       10       28         Education level       2       6         MA       14       39         MA +15       2       6         MA +30       5       14         Evaluation Results       5       14         Ineffective       0       0         Developing       0       0         Skilled       4       12		9	25
15.1 to 20 days       3       8         Over 20 days       3       8         Professional leave absences       3       8         0 to 33 days       13       36         3.1 to 6 days       8       22         6.1 to 9 days       5       14         Over 9 days       10       28         Education level       8       22         BA       6       17         BA +15       2       6         MA       14       39         MA +30       5       14         Evaluation Results       5       14         Evaluation Results       0       0         Developing       0       0         Skilled       4       12	5.1 to 10 days	12	33
Over 20 days       3       8         Professional leave absences       13       36         0 to 33 days       13       36         3.1 to 6 days       8       22         6.1 to 9 days       5       14         Over 9 days       10       28         Education level       8       2         BA       6       17         BA +15       2       6         MA       14       39         MA +15       9       25         MA +30       5       14         Evaluation Results       5       14         Evaluation Results       0       0         Developing       0       0         Skilled       4       12	10.1 to 15 days	9	25
Over 20 days       3       8         Professional leave absences       13       36         0 to 33 days       13       36         3.1 to 6 days       8       22         6.1 to 9 days       5       14         Over 9 days       10       28         Education level       8       2         BA       6       17         BA +15       2       6         MA       14       39         MA +15       9       25         MA +30       5       14         Evaluation Results       5       14         Evaluation Results       0       0         Developing       0       0         Skilled       4       12	15.1 to 20 days	3	8
Professional leave absences       13       36         0 to 33 days       13       36         3.1 to 6 days       8       22         6.1 to 9 days       5       14         Over 9 days       10       28         Education level	• • • • • • • • • • • • • • • • • • •	3	8
3.1 to 6 days       8       22         6.1 to 9 days       5       14         Over 9 days       10       28         Education level       8       22         BA       6       17         BA + 15       2       6         MA       14       39         MA + 15       9       25         MA + 30       5       14         Evaluation Results       0       0         Ineffective       0       0         Developing       0       0         Skilled       4       12	· · · · · · · · · · · · · · · · · · ·		
3.1 to 6 days       8       22         6.1 to 9 days       5       14         Over 9 days       10       28         Education level	0 to 33 days	13	36
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Over 9 days       10       28         Education level           BA       6       17         BA +15       2       6         MA       14       39         MA +15       9       25         MA +30       5       14         Evaluation Results           Ineffective       0       0         Developing       0       0         Skilled       4       12	· · · · · · · · · · · · · · · · · · ·	5	14
Education level       6       17         BA       6       17         BA +15       2       6         MA       14       39         MA +15       9       25         MA +30       5       14         Evaluation Results       0       0         Ineffective       0       0         Developing       0       0         Skilled       4       12	<del>-</del>	10	28
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MA       14       39         MA +15       9       25         MA +30       5       14         Evaluation Results       Ineffective       0       0         Developing       0       0         Skilled       4       12	BA +15		
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Ineffective         0         0           Developing         0         0           Skilled         4         12		3	<b>.</b> .
Developing 0 0 Skilled 4 12		0	0
Skilled 4 12			
	* •		
	Accomplished	30	88

# **Research Question 1**

The first two research questions were based on Bowlby's Attachment Theory.

Because students who have close relationships with their teachers tend to have higher

achievement, it was hypothesized that students whose teachers were often absent would, on average, have lower achievement than students whose teachers had fewer absences. Research Question 1 assessed the relationship of teacher sick/personal leave absences to student achievement at the local site? The null hypothesis for this question was that there is no statistically significant relationship between teacher sick/personal leave absences and student achievement. To test the null hypothesis, a simple regression model was used to determine if a relationship between teacher sick/personal leave absences and student achievement exists.

Results of the analysis are reported in Table 6. The model was not statistically significant (F(1,34) = 1.388, p = .247). The predictor variable of teacher sick/personal leave accounted for only 1.1% of the variance in student achievement in Grades 4-8 in math and ELA in the 2016-17 school year (Adjusted  $R^2 = .011$ ). As a result of this analysis, Null Hypothesis 1 failed to be rejected.

Table 6

Regression Coefficients for the Relationship Between Teacher Sick/Personal Leave and Student Achievement

Predictor variable	В	Std. error	β	t	P
Teacher sick/personal leave	.018	.016	.198	1.178	.247

## **Research Question 2**

Research Question 2 assessed the relationship of teacher professional leave absences to student achievement at the local site. The null hypothesis for this question was that there is no statistically significant relationship between teacher professional leave absences and student achievement. To test this null hypothesis, a simple regression

model was also used to determine if a relationship exists between teacher professional leave absences and student achievement.

Results of the analysis are reported in Table 7. This model was also not statistically significant (F(1,34) = 1.285, p = .265). The predictor variable of teacher professional leave absences accounted for a mere 0.8% of the variance in student achievement in grades 4-8 in math and ELA in the 2016-17 school year (Adjusted  $R^2 = .008$ ). As a result of this analysis, Null Hypothesis 2 failed to be rejected.

Table 7

Regression Coefficients for the Relationship Between Teacher Professional Leave
Absences and Student Achievement

Predictor variable	В	Std. error	β	t	P
Teacher professional leave	.035	.031	.191	1.134	.265

## **Research Question 3**

Research Question 3 evaluated the relationship of teaching experience, teacher education level, and teacher evaluation results to student achievement at the local site. The null hypothesis for this question was that there is no significant relationship between teaching experience, teacher education level, or teacher evaluation results and student achievement. To test this null hypothesis, a multiple regression model was used to determine any relationships that may exist when accounting for teacher experience, teacher education level, and teacher evaluation results to student achievement.

Like the first two predictor variables that were separately examined in this study, the three predictor variables comprised in the linear multiple regression were also not statistically significant (F(3,29) = 1.07, p = .379). Results of the analysis are reported in

Table 8. When considered together, the predictor variables of teacher experience, teacher education level, and teacher evaluation results only accounted for 0.6% of the variance in student achievement (Adjusted  $R^2 = .006$ ). As a result of this analysis, Null Hypothesis 3 failed to be rejected.

Table 8

Regression Coefficients for the Relationship Between Teacher Experience, Teacher Education Level, and Teacher Evaluation Results and Student Achievement

Predictor variable	В	Std. error	β	t	P
Teacher experience	058	.045	331	-1.296	.205
Teacher education level	.505	.293	.444	1.725	.095
Teacher evaluation results	.639	.724	.161	.883	.384

#### Conclusion

This study from a rural Northeast Ohio school district was conducted to determine the relationship between teacher absences, both for professional development and personal/sick leave, and student achievement at the local site for the 2016-17 school year. The study was specific to teachers in Grades 4-8 in the disciplines of math and ELA. The teacher-related variables of sick/personal leave absences, professional leave absences, teacher experience, teacher education level, and teacher evaluation results, were tested for any potential relationships to student achievement. A power analysis was conducted to determine that the sample size for the simple and multiple linear regressions of this study was adequate to produce valid results. This study was guided by two research questions regarding the relationship between teacher absences for sick/personal leave and student achievement as well as the relationship between teacher absence for professional leave and student achievement. The third research question was based on literature that

suggested a minimal impact of teacher experience, teacher education level and teacher results to student achievement. The study confirmed that no significant relationship existed between any of the teacher-related variables in the three research questions.

The results of this study did not show a significant relationship existed between the five teacher-related predictor variables and student achievement. However, there was a prevailing concern expressed by the focus district's Board of Education regarding the community perception created by the number of days teachers are absent from student instruction for sick/personal and professional reasons. Therefore, the focus of the project study in Section 3 will be to address teacher absences for sick/personal and professional leave.

Section 3 includes a description of the project as well as goals to guide the project's implementation. A literature review including participative leadership theory, delivery of professional development, influencing teacher attendance, and negotiating change provide the foundation for the project's deliverables. The project will consist of a 1-day professional development activity for the focus district's Board of Education and a 2-day professional development for the district's administrative team, who will be responsible for implementing the changes recommended and endorsed by the Board. It is the goal of this researcher, and ultimately, the focus school district, to implement changes that will result in meaningful strategies to increase student achievement.

## Section 3: The Project

#### Introduction

The purpose of this quantitative study was to determine if a statistically significant relationship existed between the predictor variables of teacher absence for sick/personal leave, teacher absence for professional leave, teacher experience, teacher education level, and teacher evaluation results to the criterion variable of student achievement in Grades 4-8 in the disciplines of math and ELA in the focus district. Results of the analysis indicated that no statistically significant relationships existed between any of the five predictor variables and the criterion variable of student achievement. The teachers in the study were, however, absent from student instruction an average of 18.8 days during the 2016-17 school year. Consultation with the Board of Education revealed a concern regarding the negative public perception their constituents address to them regarding the number of teacher absences that occurred in the focus district both prior to and during the implementation phase of this study. That consultation also revealed a desire for the Board to understand what the district can do to increase teacher attendance in succeeding school years. Therefore, the Board's desire to increase teacher attendance became the impetus for this project study.

Section 3 provides a detailed description of this project. I state specifically the project's rationale, purpose, goals, learning outcomes, and target audience. A literature review specifies the leadership theory as well as the research-based rationale to institute the changes needed to increase teacher attendance in the focus district. I also include

goals for the project's implementation, evaluation of the project, and the project's implications for social change.

#### Goals

It may seem logical to presume that teachers should miss fewer school days. There is a body of educational research that reveals the effects of teacher absences on student performance (Miller, 2012; Nithya et al, 2014; Roby, 2013; Sawchuk, 2014). Beyond their mere intuition, it is important for school board members and administrators, collectively referred to as the district leadership team, to understand the research that reveals the effects of teacher attendance on student achievement before advocating for strategies to increase teacher attendance. Additionally, understanding that teacher absence from the classroom is not only because of sick/personal leave, but is also due to the professional development initiatives of the school district, it is also important for district leadership to understand research regarding the influence of teacher professional development on student achievement before making decisions about professional development implementation. Therefore, the first goal of this project study was to brief school board members and school administrators on the body of research regarding the relationship of teacher absence for sick/personal and professional leave to student achievement.

Among the body of educational research is a multitude of district-level strategies designed to increase teacher attendance. Not all strategies to increase teacher attendance will work with all teachers in all school districts. I describe the above in detail in this chapter. Therefore, it is important for district leadership to consider the culture and

instructional needs of the school district when deciding upon strategies to use to increase teacher attendance. Additionally, there are a variety of ways to implement professional development opportunities for teachers that do not require them to miss instructional time. Therefore, another goal of this project study will be for district leadership to understand research-based strategies to increase teacher attendance as well as strategies to provide professional development opportunities for teachers that do not remove them from classroom instruction.

The primary stakeholders in discussions and decision-making about teacher absences are the teachers themselves. Another goal of this project study will be to gain feedback from teachers on the various school cultural influences of the focus district that contribute to teacher attendance as well as the researched strategies to decrease teacher absences for sick/personal leave. Additionally, teacher feedback will be sought on the various strategies to offer PD outside of instructional hours.

If district leadership were to develop new policies/procedures for teacher sick/personal leave and professional leave that violate locally negotiated agreements, the action would likely be overturned by the State Employment Relations Board if challenged by the local teacher union. Such a unilateral action by the Board of Education would surely cause distrust between district leadership and teachers. If the focus district is going to change its teacher attendance or professional development policies/procedures, it needs to do so through negotiations of the master agreement with its union partners. Based on the feedback from district leadership and the focus district's teachers, an additional goal of this project study will be for district leadership to identify

the specific attendance incentives/policies and professional development administration strategies it plans to negotiate with the district's union partners. Such attendance strategies need to be prioritized not only for their potential impact on teacher attendance, but also must be considered through the lens of the long-term fiscal well-being of the school district.

#### Rationale

The rationale for this project study was to decrease teacher absences. The reason for developing the project study in this way was due to an analysis of descriptive statistics of the sampled population that revealed math and ELA teachers in Grades 4-8 of the focus district averaged 12.1 days of sick/personal leave absence in the 2016-17 school year. In addition to these absences, the district's teachers averaged 6.7 days of professional leave absence in the same year for an average total of 18.8 days of teacher absence. With 180 school days composing a school year, teachers are missing, on average, more than 10% of all instructional time available to their students. Considering a teaching schedule of 5 instructional hours per student day, students are being taught by a substitute teacher 94 hours per year, on average.

The sample group of teachers for this study missed an average of 2.2 more instructional days for the 2016-17 school year than the district's teachers missed the previous school year. Regardless of the lack of statistical significance of teacher absence in this study, school board members in the focus district expressed concern about the lost instructional time of teachers. To increase teacher attendance, districts must first understand the factors associated with teacher attendance and then create a plan to

address the factors (Brown & Arnell, 2012; Smith, 2012). Therefore, it is the desire of the school board, working with the district's administrative team and teachers, to take active measures to reduce the number of school days teachers are absent for sick/personal and professional leave.

This project will include 3 days of professional development. Day 1 will be developed for the district leadership team. This day will be used to educate the team about the body of research associated with the relationship of teacher absence for sick/personal and professional leave on student achievement. The day will also be used to educate the team about the research-based strategies other districts have used to decrease teacher absences. The team will learn about the alternative approaches available to schedule teacher professional development during noninstructional times so teachers get the professional development they need without sacrificing student contact time.

The second day of professional development will be for a district teacher team that will comprise a representative group of the district's teachers. This teacher group will consist of the teachers' union president, vice-president, and three teachers each from the district's elementary, middle, and high schools for a total team of 11 teachers. The teachers will be apprised of the content of the discussion before committing to participate in the training day.

Teachers who have a positive view of their school culture have fewer absences (Owen, 2010). This professional development day will be used to assess teacher perceptions about the cultural factors in their respective buildings that may contribute to teacher absence. Teachers will also be briefed on the research body regarding the

relationship of teacher absence for sick/personal and professional leave on student achievement. The teacher team will then learn about the researched strategies used by other school districts that have led to increased teacher attendance. The day will close with a discussion and identification of specific strategies the teachers feel would be most beneficial in the effort to increase teacher attendance at the focus school district.

The third day of the professional development project will be for the district leadership team. This day will be utilized to review the district's strategic plan, 5-year financial forecast, state report card data, and teacher survey regarding the district's cultural influences that may contribute to teacher absences. Strategies to increase teacher attendance and scheduling of teacher professional development activities will be finalized within the confines of the district's financial position. Negotiating priorities and financial parameters will also be established.

#### **Review of the Literature**

Although the results of this study indicated no significant relationships existed between teacher absence for sick/personal leave or professional leave and student achievement, the Board of Education of the focus district has determined that increasing teacher attendance is a district priority. Therefore, the literature chosen for this review is concentrated on the professional development activity I will be administering to the focus district's Board of Education, administration, and teachers with a goal of increasing teacher attendance at the district through school district policy and operating procedure. This change can be successfully implemented through efforts of the focus district's Board of Education conferring with district administration and teachers. The ultimate desired

outcome of this professional development effort will be to create a blueprint for recommending policy/procedural changes to the Board of Education and collaborating with the district's certified teacher union partners on any needed contractual provisions affected by the PD effort. As superintendent of the focus district, it is my responsibility to facilitate that change as articulated via the project study. Therefore, the process for leading and implementing change in an educational organization is the primary focus of this literature review. The order of the literature review for this professional development project study is participative leadership theory, delivery of professional development to teachers, influencing teacher attendance, and negotiating change.

To accomplish this review of the literature, I used the following databases:

Education Source, ERIC, Google, Google Scholar, and ProQuest Central. The following

Boolean phrases guided the review: educational leadership, participative leadership,

effects of participative leadership, professional development days, high quality

professional development, delivery of professional development, differentiated

professional development, successful professional development, professional

development days in the teaching year, online professional development, impact of online

professional development, increasing teacher attendance, teacher morale, union
management relationships, and negotiating change. These terms provided me with the

means to develop guiding principles to facilitate meaningful change in the focus school

district through this project study.

# **Participative Leadership Theory**

As the intended participants of this project study will be the focus district's Board of Education and administrative team, it is important to develop a foundation for the project. To that end, participative leadership theory will be further explored and developed as a conceptual framework to base this project. This framework will provide the basis for the board and administrators of the focus district to understand the relevance of the work that must be done in collaboration with teachers in the district to institute meaningful change that leads to increased student achievement.

Sharma and Jain (2013) define leadership as "a process by which a person influences others to accomplish an objective and directs the organization in a way that makes it more cohesive and coherent" (p. 310). Qualities of leadership may be easy to see in someone, yet the qualities that make an effective leader are hard to precisely identify (Day & Antonakis, 2012). As a result, scholars are not in agreement about the precise behaviors or characteristics of effective educational leaders. Anthony and Anthony (2017) described an educational leader as someone who identifies an organization's need to change, allocates the resources necessary to institute the change, actively facilitates and manages the change, monitors and motivates others during the change, and successfully delivers the change. Buyukgoze (2016) simply stated that listening to the ideas of subordinates is one of the main characteristics that define a successful educational leader. Listening to and thoughtfully considering the ideas of subordinates when instituting change in an educational organization is the foundation on which participative leadership theory is constructed.

Participative leadership theory suggests that the most appropriate style of leadership is one in which the thoughts and ideas of others are taken into account (Cherry, 2012; Sagnak, 2016). Participative leaders encourage contributions and participation from members of the organization and ensure they feel important to the decision-making process. Participative leaders do not concede final decision-making authority to organizational members; rather, they elicit participation from organization members while maintaining final decision authority (Cherry, 2012).

The origins of participative leadership theory date back to the 1930s and 1940s when behavioral researchers Kurt Lewin, Ronald Lippitt, and Ralph K. White identified three primary leadership styles: democratic, laissez-faire, and autocratic (Gill, 2016). Based on their research that included interviews with business leaders and employees, the researchers concluded that a democratic leadership style was highly effective and the most popular among subordinates. Their research ultimately gave rise and value to the democratic leadership style in organizations (Gill, 2016).

The term "participative leadership" was later documented by several scholars including Dr. Rensis Likert in 1967. Through his research, Likert identified four unique leadership styles (Coggins, 2016). Exploitive authoritative leadership is a style in which the leader shows little concern for his followers and makes all decisions without consulting subordinates. A benevolent authoritative leadership style is one in which the leader displays concern for employees and rewards their performance; however, all the leader's decision are made in isolation. Consultative leadership style occurs when the leader listens to the ideas of subordinates; however, all decisions are central to the leader.

A leader with a participative style shows concern for employees, listens to their ideas, and includes subordinate ideas in the final decision-making process.

In 1971, Gary Yukl also identified four leadership styles based upon the decision-making authority granted to subordinates by the leader (Coggins, 2016). Autocratic leaders make all decisions alone and without consultation with the leader's subordinates. A leader with a consultation style asks for ideas from subordinates but ultimately makes decisions alone. A joint decision leadership style occurs when the leader asks for ideas from subordinates and includes them in the decision-making process. Leaders who embrace a delegation style give subordinates the complete authority to make decisions.

Yukl's "joint decision" leadership style (1971) is the basis for present-day participative leadership in educational organizations. Successful schools are not run with a top-down relationship platform; rather, they are run with a decentralized authority structure (Sagnak, 2016). Participative leadership contributes to such decentralized authority with leaders sharing the influence of organizational decision-making with followers in the organization (Delbecq et al., 2013). Such a leadership style has a positive effect on subordinate behavior as they feel intrinsically rewarded when part of an organization led with a participative style (Sagnak, 2016).

DePoel, Stoker, and Van der Zee (2012) found that participative leadership relates in a positive way to creating a climate for change. De Poel et al. (2012) opined that leaders who involve their employees in an organization's decision-making processes not only stimulate the employees to participate actively, but also encourages them to become part of an organizational climate change. By stimulating a climate for change,

participative leaders create an environment conducive to positive work outcomes (De Poel et al., 2012). Participative leaders "stimulate employees to evaluate and reflect on the work processes as a group and stimulate employees, as a group, to participate in making decisions about the work processes" (De Poel et al., 2012, p. 706).

In education, leaders who place a strong emphasis on a participative leadership approach encourage teachers to engage in more innovative instructional and curricular decision-making (Somech, 2005). In a participative structure, the leader facilitates the conversation encouraging others to willingly and openly share their knowledge and information regarding the organization's decision-making. As others are encouraged and led to sharing their ideas, the leader takes all the available information and solutions suggested by the team and synthesizes that knowledge and understanding back to the team ("Participative Leadership Theory and decision-making style," 2017). This process improves teacher innovation and expertise by recognizing teachers as educational experts. Teachers internalize a sense of authority about what they do and how they do it, giving meaning to their work and a feeling of being respected by others (Somech, 2005).

Supportive leadership is key to stimulating commitment of teachers in an educational organization. School leaders who utilize a participative decision-making style have a positive influence on the commitment of teachers to the school (Devos et al., 2014; Miao et al., 2013). As educational leaders work to create new policies and procedures to increase student achievement, having a committed teaching staff involved in the educational decision-making that affects the teacher work environment is necessary to ensure organizational success. Institutional changes that have a positive effect on

student achievement sometimes require a change to the working conditions of teachers. Specifically, when considering changes to a district's delivery of professional development and policies regarding teacher absences, it is integral for a participative leader to include and collaborate with teachers in the decision-making process.

# **Delivery of Professional Development to Teachers**

Organizations in the United States spend \$20 billion per year on employee PD (Guskey & Yoon, 2009). However, revenue school districts spend on teacher PD does not necessarily relate to gains in student achievement. When traditional, short-term PD initiatives are replaced with long-term designs, instructional improvement has a greater chance for success (DeMonte, 2013). However, there are no long-term PD designs that work well in every instance. "What further complicates the work of selecting professional learning activities is that there are no features or programs that always work in every setting. Rather, professional development is as complex as teaching" (DeMonte, 2013, p. 19-20). Therefore, the quality of the PD experience is an important consideration in district planning for teacher development.

High-Quality Professional Development (HQPD) is job-embedded. It is authentically related to the work that teachers must be involved. The activities are informed by what teachers do and need to do in the classroom (DeMonte, 2013). Archibald et al. (2011) derived five essential qualities possessed by HQPD:

 HQPD is aligned with school goals, state and district standards and assessments, and other professional learning activities including formative teacher evaluation.

- HQPD is focused on core content and modeling of teaching strategies for the content.
- HQPD is inclusive of opportunities for active learning of new teaching strategies.
- HQPD provides opportunities for collaboration among teachers.
- HQPD includes embedded follow-up and continuous feedback.

The best design practices of HQPD are more important than the PD programs themselves (Hill et al., 2013). Gulamhussein (2013) opined that the duration of the HQPD experience has to be a significant amount of time and be ongoing to allow educators to grasp the concepts to implement the action. There must be a support system in place as teachers are in the implementation stage of HQPD initiatives (Gulamhussein, 2013). HQPD is the link between education reform initiatives and success in the classroom (DeMonte, 2013).

This study revealed no statistically significant relationship between teacher absences for professional development and student achievement at the focus district. However, with an average PD absence rate of 6.7 days per teacher, when combined with absence rates of teachers for sick/personal leave, the district's Board of Education has expressed concern about the number of student days missed for PD and has a desire to decrease the days of absence. PD is needed to provide teachers the opportunity to learn, practice, reflect, and assess their teaching (Bibbo & D'Erizans, 2014). Understanding this need, other options that provide PD opportunities without requiring the teacher to miss considerable instructional time need to be explored.

A joint collaboration between the American Federation of Teachers, Council of Chief State School Officers, National Education Association, and the National Staff Development Council (2010), suggested that one way of adding PD time away from instructional time and without increasing teacher compensation is to use teacher time already included in the negotiated agreement more creatively. One example is to use weekly staff meetings for PD instead of announcements and other administrative business that could easily be communicated through e-mail. The report also suggests that the most effective way to ensure all teachers experience powerful collaborative learning is to alter the way school schedules are designed by embedding learning time for educators into every teacher's daily schedule (American Federation of Teachers, Council of Chief State School Officers, National Education Association, & National Staff Development Council, 2010). In this instance, school districts should ideally build time into the work day for teachers in the same grade level or in the same subject area to meet regularly (Archibald et al., 2011). Teachers should have the opportunity to discuss student work, strategies for effective instruction, and analyze student performance (Archibald et al., 2011).

Professional learning with the capacity to increase educator effectiveness and student achievement requires prioritization, monitoring, and coordination of resources (Ohio Department of Education, 2015). Prioritizing teacher time as a resource needs to be considered when developing effective PD for district staff. Creating new, alternatives times for PD is a solution to enhancing teacher professional practice without sacrificing classroom instruction time.

Another consideration for PD that does not remove teachers from instructional time is online PD. Online PD is "any internet-based form of learning or professional growth process that an educator can engage in" (Elliott, 2017, p. 119). The main benefits of online PD are the convenience, cost, and time resources (Dinu, 2014).

Online PD is merely another delivery method for PD. PD is administered as a way to improve various components of a teacher's performance, including content, skills, or abilities associated with pedagogy (Elliott, 2017). Additionally, online PD allows greater access to differentiated PD opportunities. Teachers become partners in their PD as they evaluate where they are in their PD journey, determine their needs, and evaluate the effectiveness of the training they receive (Dinu, 2014). Dinu (2014) explains that with online PD "Every teacher and educator can recreate his professional trajectory, with his learning experiences, and adapt it to his own needs" (p. 139). All the while, teachers who participate in online PD are also being prepared to become future online teachers (Norton & Hathaway, 2015).

Although online PD of teachers has gained increased prominence in recent years, sometimes there is a disconnect between the desired and actual teacher learning outcomes. In a study of 859 educators in a Midwestern state who participated in a Formative Instructional Practices online PD series, Collins and Liang (2015) found that online PD learning outcomes did not match desired outcomes of the online learning modules. The authors found that most participants perceived that the online modules did not enhance their knowledge of content, pedagogy, or technology. Many of the participants felt that the quality of the PD experience was less than that which they would

normally experience in a traditional face-to-face PD experience. Additionally, three quarters of the respondents felt overloaded by the sheer volume of information for which they were exposed in the online environment.

Although this project study concluded no significant relationship existed between teacher PD absences and student achievement, teachers missed an average of 18.8 days of student instruction when combining professional leave with sick/professional leave.

Sustained, job-embedded PD of teachers leads to student achievement gains (Althauser, 2015). Therefore, exploring alternative PD times and delivery methods are important considerations to increasing teacher contact time with students in the classroom.

# **Influencing Teacher Attendance**

State law in Ohio mandates the rewarding of 1.25 sick leave days per month to teachers (Ohio Revised Code, 1976/2012). Additionally, school district negotiated agreements often contain provisions for personal leave apart from sick leave. The focus district of this study, like many Ohio school districts, provides for three personal days. School culture, district policy, and teacher incentives are ways in which districts can potentially increase teacher attendance without compromising a teacher's lawful right to utilize sick leave or negotiated personal leave.

School culture can increase teacher attendance. Teachers who find value in and feel positive about their school culture miss fewer days (Owen, 2010). Administrative support of teachers affects teacher satisfaction in their work environment which leads to increased attendance (Knoster, 2016). Positive relationships that are prevalent between teachers, staff, and school leadership contribute significantly to perceptions of workplace

environments and influence teachers in their decision to attend school (Harrison, Labby, & Sullivan, 2015; Owen, 2010). Additionally, investment in the physical infrastructure of the school and teacher well-being initiatives are other cultural considerations for increasing teacher attendance (Knoster, 2016).

The leadership style of the principal is another cultural consideration (Knoster, 2016). Second only to teachers, the influence of the principal accounts for up to 25% of the variation in student learning (Davis & Darling-Hamilton, 2017). When separately considered, most variables related to student achievement have a small effect. Student success occurs when individual variables are combined to attain critical mass. Creating the conditions for such a critical mass to occur is the role of the principal (Wallace Foundation, 2013). In a survey of 40,000 teachers conducted by Scholastics and the Bill & Melinda Gates Foundation (2010), supportive leadership was found to be the most important determinant for teacher retention. There is a positive relationship between school leaders who are visible in their buildings and the attendance of teachers in their buildings (Owen, 2010). Administrative supports of teachers affects satisfaction in their work environment and contributes to increased teacher attendance (Knoster, 2016).

Another consideration for increasing teacher attendance is through school district policy. Knoster (2016) recommended eight strategies for school boards to consider as they implement policies to affect teacher attendance positively. To increase teacher attendance, boards of education need to consider

- Increasing formal reporting of teacher attendance data
- requiring teachers to report absences directly to supervisors instead of a

computerized system with no human interaction

- consistent communication with teachers regarding attendance expectations
- holding administrators accountable for teacher absences
- promoting good health and wellness of teachers as a matter of policy
- allowing carry-over of unused sick leave to eliminate the "use-it-or-lose-it" mentality
- eliminating leave banks
- restricting the allowable reasons for usage of personal days.

Another strategy boards of education can consider for increasing teacher attendance is offering incentives not to use sick leave. In the Carthage Independent School district (Texas), the district offered teachers \$5,000 for every teacher who had perfect attendance. In its first year of implementation, perfect attendance in the district increased from 1 teacher to 20 teachers ("Districts Offer Incentives to Curb Teacher Absences," 2012). The Dallas Independent School District (Texas) incentivized teacher attendance with the Staff and Teacher Attendance Reward (STAR) program. Through this program, the district deposited a \$1,000 matching contribution in a district retirement account for each teacher who used 1 or less sick/personal days per year. The program matched 75% of up to \$700 in a retirement account for two days of absence and 50% of up to \$500 for 3-5 days of absence ("Districts Offer Incentives to Curb Teacher Absences," 2012). However, there are considerations for school districts to make before offering teachers attendance incentives. Teachers are not likely to exert significant effort to obtain the incentive if the probability of reward is too high or too low (Ahn, 2008).

Finding a balance between the extremes is an important factor to incentivizing attendance (Knoster, 2016).

Until this project study, the focus district has neither questioned nor studied the relationship of teacher attendance on student achievement in the past. Successful organizational change requires an ongoing commitment to the coaching of individuals in the organization affected by the change initiative (Jim, 2016). Consideration of how change is negotiated and ultimately managed is integral to the success initiative of increasing student achievement in the focus district.

# **Negotiating Change**

To some, the mere thought of negotiations with union partners elicit feelings of anxiety and worry. The negotiations process itself often leads to negative morale for teachers and administrators after a settlement is reached (Prosise & Himes, 2017). As a way of decreasing such ill feelings and emotions during the negotiation of change, district leadership needs to institutionalize collaboration by making it part of the district's policy and ongoing professional practice (Rubinstein & McCarthy, 2011).

Districts need to adjust their philosophical approach to negotiations from one of negotiating to one of problem-solving (Hamill, 2011). Neale and Lys (2015) suggested both parties need to view negotiations in terms of finding solutions to the problems of the other side that makes both better off than they would have been otherwise. Negotiations should be viewed as a problem-solving exercise, not a fight (Neale & Lys, 2015). An environment of communication and collaboration is needed for the negotiating parties to gain a shared understanding of the substantive issues facing each group (Hamill, 2011).

To create an ongoing spirit of collaboration, Rubinstein and McCarthy (2011) recommended utilizing labor-management teams as an ongoing, long-term way of acquiring knowledge and building relationships together. Both parties must support ambitious goals and be willing to take dual ownership in the development of solutions to problems (Hamill, 2011).

Another significant element needed for successfully negotiating change is trust. Productively addressing and navigating negotiations requires a relationship of trust between management and labor (Tucker, 2012). Trust is not developed overnight. Rather, trust is developed and nurtured over time. With trust comes productivity in working relationships. Effective schools develop a professional culture based on trust and collaboration between administrative leadership and teaching staff (Weinberg, 2011). Every significant change initiative breeds resistance. The resistance is a byproduct of asking or expecting people to alter the way they currently operate (Lum, 2017). Effective leaders make conflict as productive as possible by engaging critics to understand why they are resistant to the change and to persuade them regarding the necessity of change (Lum, 2017). The better groups work together, the more effective is the potential for sustained change across the organization (Lum, 2017).

In the focus district, increasing teacher attendance will ultimately occur through district leadership understanding researched ways of increasing attendance and creating PD opportunities that remove teachers from their classrooms less. District leadership then needs to communicate and collaborate with district teachers to create strategies that lead to increased attendance. Derived strategies then need to be negotiated with union partners

to establish negotiated policy to increase teacher attendance and, ultimately, student achievement. The collaborative process between district leadership and teachers is the impetus for this project study.

# **Project Description**

# **Needed Resources and Existing Supports**

Creating a comfortable work space to stimulate discussion is a priority for this project. Such a space exists in the focus district's 5-year-old elementary school library. A projector and large screen available in this space will be ideal for reviewing the PowerPoint presentation for this project. Other needed resources will include paper and pens available for each participant, chart paper, and chart markers for large visuals and documentation of ideas stimulated through conversations. Another resource needed for this project will be funding for attendee snacks, beverages, and lunch. This revenue will be provided from the district's school board service fund.

The first existing support needed for this project includes Wagner and Masden-Copas' *School Culture Survey* data to be administered to the focus district's teachers. Coded data on teacher absence rates for sick/personal leave and professional leave absences will also be needed for the group activities. A comprehensive listing of researched strategies to decrease teacher absence for sick/personal leave will be made available as well. Additionally, a list of researched PD options that do not remove teachers from instructional time as well as current district data on how and when PD occurs will be available to attendees.

#### **Potential Barriers and Solutions to Barriers**

The first potential barrier to this PD activity concerns the sentiment of teachers.

Teacher sick days are legislated through Ohio Revised Code and teacher professional days are governed by the teacher negotiated agreement. As such, teachers have no contractual or statutory obligation to increase their attendance. Despite state law and negotiated agreements, teachers generally desire high achievement for their students.

Additionally, 50% of each teacher's evaluation in Ohio is based upon student achievement. By sharing the research regarding teacher attendance, I intend to emphasize the importance of teacher attendance as it relates to student achievement as a way to remediate this barrier.

Another potential barrier to this project for teachers is their relationship to me as their superintendent. As such, it may be difficult for the participating teachers to be up front and honest about their thoughts and concerns regarding the subject matter of the PD activity. To remediate any such concerns, I intend to emphasize my role in this activity as a researcher, first and foremost. As such, it is my job to remain unbiased and non-judgmental regarding their thoughts and opinions. It is my responsibility to stimulate conversation to identify workable solutions to the teacher attendance data as perceived by the district's Board of Education resulting from this study. It would also be my intent to acknowledge that I, as the researcher for this study, had no idea which teacher-specific data belonged to which teacher because that information was submitted to me in an anonymous, coded format. No teacher-specific data was made available to any employees of the district except the records custodian of the project, the school district's treasurer.

Additionally, it is my responsibility to lead this activity with a demeanor and tone that elicits respect and a true desire to understand and value the perspectives of the participants.

Another barrier to this work could be that principals may not be comfortable discussing any negative information revealed in the school culture assessment tool. The reason for this concern is that I am the direct supervisor and evaluator of the principals. Since the school culture discussion is an important component to increasing teacher attendance, coded results of the teacher assessment data from the self-assessment must be discussed and understood. I intend to emphasize that the function of the PD activity is to define ways in which teacher absences for sick/personal and professional leave are decreased. The result of that work will not be used for evaluative purposes.

The final barrier is that it may be difficult for principals to prioritize this work at the beginning of the school year with all the activities associated with facilitating the start of a new school year. This barrier can be remediated by discussing timelines for this project with the administrative team the summer before the implementation of the project. Exercising flexibility in the scheduling by considering teacher and administrator work-loads will help to alleviate the concerns about the time-commitments associated with this PD activity.

# **Proposal for Implementation and Timetable**

The implementation of this project will commence at the final staff meeting of the school year in each of the focus district's three school buildings. That is when the district's teachers will complete the school culture self-assessment. I will then meet with

the district's administrative team at their end-of-the-school-year retreat in June to prioritize educational initiatives for the following school year. During that discussion, a timeline will be determined for the administration of this professional development project during the fall of the upcoming school year. Additionally, the nine teachers needed for the teacher feedback portion of the project will be identified. The timeline will consider the following initiatives in order:

- The district leadership team that includes the Board of Education and the
  administrative team will meet at a summer school board work session. This
  meeting will be to conduct a formal introductory preview of the PD project
  and the desired outcomes.
- 2. A meeting will be scheduled with the union president and vice-president to apprise them of the PD and its purpose. I also plan to apprise them of the nine teachers who are invited to participate in the study.
- 3. A meeting will be scheduled with the teacher group. The union president and vice-president will be invited to this meeting as well. This meeting will be to provide an introduction to this PD and its purpose.
- 4. Schedule Day 1 of the formal PD to include the district leadership team.
- 5. Schedule Day 2 of the formal PD to include all 11 members of the district teacher team.
- 6. Schedule Day 3 of the formal PD to include the district leadership team.

## Roles and Responsibilities of Student and Others

As the creator of this PD experience, I will be in charge of this project. I will assume responsibility to ensure that all groups are understanding of the project's purpose and know the ultimate goal of this project is to increase student achievement.

Additionally, I will assume all responsibility for ensuring all participants understand the data associated with the project and facilitating conversations in the PD activities to ensure that all members feel valued and that their opinions matter to determine the selected strategies to decrease teacher absence in the classroom.

All teachers in the focus school district will be responsible for completing the school culture survey. This survey will enable the district leadership team to understand the cultural influences that potentially impact teacher attendance. Additionally, the 11 teachers chosen to participate in the district teacher team for this project will be responsible for giving their thoughts and opinions without reservation or fear.

School district administrators will be responsible for analyzing school culture survey results. They will then be expected to generate ideas to implement cultural changes in their buildings that have the potential to decrease teacher absence. School administrators will also need to create ideas for scheduling teacher PD outside of the instructional work day and develop strategies to improve teacher attendance. The focus district's Board of Education will be responsible for prioritizing attendance and PD strategies. An additional responsibility of the Board will be to allocate district resources for the negotiation and implementation of identified priorities.

## **Project Evaluation Plan**

At the end of the second day of the PD project, the 11 participating teachers will be asked to complete a summative evaluation of the project. At the end of the third day of the PD project, district administrators will be asked to complete the same evaluation. The evaluation responses will consist of a 1-4 Likert scale rating of six questions pertaining to the professional development activity (Appendix C).

The final three evaluation metrics for this project will be outcome-based evaluation measures. The Institute of Museum and Library Services (2017) defines outcome-based evaluation as identifying any project outcomes that benefit people through the identification of their achievements or changes in skills, attitude, knowledge, behavior, or condition. There are three outcome-based measurements in this PD project that will identify the changes in behavior of teachers at the focus school district after the first year of implementation of the project's initiatives.

The first outcome-based measure will be the changes in the culture of each of the focus district's three school buildings. This measure will be calculated through a second administration of the school culture survey at the end of the project's implementation year. The second outcome-based measure will be a calculation of teacher absence for sick/personal leave at the end of the implementation year. The third outcome-based measure will be a calculation of teacher absence for professional leave at the end of the implementation year.

# **Project Implications**

The social change implications of this project are important for the state of Ohio. The outreach and transparency of this project's initiatives with the district's union partners create the potential to strengthen the working relationship between teacher union leadership and school district leadership. This project also provides an opportunity for the focus district's Board of Education to demonstrate it values the district's administrative team as the Board considers their thoughts and perspectives about potential changes to the district's collective bargaining agreements and school board policies.

Through any new policies that incentivize attendance and move professional development opportunities away from the student day, teachers will be absent from instruction less frequently. This will create the potential for teachers to increase the achievement of their students. This will also enable teachers to rate higher on the Ohio Department of Education's teacher evaluation measures where student achievement accounts for 50% of the final teacher summative rating.

Giving the focus district's teachers a voice in the district's analysis of board policy change will prove that the district's Board of Education values teacher perspectives and has a desire to create and sustain a work environment that teachers find pleasant and fulfilling. This collaborative action demonstrates that the board understands the most important factor related to student success is its teachers (Chetty et al., 2013; Duncan et al., 2011; Goldhaber, 2016). Ultimately, the greatest potential social change of this project will be increased student learning and achievement.

#### Conclusion

The focus district's Board of Education had a desire to decrease teacher absences for sick/personal and professional leave as a result of the number of absent instructional days teachers utilized during the implementation year of this study. This PD project was developed to help the Board of Education, district administrators, and district teachers understand the literature about the relationship of teacher absence to student achievement. The project was also developed to gain insight into the perceptions of the culture of each of the district's three buildings to determine what, if any, influence the culture may have on teacher absence. Another consideration of this project was for the district administrative team and teachers to understand the specific strategies that lead to increased teacher attendance, dialogue about the strategies, and make recommendations to the Board of Education as to which strategies have the greatest potential to increase teacher attendance at the focus district.

The ultimate goal of this project study is to improve student achievement.

Through the project's focus on district collaboration, school culture, and research-based strategies to increase teacher attendance, I believe the district will be well-postured to achieve this goal. The reflections and conclusions of this study will be presented in Section 4.

#### Section 4: Reflections and Conclusions

#### Introduction

This quantitative study addressed the relationship of teacher absence for sick/personal leave, teacher absence for professional leave, teaching experience, teacher education level, and teacher evaluation results to student achievement. Through simple and multiple regression analysis, I determined that no significant relationships existed between these variables and student achievement at the focus district in the 2016-17 school year. As a result of the lack of statistical significance, none of the three null hypotheses were rejected.

Despite the lack of statistical significance in the studied teacher-related variables, concern about the number of days teachers were absent from classroom instruction for sick/personal and professional leave in the focus school district exists. This project study addresses those teacher absences. Section 4 includes an analysis of the project's strengths and limitations. I also analyze alternative approaches to the problem addressed by my project. I conclude with reflections of my scholarship throughout this study as well as the implications of my project and its potential to promote social change.

## **Project Strengths and Limitations**

This project involves collaboration among multiple stakeholders including the focus district's Board of Education, administrative team, and selected teachers. The focus of this project is to decrease teacher absence for sick/personal and professional leave.

One of the strengths of this project is that the decisions made regarding teacher absences involve the teachers and administrators in addition to the Board of Education. Effective

leaders embrace an adaptive approach to leadership by focusing on collaborative ways to solve problems. Such leaders involve multiple stakeholders to gain differing perspectives to solve complex problems (Nelson & Squires, 2017).

Since this project involves teacher absence, gaining teacher perspectives regarding absence by including them in the conversation gives context to the discussion. Developing strategies without teacher input would give the appearance that the thoughts of teachers did not matter to the Board of Education and could undermine the resulting strategies. Further, the teachers participating in the discussion may have thoughts and opinions about absences that nonteachers may not have considered. If that is the case, teacher perspectives have the potential to provide solutions to absences that nonteachers may not be able to formulate.

Another strength of this project is in its analysis of school culture as a factor in teacher absence. School culture has a strong influence on teacher attendance (Miller, 2014). With school building culture affecting teacher attendance, this project enables administrators to consider a thoughtful analysis of the cultures present in their buildings from the perspectives of their teachers. Positive school cultures lead to professional satisfaction, contribute to higher morale, and promote teacher effectiveness (School Culture, 2013). The project will empower administrators to institute necessary changes in school building culture and lead to the potential to increase teacher attendance and stimulate a better educational environment for students, teachers, and administrators alike.

An additional strength of this project is that it brings teacher attendance to the conversation as an effective strategy to raise student achievement. Missing instructional time for sick/personal leave may be contractually and lawfully appropriate; however, it may not be in the best interest of student achievement. Furthermore, it is a professional obligation of school districts to ensure teachers have the PD they need to promote student success. Continually providing PD exclusively during the student instructional day may negatively affect student achievement long-term. To develop effective teaching, school leadership has the authority, responsibility, and discretion to create the conditions and supports that have a positive effect on student achievement (Hitt & Tucker, 2016).

Although questioning teacher absences as an educational institution may not be easy, the conversation is essential if the focus district intends to change it.

The purpose of this project is to create structures within the focus district that have the potential to decrease teacher absence for sick/personal and professional leave. However, the results of the study indicated that teacher absence for sick/personal and professional leave were not significantly related to student achievement. A perceived limitation of this project may be that some participants could make allegations that the structures to decrease teacher absence are not needed since teacher absence was not significantly rated to student achievement. Such an argument can be remediated through identification and discussion regarding the limited scope of the study's research report which included five grades of teachers in two academic subjects measured in one school year. There are many other grade levels and academic disciplines prevalent in the focus district that was beyond the purview of this study. Additionally, there is a wealth of

research on other similar educational settings in which there is a significant negative relationship between teacher absence and student achievement.

Another potential limitation of this project regards the potential changing structures of teacher PD that do not remove teachers from the classroom as much as the current district PD structures do. It is likely that any structures that promote PD outside the student day may also fall outside the teacher contracted work time. Financially incentivizing PD to occur outside the work or contracted day may seem like a worthwhile strategy to explore; however, if a teacher refuses to attend PD during noncontractual time, regardless of the financial incentive, the district would have no recourse. The district would have to either professionally develop teachers during contractual times or not at all. Although such a circumstance may not be completely remediated, utilizing teachers to brainstorm ideas and recommend alternative PD approaches may give more credibility to the derived incentives.

An additional limitation of this project is the relatively small representative sample of teachers participating in the project. Of the focus district's 160 teachers, 11 (union president, union vice-president, and three teachers from each of the focus district's three buildings) are being invited to participate in the project's discussion. Such a concern can be remediated by explaining the content of the project's teacher PD day well in advance. I can then invite the 11 teacher participants to discuss with their teaching colleagues prior to the discussion so that the 11 teachers can represent the sentiments and will of the entire teaching staff during the PD project.

## **Recommendations for Alternative Approaches**

An alternative approach to addressing teacher absences for sick/personal leave is for the focus district's Board of Education to consider policy and procedural changes. Knoster (2016) suggests that reevaluating school district policies and procedures that relate to teacher attendance have the potential to increase attendance. Policy changes can range from small changes in certain practices to large, systemic adjustments. Policy and procedural recommendations (Knoster, 2016) for the focus district to consider include:

- More formalized reporting of teacher attendance data. Examples of this
  reporting could include a monthly electronic communication to each
  employee, carbon-copied to the employee's supervisor, if the employee has
  depleted sick leave to 5 days or less. Another example of a formalized report
  could be a monthly statement of each employee's sick leave usage and accrual
  sent to the employee.
- Reporting of absences directly to supervisors instead of using automated
  methods. Like many districts, the focus district utilizes an electronic method
  of communicating absences to a reporting system with no human contact. A
  policy change in this circumstance would require teachers to have direct
  contact with their supervisor to report absences.
- Establishing consistent, clear methods of communication to staff about attendance expectations. This strategy could range from discussion about the importance of regular attendance in staff meetings to ongoing, individual conversations with staff members regarding their attendance through the

- teacher evaluation protocol.
- Holding district administrators accountable for the attendance of their employees. To ensure administrators are holding teachers accountable for attendance, the central office could link teacher attendance to the evaluation of district administrators.
- Promoting wellness as a matter of district policy. The focus district has a
  wellness committee. This committee could take a more active role in
  publicizing and connecting its teachers to the district's health and wellness
  initiatives.

An additional school district policy approach to decrease teacher absence for sick/personal leave could be consideration of a district policy change to a 4-day school week. Four-day school weeks have proven to increase teacher attendance in several states (Beesley & Anderson, 2007). Such a schedule would give teachers an additional day each week to schedule appointments and doctor visits during noninstructional days, thus, decreasing many of the reasons teachers may have to use sick/personal leave.

An alternative approach to decreasing teacher absence for professional leave is to consider a change in permissible PD participation procedures for teachers. One solution to decreasing absences for PD leave is only to permit teachers to participate in professional conferences, meetings, or workshops during their noninstructional times (Hanover Research, 2012). This solution would limit the amount and type of PD activities in which teachers could participate.

In 2014, the Ohio legislature changed the statute from allowing school districts five calamity days per school year to requiring school districts to provide a minimum number of instructional hours per school year (Ohio Revised Code, 1987/2014). The minimum requirement of yearly instructional hours is 910 for grades K-6 and 1001 for Grades 7-12. Therefore, another solution to absences for PD activities could be that the focus school district increases the number of district PD days. Even with its current procedure of scheduling 2 PD days per school year, the focus district is still 156 instructional hours over the state minimum in grades 7-12. Therefore, adding PD days to the schedule is a solution that would keep the focus district in lawful compliance with the Ohio statute while providing additional opportunities for its teachers to receive PD without the need to miss student instructional time.

# Scholarship, Project Development, and Leadership and Change

In my preparations for this project, my research into participatory leadership theory validated the collaborative spirit I have sought to exemplify in my professional life as a superintendent. When considering changes to school district policy and procedure, it is reasonable to expect the district administration and Board of Education to be included in the conversation. However, considering policy and procedure changes regarding teacher absence without first seeking the insights and perspectives of the teachers themselves in the focus district would not engender the spirit of ownership and buy-in from our teachers that would give credibility to any final decisions.

The topic of teacher absence, especially as it pertains to sick/personal leave, has the potential to create an emotional conversation considering the rights of teachers

intertwined with the achievement of students. Such a delicate conversation needs to be approached carefully and methodically to build trust. Leis and Rimm-Kaufman (2015) identified three leadership attributes that lead to trusting relationships in educational environments. Leaders who acknowledge conflict, prioritize relationships, and empower teachers through the use of shared decision-making build trust within their organizations (Leis & Rimm-Kaufman, 2015). These leader attributes were foundational to my project study. Through conversations about the relationship of teacher absences for sick/personal and professional leave to student achievement in the body of educational literature, the potential conflict between the rights of teachers and the achievement of students is acknowledged. The relationship is prioritized by showing teachers their perspectives are valued as evidenced by their invitation to, first, seek feedback from their colleagues, and then join the conversation as valued representatives along with district leadership. Finally, teachers are empowered by having their ideas vetted. Teacher perspectives become a foundational contribution to the district's derived solutions as an integral component of this project study.

During the development phase of this project, I learned to utilize problem-solving skills I had developed in my professional capacity as a school superintendent. I understood that leading teacher, administrators, and board members through a conversation about strategies to decrease teacher absence could become emotional and divisive. Therefore, I knew I needed to lead the conversation's stakeholders through a formal, methodical approach to analyzing the problem of teacher absences. To accomplish this objective, I utilized Carnegie's four-step approach to problem resolution

(1944). Through this comprehensive process of problem resolution, stakeholders are prompted to consider these four questions (Carnegie, 1944):

- 1. What is the problem?
- 2. What is the cause of the problem?
- 3. What are all possible solutions to the problem?
- 4. What is/are the best solution(s) to the problem?

I have learned through the resolution of multiple problems at the superintendent level that this four-step problem resolution process creates opportunities for a deep, analytical understanding of problems. Solutions are vetted for their relationship to the problem and applicability for solving the problem. The methodical nature of this process also promotes high-level discussion and reasoning that ensures all perspectives are understood before the best solution(s) is derived.

Finally, this project has taught me the importance of collaboration in my role as a leader of this project and the school district. In considering the conversations outlined in this project's deliverables, it will be important for me to consider the perspectives of others before rushing to judgment about the best way for our district to proceed with regard to increasing teacher attendance. Most importantly, I have learned to rely on evidence over intuition. For this project study, the evidence will derive from the attitudes and perspectives of the teachers affected by the project's outcomes. Evidence will also be gained from the administrators responsible for ensuring implementation of the project's outcomes and the focus district's Board of Education who will be responsible for creating the policies and procedures that direct the outcomes.

## Reflections on the Importance of the Work

Through my comprehensive literature review I conducted for this project, my prior sentiment that the classroom teacher is the most important influence on the education of children in a school setting was validated (Chetty et al., 2013; Duncan et al., 2011; Goldhaber et al., 2013; Stronge et al., 2011). Considering the influence of the classroom teacher on student achievement, I studied five teacher-related variables to determine the relationship of the variables to student achievement. Even though none of the variables were significantly related to student achievement at the focus school district, the process was important because I learned that for 1 school year, despite the body of literature to the contrary, the relationship of the studied variables in the focus school district was not what I expected. Research cannot be generalized to all school districts all the time. This project study was a prime example.

This work was also important because it proved how perceptions are often more impactful than facts when it comes to state educational priorities. One example of this is the evaluation statutes in Ohio. Despite the vast literature that undermines the utility of teacher evaluation to student achievement, the Ohio legislature made teacher evaluation a legislative priority in 2014 (Ohio Revised Code, 2011/2012, 2013, 2014). In the focus district of this study, the legislative changes added an average of 200 hours of additional yearly work per administrator related to the evaluation changes. The irony of all the additional administrative work associated with teacher evaluation in the focus district is that every studied teacher scored as either *Accomplished* (88%) or *Skilled* (12%) in the

state's evaluation criteria. This underscores why there was no statistical significance to the relationship of teacher evaluation to student achievement in this study.

Although there was a lack of statistical significance in the teacher evaluation variable, that result underscores a very important consideration in school districts, focusing on the right work. As the state has legislatively mandated the additional work of teacher evaluation, as a school district, we must and will continue to comply. However, the state's priority does not mean that teacher evaluation will be a district priority worthy of additional time and financial resources going forward. In fact, our district will look for ways to economize the process to take less administrative time preparing evaluations, so we can focus on other district priorities that can impact student achievement. The work of this project study underscores the importance of developing district priorities based upon the will of local constituents (i.e., school board) and data.

# Implications, Application, and Directions for Future Research Implications and Application

The social change implications of this study are far reaching. Students are the main benefactors of the social change promoted in this study. When teachers are absent less frequently from instruction, their students have the potential and opportunity to reach higher levels of academic achievement. Similarly, when teachers are absent less often from instruction, they have the potential to become more effective instructional practitioners. Finally, when students reach higher levels of achievement and teachers reach increasing levels of instructional effectiveness, the school district is promoted and

held to a higher level of esteem from the State Department of Education and the local community it serves (Brown et al., 2012; Hamilton et al., 2013; Johnson, 2009)

At the focus school district, the application of this study's initiatives to its students, teachers, administration, and Board of Education will promote instructional effectiveness. The result is the increased achievement of the district's students. With a finite number of instructional minutes in all school districts, the challenges created by teacher absence for sick/personal and professional leave is not limited to the focus district. This study can be applied to all districts that may struggle with the delicate balance of contractually obligated sick/personal leave time and teacher professional development that needs to occur. This study promotes a dialogue grounded in shared decision-making to ensure that the needs of students and teachers are addressed.

# **Direction for Future Research**

This study was focused on analyzing the relationship of five teacher-related attributes to student achievement. Only utilizing data from the relatively small focus district for so many variables was a limitation of this project's design. Future research on this topic should include a study broader in scope of teacher participants. This could be accomplished by studying a significantly larger school district with multiple elementary and middle schools. A larger-scale study could also be accomplished by using several subject school districts. Choosing urban, suburban, and rural districts could expand the scope of the study and provide additional information about the differing effects of the studied variables in different school and social settings.

This study was also limited by its relatively short duration of 1 school district in 1 school year. A study that expands the duration to a longitudinal format would likely produce more expansive data. Such a study could better show the long-term effects of the studied variables on student achievement. A longitudinal design would also promote more generalizable results for school districts to rely upon.

A final consideration for future research could be a qualitative approach to the variables of this study. To receive teacher feedback regarding the effects of district professional development, teacher evaluation, and district policy on teacher performance could give a more comprehensive perspective of this study's variables. Such a study could provide additional clarity on the challenges and difficulties associated with teaching in a 21<sup>st</sup> century learning environment.

## **Conclusion**

When the focus district for this study was in fiscal emergency from 2012 to 2015, teacher absence from student instruction was not at a level that caused concern to district administration or the Board of Education. One of the contributing factors to the relatively low absence rate was that limited district resources were available to provide professional development experiences to teachers. Once the district became fiscally solvent in 2015 and subsequently released from fiscal emergency, the district began providing financial resources to professionally develop its teachers. Absence rates for sick/personal and professional leave began to rise steadily. This project study was developed as a result of that increase in teacher absences. I wanted to know the relationship of teacher absences for sick/personal and professional leave to the district's student achievement.

Additionally, I wanted to know whether a relationship existed between the teacher-related variables of experience, education level, and evaluation results to student achievement as well.

My research of the focus district in the 2016-17 school year concluded that no statistically significant relationships existed between the five teacher-related predictor variables and the criterion variable of student achievement. Despite these findings, the district's Board of Education remained concerned about the number of sick/personal and professional leave days the district's teachers were utilizing. The board's desire to change policy/procedures regarding teacher absences led to the creation of this project study. In it, I intend to utilize a three-day professional development structure grounded in participatory leadership theory to collaboratively develop strategies and solutions to increase teacher attendance that involves teachers, administrators, and the Board of Education culminating in the negotiating of the derived provisions with union partners.

After providing a safe learning environment, my most important job as a school district superintendent is to make the achievement of my students the highest priority in my decision-making. In an educational setting, what is best for students can be contradictory to what is perceived to be best for adults. Having conversations about creating incentives for teachers to miss less instructional time or attend professional development activities outside the work day has the potential to create dissension and ill-will with our teachers and union partners. That is the reason for the collaborative approach embraced in this study. By establishing close relationships to and networking with teachers, administrators and school board members, a structured project study was

created to derive solutions to a problem. Ultimately, I desire that the research of this study combined with its professional development activities will empower the focus district to create better policies and procedures that effectively utilize the collective effort of the district's employees. The result of this work is a sincere desire to positively contribute to the academic achievement of the focus district's students.

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#### Rationale

Descriptive statistics for the focus school district in the 2016-17 school year revealed that 4<sup>th</sup> through 8<sup>th</sup> grade teachers of Math and English Language Arts (ELA) averaged 12.1 sick/personal leave day absences. The same group of teachers averaged 6.7 days of professional development absences in the same school year. With an average of 18.8 absent instructional days, teachers were absent over 10% of all available instructional time for the 2016-17 school year.

## **Purpose**

This professional development project was developed to utilize the collective expertise of teachers, administrators, and school board members to analyze and develop strategies/policies that have the potential to increase teacher attendance during instructional hours.

### **Target Audience**

This professional development project will commence with a school culture survey administered to all the focus district's 160 certified teachers. The three-day professional development (PD) activity will include the focus district's certified union president and vice-president as well as three teachers from each of the district's three school buildings for a total of 11 teacher representatives. The PD activity will also include all five members of the district's Board of Education as well as eight school district administrators including six principals, special service director, and the curriculum director.

## **Project Goals**

#### A. Research

- Educate teachers, board members and administrators about the research regarding the relationship of teacher absence for sick/personal leave on student achievement.
- 2. Educate teachers, board members and administrators about the research regarding the relationship of teacher absence for professional leave on student achievement.

## B. Research-based strategies

- 1. Educate teachers, board members and administrators about the research-based strategies to increase teacher attendance.
- 2. Educate teachers, board members and administrators about the research-based strategies to provide PD for teachers that doesn't remove them from instruction.

#### C. Teacher feedback

- Analyze the results of the school culture survey (Wagner & Masden-Copas, 2002) administered to all the district's teachers with administrators and board members.
- Facilitate the communication of teacher perspectives regarding the scheduling of PD outside of instructional hours.
- Ensure that teacher perspectives regarding the scheduling of PD outside of instructional hours are communicated with and understood by

administrators and board members.

## D. Negotiation parameters

- Considering all feedback derived from the PD activity, facilitate the
  creation of negotiation parameters with board members and administrators
  of incentives/policies for teachers to decrease absences for sick/personal
  leave.
- Considering all feedback derived from the PD activity, facilitate the
  creation of negotiation parameters with board members and administrators
  of incentive/policies for the administration of PD outside of instructional
  time.

#### **Learner Outcomes**

- A. Teachers, administrators, and board members will understand the research regarding the relationship of teacher absence for sick/personal leave to student achievement.
- B. Teachers, administrators, and board members will understand the research regarding the relationship of teacher absence for professional leave to student achievement.
- C. Teachers, administrators, and board members will understand the research-based strategies to reduce teacher absence for sick/personal leave.
- D. Teachers, administrators, and board members will understand the research-based strategies to reduce teacher absence for professional leave.
- E. Through a review of the focus district's teacher data, administrators and board

members will understand the school cultural influences of each of the district's three buildings that could relate to the number of teacher absences for sick/personal leave.

F. Administrators and board members identified negotiation parameters that have the potential to decrease teacher absence for sick/personal and professional leave.

### **Project Schedule**

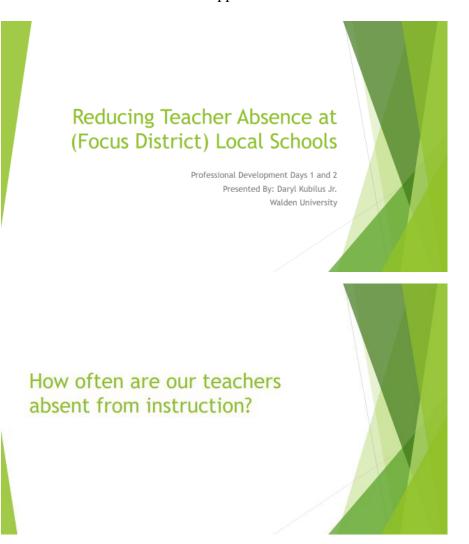
- A. May end-of-year staff meeting- All district teachers will anonymously complete the school culture self-assessment (Wagner & Masden-Copas, 2002).
- B. Day 1 PD- administrators and board members
  - Review focus district data on teacher absence for sick/personal and professional leave from the 2016-17 school year.
  - Review the research regarding the relationship of teacher absence for sick/personal and professional leave.
  - 3. Analyze results of teacher data on the school culture self-assessment (Wagner & Masden-Copas, 2002).
  - 4. Facilitate a discussion regarding the interplay of school culture, teacher absence, and student achievement.
  - Review the research-based strategies other districts have utilized to decrease teacher absence for sick/personal leave.
  - 6. Review alternative scheduling options for PD.

### C. Day 2 PD- teachers

1. Review focus district data on teacher absence for sick/personal and

- professional leave from the 2016-17 school year.
- Review the research regarding the relationship of teacher absence for sick/personal and professional leave.
- 3. Analyze results of teacher data on the school culture self-assessment (Wagner & Masden-Copas, 2002).
- 4. Facilitate a discussion regarding the interplay of school culture, teacher absence, and student achievement.
- Review the research-based strategies other districts have utilized to decrease teacher absence for sick/personal leave.
- 6. Review alternative scheduling options for PD from the literature.
- Considering research and the school culture data, identify strategies to decrease teacher absence in the focus district.
- D. Day 3 PD- administrators and board members
  - 1. Review focus district data
    - a. 5-year strategic plan
    - b. 5-year financial forecast
    - c. 2015-16, 2016-17, and 2017-18 state report cards
    - d. Teacher team recommendations for decreasing teacher absence
  - 2. Considering research, school culture data, and teacher recommendations, identify strategies to decrease teacher absence.
  - Identify final negotiation parameters regarding teacher absence and PD scheduling.

Appendix B: Presentation



## 2016-17 school year 4<sup>th</sup> - 8<sup>th</sup> grade Math and ELA Teachers

- 12.1 sick/personal leave absences
- 6.7 professional leave absences

Combined average of 18.8 days of absence from classroom instruction for the year

That is more than 10% of the school year.

How does teacher absence relate to student achievement?

Ohio's 30 <u>highest</u> achieving districts:

97.83% teacher attendance

Ohio's 30 <u>lowest</u> achieving districts: 87.28% teacher attendance

(Roby, 2013)

## Did you know?

10 days of teacher absence from instruction in one year equals the same student achievement difference that occurs between students who have a 1st year teacher versus a 3rd year teacher!

(Nithya, Waymack, & Zielaski, 2014)

### PD Definition:

"Teachers learning, learning how to learn, and transforming their knowledge into practice for the benefit of their students' growth"

(Ermeling, 2010, pg. 10)

What does research say about the relationship of teacher PD to student achievement?

## The results are mixed!

- (Dash, De Kramer, O'Dwyer, Masters, & Russell, 2012)
- · (Telese, 2012)
- (Yoon, Duncan, Lee, Scarloss, & Shapley, 2007)
- (Shymansky, Tzu-Ling, Leonard, Yore, & Everett, 2012)
- (Desimone, Smith, & Phillips, 2013)
- (Akiba & Liang, 2016)
- (Harris & Sass, 2011)

## **School Culture**

Results of the May, 2018 School Culture Assessment

(Wagner & Masden-Copas, 2002)

## Did you know?

Teachers who find value in and feel positive about their school culture miss fewer days.

(Owen, 2010)

Administrative support of teachers affects their job satisfaction and leads to increased attendance.

(Knoster, 2016)

## Did you know?

Positive inter-collegial relationships influence teacher attendance.

(Harrison, Labby, & Sullivan, 2015)

Investment in infrastructure and teacher well-being has the potential to increase teacher attendance.

(Knoster, 2016)

What are some proven ways (focus district) can increase teacher attendance?



## Knoster's (2016) 8 policy recommendations:

- 1) Increase formal reporting of attendance data.
- 2) Require teachers to report absences directly to their supervisors.
- Consistent communication with staff regarding attendance expectations.
- 4) Hold administrators accountable for teacher absences.
- 5) Promote good health of teachers as a matter of policy.
- Allow carry-over of unused sick leave days, thus, eliminating the "useit-or-lose-it" mentality.
- 7) Eliminate sick-leave banks.
- 8) Restrict usage of personal leave days.

## Incentives

Carthage Independent School District (Texas)

("Districts Offer Incentives to Curb Teacher Absences," 2012)

Dallas Independent School District (Texas)

("Districts Offer Incentives to Curb Teacher Absences," 2012)

Finding Balance in Incentives

(Ahn, 2008; Knoster, 2016)

## Alternative ways to administer PD outside of instructional hours

- On-line
- · Internal PD administration
- · Professional Learning Communities (DuFour & Eaker, 1998)
- Middle School Concept (National Middle School Association, 2010)
- · Staff meetings
- · Creation of a PD standards rubric



## Group Activity:

Prioritize the top 10 incentives/policies/structures that you think have the potential to increase teacher attendance at (focus district).

Final Thoughts and Reflections

Complete Evaluation (day 2 only)

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# Reducing Teacher Absence at (Focus District) Local Schools

Professional Development Day 3
Presented By: Daryl Kubilus Jr.
Walden University

# How are we doing in our organizational planning, stewardship, and student achievement?

- · Review of 5-year district strategic plan
- Review of 5-year financial forecast
- Review of state report card data: 2015-16, 2016-17, and 2017-18

Review of the top 10 incentives/policies/structures this group identified in Professional Development Day 1

Review of the top 10 incentives/policies/structures identified in Professional Development Day 2

## **Group Activity**

Compare/contrast the Board/administrative team list of incentive/policy/structure changes to the teacher list of changes



## Appendix C: Teacher/Administrator Survey

Please use	the scale below to rate each of the	six questions:	
Disagree: 1	Somewhat Disagree: 2	Somewhat Agree: 3	Agree: 4
	nderstood the research about the re rsonal leave to student achievemen	-	sence for
Rat	ing		
	nderstood the research about the reional leave to student achievement	-	sence for
Rat	ing		
	nderstood the research-based strate rsonal leave.	gies to reduce teacher a	bsence for
Rat	ing		
	nderstood the research-based strate ional leave.	gies to reduce teacher a	bsence for
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cultura	rough a review of the focus district influences of each of the district of teacher absences for sick/person	s three buildings that co	
Rat	ing		
	e committee identified strategies the absence for sick/personal and pro		potential to decrease
Rat	ing		