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# Modernizing the School Calendar to Fit the Needs of the 21st-Century Student

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by

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Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work at Lindenwood University and that I have not submitted it for any other college or university course or degree.

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## Abstract

Ever since the 1983 landmark study, *A Nation at Risk,* was released, educators have been examining the effectiveness of instructional time in American schools (Pedersen, 2012). However, school calendars have remained stagnant and seemingly a product of society and economy, tied to agriculture, for over 100 years (Turner & Finch, 2018). In Missouri, a growing number of schools are reevaluating the five-day school week and implementing a four-day school week in response (Turner & Finch, 2018). As stated by Thompson (2020), the impact of the four-day school week on student achievement requires more study. This study involved investigating the impact of the four-day school week on student academic achievement by examining 7th-grade and 8th-grade MAP data provided by the Missouri Department of Elementary and Secondary Education in the areas of math and ELA prior to and following the implementation of the four-day school week. Additionally, the perceptions of principals and teachers who work within the four-day school were collected to examine teacher morale, school finance, student discipline, and overall attendance (teachers and students). Quantitative data were analyzed to investigate pre- and post-implementation patterns. Furthermore, qualitative data in the form of interview responses were analyzed using coding methods to identify common phrases, keywords, and themes. The study findings revealed the four-day school week produced a negative impact on 7th-grade ELA, according to MAP data analysis, whereas 7th-grade math, 8th-grade ELA, and 8th-grade math indicated an insignificant impact. Additionally, the perceptions of principals and teachers indicated the four-day school week was an overall benefit to the school climate.

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## Chapter One: Introduction

In reference to a 1983 landmark study, *A Nation at Risk,* educators have been examining the effectiveness of instructional time in American schools (Pedersen, 2012). With the state of Missouri recently implementing legislation regarding the number of days, or hours, a district is required to be in school, as well as new restrictions on when districts can start the school year, the topic of school calendars is being discussed in most districts (Missouri School Calendar Requirements, 2020). Therefore, included in this discussion are the optional alternatives to allow schools to reduce the total number of school days per year (Turner et al., 2018b).

Since the Great Recession, the use of a four-day school week as an alternative to the traditional five-day week has grown nationally (Thompson et al., 2020). As of 2011, at least 292 school districts implemented a four-day school week (Layton, 2011, p. 1). By 2018, however, the number of school districts that implemented a four-day school week had increased to at least 550 (Heyward, 2018, p. 1). According to Thompson (2020), 1,607 schools in 662 school districts across 24 states have implemented a four-day school week as of the 2018–2019 school year (p. 2). Turner (2021) recorded that 112 of Missouri's 516 school districts will operate utilizing a four-day school week model for the 2021-2022 school year.

This mixed-methods study included examining student performance data accessed through the Missouri Department of Elementary and Secondary Education (MODESE) website. Quantitative student performance data were accessed utilizing the Missouri Assessment Program (MAP) in the areas of 7th- and 8th-grade math and English

Language Arts (ELA) before and after the district transitioned from a traditional calendar. Through a series of interviews via video conference, qualitative data were collected, which were focused on teacher and principal perceptions regarding teacher morale, finance, student discipline, student achievement, and overall attendance (both teachers and students). Districts selected for this study implemented a four-day school week beginning with the 2017–2018 school year.

**Background of the Study**

Nationwide, public schools traditionally base school calendars on a state-mandated number of instructional days or instructional hours that require student attendance (Education Commission of the States, 2020). Prior to state-mandated requirements, pre-Civil War students in urban centers attended school 240 days a year, while students in rural settings typically attended school for three months in the summer and three months during the winter, allowing time for children to assist with seasonal agricultural work (Dixon, 2010, p. 1). Students in urban areas needed a reprieve from the city's sweltering heat during summers, which translated into today's summer break still implemented by most schools around the country (Gold, 2002). Federal labor laws passed in the 1850s created a necessity to implement a uniform school calendar, which consisted of about nine months of instruction and three months of vacation (Dixon, 2011).

The use of the four-day school week is not a new trend, but one that can be traced back to as early as 1936, when the Madison County School District, in Madison, South Dakota, implemented their alternative to the five-day school week (Hewitt, 2011). As of 2018, at least 550 school districts in the United States have continued this trend and implemented a four-day school week (Heyward, 2018, p. 1). According to Heyward

(2018), the motivations for the spread of the four-day school week began as a cost-saving measure but have since transitioned into benefits, including training teachers using new state assessments and focused intervention for struggling students and extracurricular activities for interested families. Other motivations, or perceived benefits, often cited by districts transitioning to a four-day school week include improved attendance, increased plan time for teachers, and reduced student discipline reports (Hewitt, 2011).

## Theoretical Framework

Chowdhury (2014) stated an interpretivist approach promotes the value of qualitative data in pursuit of knowledge and is concerned with the uniqueness of a particular situation. Philosopher Hans-Georg Gadamer (1970) claimed, "To understand is always to understand differently" (p. 87), meaning reality is subjective and socially constructed, such that it can be described and represented through diverse perspectives (Butin, 2010). This mixed-methods study was grounded in the theoretical framework of interpretivism, which asserts that the truth is an ongoing story with differing perspectives based upon the individuals involved (Butin, 2010). In the context of education, it is necessary to interview and assess the perspectives of multiple groups or individuals, including teachers and administrators, to identify patterns of thought that influence a school's day-to-day operations (Reed, 2016). Utilizing the interpretivist theoretical framework, the perspectives of teachers and principals in districts that implemented a four-day school week in the 2017–2018 school year were examined.

## Statement of the Problem

The effective use of instructional time has been a topic for instructional leaders since *A Nation at Risk* was published in 1983 (Pedersen, 2012). Before *A Nation at Risk*,

instructional time was seemingly a product of society and economy, tied to agriculture for over 100 years, with school starting in August and ending in mid-May (Turner & Finch, 2018). A common feature in both urban and rural schools, regardless of the length of the school year, was the use of a five-day school week to meet the needs of students (Turner & Finch, 2018). In Missouri, a growing number of schools are reevaluating the five-day school week and implementing a four-day school week in response (Turner & Finch, 2018). As of 2020, 105 of Missouri's 518 school districts have implemented a four-day school week, including 44 school districts transitioning for the 2020-2021 school year (Riley, 2020, para. 5). As stated by Thompson (2020), the impact of the four-day school week on student achievement requires more study.

The lack of consistent evidence of the impact of the four-day school week on student academic achievement, and the primarily anecdotal evidence of increased teacher morale, improved finance, decreased student discipline, and increased overall attendance often raises more questions than answers (Plucker et al., 2012). Critics of the four-day school week frequently provide little to no data to support their claims (Tharp, 2014). More research should be conducted to ascertain the impact a four-day school week has on student academic achievement (Thompson, 2020).

When the supply of teachers is constrained by factors such as high turnover and declining rates of students choosing the teaching profession, providing good benefits such as an additional day off per week could help attract and retain teachers (Allegretto, 2016). According to Allegretto (2016), a 17% pay gap existed between public school teachers and comparable workers (para. 20). Further, Murray (2016) stated a modern approach to school start and end dates could also influence a district's energy budget by examining

energy usage patterns relative to school calendars by region. Heyward stated (2018) around 550 districts transitioning to a four-day school week have reported average yearly savings on their overall budget between 0.4% and 2.5% (p. 5).

## Purpose of the Study

The purpose of this study was twofold. First, using data provided through the MODESE, examining if a change in the traditional school calendar was best for student achievement. For the purpose of this study, student achievement was measured utilizing the MAP data focusing on 7th and 8th-grade math and ELA scores compiled from the 2014–2015 school year through the 2018–2019 school year. Secondly, topics such as teacher morale, school finance, student discipline, and overall attendance (teachers and students) were examined through staff interviews.

### *Research Questions and Hypotheses*

1. What difference, if any, exists between the MAP math scale scores of 7th-grade students who attended a school that implemented a transition from being in session five days per week to four days per week?

   $H1_0$: There is no difference between MAP math scale scores in 7th-grade students after transitioning to a four-day week.

   $H1_a$: There is a difference between MAP math scale scores in 7th-grade students after transitioning to a four-day week.

2. What difference, if any, exists between the MAP math scale scores of 8th-grade students who attended a school that implemented a transition from being in session five days per week to four days per week?

$H2_0$: There is no difference between MAP math scale scores in 8th-grade students after transitioning to a four-day week.

$H2_a$: There is a difference between MAP math scale scores in 8th-grade students after transitioning to a four-day week.

3. What difference, if any, exists between the MAP ELA scale scores of 7th-grade students who attended a school that implemented a transition from being in session five days per week to four days per week?

$H3_0$: There is no difference between MAP ELA scale scores in 7th-grade students after transitioning to a four-day week.

$H3_a$: There is a difference between MAP ELA scale scores in 7th-grade students after transitioning to a four-day week.

4. What difference, if any, exists between the MAP ELA scale scores of 8th-grade students who attended a school that implemented a transition from being in session five days per week to four days per week?

$H4_0$: There is no difference between MAP ELA scale scores in 8th-grade students after transitioning to a four-day week.

$H4_a$: There is a difference between MAP ELA scale scores in $8^{th}$-grade students after transitioning to a four-day week.

5. What are the perceptions of school principals who are employed by a school district that implemented a transition from being in session five days per week to four days per week related to teacher morale, school finance, student discipline, and overall attendance (teachers and students)?

6. What are the perceptions of teachers who are employed by a school district that implemented a transition from being in session five days per week to four days per week related to teacher morale, school finance, student discipline, and overall attendance (teachers and students)?

**Significance of the Study**

At a time when the supply of teachers is constrained by factors such as high turnover and declining rates of students choosing to teach, providing adequate benefits, such as an additional day off per week, could be useful in attracting and retaining teachers (Allegretto, 2016). This mixed-methods study on the four-day school week consisted of the investigation of an area where the literature is state-specific and relatively new (Anglum & Park, 2021). The findings of this study will allow school leaders to determine if district implementation of a four-day school week will impact student achievement in the form of MAP testing data. An additional focus will reveal further insight into staff perceptions of the four-day week, specifically in the areas of teacher morale, finance, overall attendance (student and teacher), and discipline. By reviewing the data provided in this study, school leaders will be able to ascertain the impact of implementing a four-day week on students and staff and if a transition is in the best interests of their district.

**Definition of Key Terms**

For the purposes of this study, the following terms are defined:

### *Balanced Calendar*

A balanced calendar refers to the structuring of a school district calendar, which includes breaks spread out throughout the year as opposed to the traditional summer break (Zubrzycki, 2015).

### *Compressed Work Week*

A compressed workweek refers to the use of a four-day, 40-hour work schedule, which requires working fewer days with longer hours (Turner & Finch, 2018).

### *Expanded Learning Time*

The expanded learning time refers addition of hours, days, or both to the school day or school calendar and is typically done to increase student achievement (Zubrzycki, 2015).

### *Extended School Calendar*

The extended school calendar is a calendar that has more than the traditional 180 days of instructional time (Zubrzycki, 2015). An extended school year may also be a year-round school or may have a traditional summer break shortened (Zubrzycki, 2015).

### *Year-round School*

Year-round schools implement a calendar to spread instructional days over the course of an entire year instead of a traditional summer break (Zubrzycki, 2015). These calendars vary between districts and can have longer-than-average years, while districts that implement a year-round school calendar might spread 180 days over a longer stretch of time (Zubrzycki, 2015).

## Delimitations, Limitations, and Assumptions

The scope of the study was bounded by the following delimitations:

### *Time Frame*

Data were collected during the spring 2021 semester.

### *Location of the Study*

This study took place utilizing several school districts located in southwest Missouri. Seven Missouri schools were selected for further research based upon the year the district implemented a four-day school week. Each of the seven districts selected for further research implemented a four-day school week in 2017–2018 and have been included in this study.

### *Sample*

The sample consisted of principals and teachers in districts that implemented a four-day school week in the 2017–2018 school year.

### *Criteria*

Criteria for selection in this mixed-methods study were based upon when a school district implemented a four-day school week for the first time. To be included in the research, a school district implemented a four-day school week for the first time in the 2017–2018 school year. Following prospectus approval, superintendents were contacted for permission to conduct research in their districts. Access to staff members who the school district employed before and after the transition from a five-day to a four-day school week was requested. The requested staff members were contacted via email with an attached Research Information Sheet to participate in a voluntary interview. The first principal and teacher from each district who responded to the interview request were selected to participate in a video interview session.

The following limitations were identified in this study:

### *Sample Demographics*

For the qualitative aspect of this mixed-methods study, the number of principal and teacher participants who volunteered for the interview process limited the sample size.

### *Instrument*

The interview questions were constructed by the researcher, utilizing research from Creswell (2018), Fraenkel et al. (2019), and Turner (2010). Questions asked in this study were constructed utilizing previous research regarding school calendars and student achievement, student discipline, teacher morale, district finance, and overall attendance.

## Summary

This mixed-methods study included examining the perceptions of teachers and principals regarding the potential impact the implementation of a four-day school week had on student achievement, finance, teacher morale, student discipline, and overall attendance. Quantitative student achievement data was gathered utilizing Missouri's MAP test, specifically in seventh and eighth-grade math and ELA, beginning with the 2014–2015 school year. Districts selected for this study implemented a four-day school week in the 2017–2018 school year. The information provided in this study could assist school leaders in ascertaining the impact of implementing a four-day week and if a transition would be in the best interests of the students and staff.

Chapter Two includes a review of literature pertaining to various aspects of the four-day school week. This review contains information regarding the history of school calendars, alternative calendar options, four-day school week calendar formats, background on Missouri school calendar requirements, and information about the MAP.

In Chapter Two, related topics and the potential impact of the four-day school week on student achievement, attendance, teacher morale, student discipline, and finance are presented.

## Chapter Two: Review of Literature

The structure and length of the school year in America have been debated for years (O'Sullivan, 2013). In the 1990s, time in the school received relevant consideration and examination following the establishment of the National Education Commission of Time and Learning (Patall, 2010). While a 1983 report, *A Nation At Risk*, started the process, the commission's report "Prisoners of Time" finalized in 1994 cited very little progress and recommended reforming time used for learning in school (Patall, 2010). The following review of literature offers a detailed examination of the research associated with school calendar options, including the four-day school week and the perceived effects.

The literature review in Chapter Two is organized into various sections to examine the research and characteristics of different school calendars thoroughly. The theoretical framework summarized in Chapter One is expanded in Chapter Two. The following section includes an examination of the traditional five-day week school calendar to provide a frame of reference in subsequent sections. An in-depth look at various alternative calendars is also analyzed to provide differing options for school districts. Multiple variations of the four-day week utilized in school districts around the country are then explored. Background of the (MAP is then examined and presented, followed by a review of student achievement recorded by MAP and calendar factors that decrease, increase, or have no effect on student academic achievement. The final sections of the review literature include examining the factors that affect the attendance of students and staff, district finance, and other considerations that may impact students and staff in a school district.

## Theoretical Framework

Fraenkel et al. (2019) defined the theoretical framework as "the theoretical approach used to structure a research study" (p. 425). A well-articulated theoretical framework can provide focus, boundaries, and purpose, allowing for dissertation research (Butin, 2010). According to Creswell and Creswell (2018), when utilizing a mixed-methods approach to research, the use of theory informs the study's design, which includes how the quantitative and qualitative data are collected, analyzed, and interpreted.

This mixed-methods study is grounded in the theoretical framework of interpretivism. Interpretivism is a philosophical research approach stemming from 12th-century cultural anthropology (Butin, 2010; Ryan, 2018). Interpretivism developed from Immanuel Kant's argument that individuals cannot be objective because of their basic understandings that influence perceptions (Rohlf, 2020). Kant argued, as summarized by Rohlf (2020), that "Our understanding uses [a priori concepts] to construct experience together with the a priori forms of our sensible intuition (space and time)" (Transcendental Deduction section). Yanow and Shwartz-Shea (2015) interpreted Kant's argument to imply that if an individual begins a study with previous knowledge that influences what is perceived, the individual could be impacted by prior knowledge. German philosopher Max Weber contributed to interpretivism, as noted by Kim (2019):

> An understanding (*Verstehen*) in this subjective sense is not anchored in a non-cognitive empathy or intuitive appreciation that is arational by nature; it can gain objective validity when the meanings and values to be comprehended are explained causally, that is, as a means to an end. (Understanding section)

Weber expanded the theory of verstehen to mean a separate interpretation of each participant's experience (Yanow & Shwartz-Shea, 2015).

Interpretivism asserts that the truth is a story with differing perspectives based on various individuals involved (Butin, 2010). According to Ritchie (2013), social researchers utilizing interpretivism must "explore and understand the social world through the participants' and their own perspectives; and explanations can only be offered at the level of meaning rather than cause" (p. 24). Fundamentally, the goal of the interpretivist approach is not to explain but rather to observe and understand (Ritchie et al., 2013). McChesney and Aldridge (2019) claimed an interpretivist framework "can underpin and inform the whole of a mixed methods research study" (p. 234).

Fraenkel et al. (2019) differentiated qualitative and quantitative researchers by describing qualitative researchers searching for relationships between variables and quantitative researchers believing the world could be approximated by careful examination. Utilizing a mixed-methods approach in this study became a logical choice in that the researchers' world views could give purpose to the research through viewing research through an advocacy lens (Fraenkel et al., 2019). The interpretivist approach is popular when conducting qualitative research in that the interpretivist theory assumes reality is a social construct based on multiple interpretations of a singular event (Merriam & Tisdell, 2016).

Chowdhury (2014) stated that to avoid criticisms of validity common in utilizing an interpretivist approach, a researcher should implement a mixed-methods approach. By using interpretivism, social realities are examined through multiple perspectives and interpretations, which aids in understanding the contemporary world (Chowdhury, 2014).

According to Creswell and Poth (2018), the goal of interpretivist research is to focus on the participants' subjective meanings of their experiences to develop an understanding of their views. Balsvik's (2017) viewpoint is aligned with Creswell and Poth and theorized that interpretivist researchers must seek to comprehend the meaning of participant actions and perceptions of why participants form these meanings of the studied topic. For this study, interpretivism served to tell the story of principals and teachers employed by a district which implemented a four-day.

**Traditional School Calendars**

According to Tharp (2016), the traditional calendar and school year in America is on average 180 days and follows an agrarian cycle (p. 126). It was not unusual in a rural area for students to attend school for only six months to assist with the family farm with breaks in the spring and fall (Gold, 2002). However, Gold stated the current school calendar is derived from the need of students in urban areas to vacate the sweltering heat in the summer months (as cited in Tharp, 2016).

Before adopting a summer break, schools in urban settings such as Philadelphia, Detroit, and Buffalo incorporated anywhere from 251–260 days of instruction in 1840, often on an 11 or 12-month calendar (Patall, 2010, p. 404). Dixon (2010) continued this discussion with the belief that the current school calendar was a blend of the six-month agrarian calendar found in rural areas and the longer, 240-day calendar utilized in urban settings (para. 5). Another factor noted by Dixon (2010) was the passage of child labor laws and increased industrialization, which created the necessity of a common school calendar. The need for an educated workforce in an industrialized society encouraged states to assume more control over education policy in the 1800s, and as a result, school

calendars became more formalized and common between local districts and eventually other states (Dixon, 2010).

Across the nation, public schools have operated utilizing state-mandated minimums in the area of instructional time (Education Commission of the States, 2020). For example, in Missouri, public schools are required to provide a minimum of 1,044 hours of instruction a year (MODESE, 2020). Until 2018, however, Missouri's minimum required instructional time was stated in the form of only days and not minutes (Missouri School Calendar Act, 2018). The implementation of instructional hours instead of days allowed school districts leeway to adjust school calendars to fit the unique needs of each district by allowing flexibility (Dixon, 2010).

The traditional school calendar has remained a constant for over 170 years (Tharp, 2014, p. 1). Nationally, the average public school calendar is 179 days and lasts six hours and 54 minutes (Thompson et al., 2020, p. 16). Even in the face of criticism and the constant need for innovative strategies to address the changing dynamic of family structures, information, technology, and student learning, the approach to addressing the length of the school calendar in American public schools remains stagnant (Turner et al., 2018a). Many school districts had retained calendars that reflect those created almost 200 years ago when society was at a different point in history (Dixon, 2011, para. 5). The willingness of state legislatures throughout the nation to provide districts the flexibility to focus on instructional time rather than instructional days has allowed schools to move

toward alternative calendars, including the four-day school week, among others (Leiseth, 2008).

**Year-Round Calendar**

Four-day school weeks are not the only modification to traditional calendars. Schools have implemented a year-round schedule since the 1800s in urban settings (Patall, 2010). According to Zubrzycki (2015), districts utilizing a year-round schedule spread instructional days throughout the calendar year instead of incorporating a traditional summer break. These districts typically maintain 180 days of student instruction but reorganize the calendar to incorporate frequent, shorter breaks throughout the school year (Zubrzycki, 2015, para. 5). Districts that implement a year-round calendar will typically choose between a single-track or a multi-track calendar (Zubrzycki, 2015).

When a single-track calendar is utilized, the entire student body is on the same year-round calendar (Zubrzycki, 2015). The single-track method is generally considered the best option to increase student achievement through more enrichment and remediation opportunities and decreasing summer learning loss (Dixon, 2011). The multi-track calendar creates multiple calendars for different groups within the student body and is used in districts seeking to reduce overcrowding (Zubrzycki, 2015).

The multi-track calendar has been shown to increase the seating capacity of schools by 25–50% (Dixon, 2011, p. 9). Challenges to the multi-track calendar include increased costs due to planning and staff development, the increased need for storage space for educators who share instructional space during the school year, and scheduling parent-teacher conferences and athletic events (Dixon, 2011). The length of terms utilized by school districts who have implemented a year-round calendar varies but will usually

follow one of three options; four 45-day sessions followed by 15-day breaks; three 60-day sessions followed by 20-day breaks; or two 90-day sessions and two 30-day breaks (Zubrzycki, 2015, para. 20). This schedule can also be referred to as a balanced school calendar approach. Superville (2020) found that around 4% of American public schools, which equates to approximately 3 million students, utilize a year-round calendar (p. 2).

The purpose behind utilizing a year-round schedule includes the possible reduction of summer learning loss and improved teacher and student morale (Superville, 2020). Advocates for a year-round calendar report additional benefits by keeping schools open throughout the year, including expanded access to health care and other services (Zubrzycki, 2015). According to Dixon (2011), the regular vacation offered by the year-round calendar allows staff and students to feel rejuvenated and more motivated throughout the school year while also giving students more time for remediation and enrichment than the traditional school calendar. Teachers would also see potential increases in salary for instructors who work during the intersession and support staff (Dixon, 2011).

However, a transition to a year-round calendar will profoundly disrupt family and community routines, which often operate around the traditional school calendar format (Superville, 2020). Other criticisms of the year-round schedule report mixed research on the impact on student achievement, which begs the question of why a district would disrupt the traditional calendar and the community schedule for minimal student academic achievement gains (Zubrzycki, 2015). This transition to a year-round schedule would also impact tourism and other industries that rely on summer tourism, and the financial burden on school districts to pay stipends to teachers and additional utilities in

buildings would be difficult for already financially exhausted districts (Zubrzycki, 2015). Superville (2020) also stated a potential downfall of the year-round calendar, especially for older students, is the reduced summer work opportunities for both teachers and students.

**Four-Day School Week Formats**

In 2009, Missouri passed legislation allowing school districts to transition to a four-day school week with a minimum of 142 days and 1,044 instructional hours, which allowed for local districts to choose the option best suited for their needs (Turner et al., 2018b, p. 169). Districts that opted to maintain a five-day school week were required to include 174 instructional days with 1,044 instructional hours (Turner et al., 2018b, p. 169). While the original purpose of transitioning to a four-day school week was to save money as a district, the rationale has shifted to address challenges such as the need for more professional development and collaboration time with staff, to promote attendance, and to improve teacher retention and recruitment (Turner & Finch, 2018). According to Thompson et al. (2020), 1,607 schools in 662 school districts across 24 states utilized a four-day school week as of the 2018–2019 school year (p. 1).

When implementing a four-day school week, districts maintain the required number of instructional hours for students and staff by implementing a longer instructional day (Turner & Finch, 2018). Thompson et al. (2020) stated that the average increase in a school day when transitioning to a four-day school week is 45 minutes a day longer than the national daily average for five-day school districts (p. 5). On average, schools operating with a four-day week start the school day at 7:56 AM, and the day lasts seven hours and forty-six minutes, with students attending 148 instructional days

(Thompson et al., 2020, pp. 15-16). Anderson and Walker (2015) claimed that the longer class periods and the longer instructional day give teachers the flexibility to organize lessons to meet the needs of their students. Nationally, Thompson et al. (2020) found that students who attend schools implementing a four-day week attend 1,150 instructional hours a year, which is comparatively less than the 1,235 instructional hours students attend at traditional five-day week schools (p. 16).

Hewitt and Denny (2011), while researching the impact a four-day school week has on student academic achievement, recommended school districts designate Monday as the non-teaching day. The recommendation for Mondays stems from the observance of most federal holidays on Mondays, allowing school districts to implement a four-day school week without requiring additional make-up days throughout the year (Hewitt & Denny, 2011). Most districts utilizing a four-day school week operate Monday through Thursday, while a few others choose Tuesday through Friday (Wallace, 2020). Thompson et al. (2020) confirmed that 84.2% of school districts implementing a four-day week chose Friday as the non-teaching day (p. 14). Utilizing Fridays as a non-teaching day allows athletics or extracurricular activities to occur without students missing instructional time to travel to these events (Hewitt & Denny, 2011).

Often, districts that opt for a four-day school week utilize the fifth, or unscheduled, day for various reasons (Heyward, 2018). Most rural districts have implemented a four-day week to use the fifth day for teacher professional development or student enrichment and intervention (Heyward, 2018). However, according to Thompson et al. (2020), less than one-third of districts that operate a four-day school week offer opportunities for student-based academic services on the non-teaching day (p. 5).

Thompson et al. (2020) surveyed 665 districts with at least one building currently utilizing a four-day week and found 48.2% of these districts fully closed their buildings or provided no academic services to teachers or staff on the non-teaching day (p. 15). In addition, 29.7% of these surveyed districts provided various enrichment or remediation opportunities to students (Thompson et al., 2020, p. 15). Of the four-day school week districts not offering student-based academic services on the non-teaching day, 23.2% provided teacher professional development (Thompson et al., 2020, p. 15). These non-teaching days allow parents to schedule necessary appointments for medical reasons and have the potential to decrease student absenteeism, which increases the amount of instructional time a student receives (Anderson & Walker, 2015).

School districts that implement a four-day school week are, on average, geographically concentrated in rural areas with a significantly smaller number of enrolled students than school districts operating a traditional five-day week (Thompson et al., 2020). Thompson et al. (2020) found 90% of school districts implementing a four-day week are rural, with an average enrollment of 454 students (p. 11). Anglum and Park (2021) corroborated Thompson's findings and reiterated that nine out of 10 districts implementing a four-day school week are located in rural communities (p. 1). In Missouri, roughly 10%, or 61 school districts, have adopted a four-day school week and are found predominantly in rural locations (Anglum & Park, 2021, p. 3). The trend towards four-day school weeks in rural school districts in Missouri is not an exception, but rather part of a growing trend observed nationally (Turner et al., 2019).

## MAP Background

The MAP is designed to assess or measure student progress towards mastery of the Missouri Learning Standards according to the Missouri School Improvement Plan (MSIP) (MODESE, 2021). The information gained from the MAP is typically used to diagnose the overall quality of education throughout Missouri (MODESE, 2021). The Outstanding Schools Act passed in 1993 required Missouri to create an assessment system to measure the quality of the state's academic standards (MODESE, 2021). In 2001, No Child Left Behind (NCLB) was enacted by the federal government (MODESE, 2021). The NCLB legislation dictated student performance to determine students' adequate yearly progress at the school, district, and state levels (MODESE, 2021). Assessments in reading and math in grades 3–8 and throughout high school were also required by NCLB legislation. In 2008, a science assessment was added in grades five and eight (MODESE, 2021).

## Student Achievement

The basis for changing or implementing an initiative to alter the school calendar is centered on impacting student achievement (Johnson, 2013). However, the results of the findings of various reports, in particular reports in differing states (Colorado, Oregon, and Oklahoma), suggested the differences in policy, environment, or the structure and implementation of the four-day school weeks may be a factor to consider when examining the results (Thompson et al., 2020). According to Heyward (2018), only recent studies within the last five years have started to examine the effect of the four-day school week on student academic achievement. The studies completed to examine the impact of the four-day week on student academic achievement have been non-experimental,

leading to no causal claims by researchers on whether student outcomes improved or declined following a transition to a four-day schedule (Heyward, 2018). The limited evidence available on the impact of four-day school weeks on student academic achievement remains mixed (Anglum & Park, 2021).

***Decreased Student Achievement***

Thompson released a study in 2019(a) analyzing the impact of a four-day school week on student academic achievement utilizing evidence from four-day school districts in Oregon. Thompson (2019a) found negative effects of four-day school weeks on math and reading achievement in 3rd through 8th-grade students in Oregon. According to Thompson (2019a), student academic achievement loss experienced by the transition to a four-day school week is equivalent to the loss of 35 to 55 minutes of math or reading instruction per week, which is a similar loss when moving from small class size to large class size (p. 12). Through Thompson's (2019a) study utilizing a difference-in-difference analysis, a time trend variable determined a drop in math achievement by 0.045 of a standard deviation and drop of 0.038 of a standard deviation in reading when transitioning to a four-day school week (p. 13). According to Thompson (2019a), the data collected indicated an immediate and persistent negative impact on student academic achievement. Hill and Heyward (2017) express concern regarding a decrease in student achievement due to student and teacher absences being more impactful. As noted by veteran teachers, the long weekends have also been a concern (Hill & Heyward, 2017).

A drop in academic achievement is most significant after the first year of a four-day school week transition and is incremental in the following years except for math (Thompson, 2019a). Thompson (2019a) found a noticeable drop-off in the math

achievement of students enrolled in a four-day school week for eight or nine years. Tharp's (2014) findings agreed with Thompson's (2019b) regarding student academic achievement in four-day school weeks. Tharp (2014) analyzed the correlation between student scores in Montana schools utilizing a four-day school week and those which followed a traditional five-day week. Tharp (2014) determined a long-term negative impact on students' prolonged exposure to a four-day school compared to five-day schools by examining test results. Tharp (2014) concluded:

> Not only are the students in four-day weeks achieving proficient and advanced at a lower rate than the state average, the difference between the student scores in four-day week schools compared to the state is growing at an increasing rate. (p. 66)

Tharp (2016) recommended that school districts implement a comprehensive plan to address the loss of instructional days if the district considers a transition to a four-day school week. This plan should include the continuous monitoring of student academic achievement and address the ongoing professional development to ensure proper pedagogical strategies in a four-day school week are utilized (Tharp, 2016).

The negative impact on student achievement is felt more significantly by students who require in-school intervention, such as students receiving special services, due to the non-teaching day a week (Thompson, 2019a). The effect of the four-day week also impacts genders in differing ways (Thompson, 2019a). Thompson (2019a) found girls might be better equipped to manage the four-day week than boys when examining math and reading achievement. Girls demonstrated scale scores higher than boys by a standard deviation of 0.046 in math and 0.024 in reading (Thompson, 2019a, p. 16). Before

Thompson's analysis, detailed information regarding the impact of the four-day week on low-income and other vulnerable students did not exist (Heyward, 2018).

### *Increased Student Achievement*

Anderson and Walker released a study in 2015 which examined the impact the transition to a four-day school week has on student academic achievement by utilizing evidence from the state of Colorado. Anderson and Walker (2015) found positive effects of four-day school weeks in groups of fourth and fifth-grade math and reading proficiencies in Colorado. Specifically, Anderson and Walker (2015) reported an increase of 7% in fifth-grade math scores and 3% in fourth-grade reading scores (p. 329). Anderson and Walker (2015) utilized the Colorado Student Assessment Program (CSAP), administered each spring to every public school student in Colorado, to report an increase in proficient and advanced student scores the year the transition to a four-day school week took place and that the improvement persisted over time.

Increased student academic achievement could result from increased teacher planning time during the week (Long, 2016). A study conducted by Turner et al. (2018a) corroborated Long's statement that increased student achievement was linked to increased teacher planning time. The increased plan time and focus on the essential elements of a classroom curriculum allows staff members to eliminate unnecessary elements in their daily instruction or "fluff," which could also lead to increased student engagement and achievement (Turner et al., 2018a).

### *No Impact*

Further studies and literature regarding student achievement following the implementation of a four-day school week indicated no significant impact on student

academic achievement (Turner et al., 2019). Morton (2018) found the effects of a four-day school week on student achievement to be insignificant in Oklahoma. Hewitt and Denny (2011) studied the educational impact a four-day school week has on student academic achievement following a four-day school week implementation. Most notably, Hewitt and Denny (2011) reported little evidence of a positive correlation between increasing the school day and increased student academic achievement. This finding calls into question the traditional thought that the more time a student spends in school, the higher the student's academic achievement (Hewitt & Denny, 2011).

**Attendance**

Much like student achievement, the daily attendance of students and staff plays a significant role in evaluating schools and calendars (Johnson, 2013). In Missouri, attendance impacts school districts' funding directly through the state funding formula (Missouri Budget Project, 2017). The weighted average daily attendance (WADA) represents the weighted factor associated with educating students who qualify for free and reduced price meals, receive special education services, or possess limited English language proficiency (Missouri Budget Project, 2017). In the state funding formula, the more student attendance drops, the less money a school district receives, leading to the opposite; if student attendance increases, the state will provide more funds to the school district (Missouri Budget Project, 2017). Many school districts have considered implementing a four-day school week to increase the average daily attendance (Thompson, 2019a).

School district administrators who decided to implement a four-day school week for potential financial savings quickly discovered the benefits of improved student and

staff attendance rates (Turner & Finch, 2018). Heyward (2018) stated that generally, attendance rates increased for both students and staff upon transitioning to a four-day school week. According to Thompson (2019a), students in four-day school weeks have fewer absences per year than students in traditional calendar settings (8.5 days a year compared to 10) (p. 10). Long's (2016) interviews with teachers in an Arizona school district that implemented a four-day school week reiterated the increase in student attendance throughout the week and year. Spark's (2020) interviewed a principal from a Nevada school district that implemented a four-day school week. The principal had the following to say about student attendance in the four-day week:

> When students have games on Fridays and have to travel distances, they must miss school and so must some of their teachers. Our nearest competitor, for example, is two hours away. With three sports in every season, it is often difficult to find substitutes on Fridays. In a school where there are only a couple hundred students, half of whom participate in athletics, there may be only 100 students in the school on any given game day. Those students often receive only busywork or watch a movie in class. Education is simply not happening. If sports are scheduled only on Fridays when school is not in session, however, it cuts down on the call for substitute teachers and wasted class time. (Spark, 2020, p. 1)

While this principal pointed to the increase in student attendance with an emphasis on student-athletes, Sparks (2020) noted the lack of empirical data available on the effect of the four-day school week on student attendance and other district benefits.

**Financial Considerations**

A four-day school week is not a new model but has been implemented since the 1930s to save money during the Great Depression (Turner & Finch, 2018). The four-day model gained popularity again during the energy crisis of the 1970s as school districts attempted to fight off rising energy costs (Turner & Finch, 2018). The Great Recession of the early 2000s saw increased financial pressures on school districts through significant reductions in school funding, which saw state funding decrease by around $850 per student between 2008 and 2013 (Thompson, 2019b, p. 1). The perception is that if a district reduces the days in attendance by 20%, the district should experience a financial savings of 20% (Griffith, 2011). However, when a four-day school week is implemented in a district, staff schedules are adjusted to ensure employees work the same number of hours per week but spread across four days instead of five (Griffith, 2011).

In a study released by Griffith (2011), which utilized the Education Commission of the States, the actual savings a school district can experience by implementing a four-day school week is a maximum of 5.43% of the overall budget (p. 1). Similar studies have concluded the same percentage of potential savings when implementing a four-day school week; however, savings are typically less than anticipated (Turner et al., 2018b). Morton's (2020) research on the effects of four-day school weeks in Oklahoma found a decrease in expenditures of 1.36% and concluded the savings to be of little practical significance (p. 21).

While Griffith's study found a possible savings of 5.43%, Thompson (2019b) presented results that demonstrated expenditures per pupil might increase by 3.2% following the implementation of a four-day school week (p. 9). The increase in per-pupil

expenditures could be due to the decrease in student enrollment following the implementation of a four-day school week (Thompson, 2019b). Thompson (2019b) found student district enrollment decreased by 10.3% following the transition to a four-day school week (p. 9). However, Thompson (2019b) discovered an overall reduction of 3.1% in district operations and services, but this was mitigated by the 6% rise in capital expenditures (p. 9). Overall, Thompson (2019b) found that the shift to a four-day school week could lead to minor cost savings as a district, but these savings were statistically insignificant. Hill (2017) reported that Newcastle School District in Oklahoma faced financial challenges and implemented a four-day school week. Once the four-day week was implemented, the district could save 0.9% per year, which in this district was the equivalent of $110,000 per year (Hill, 2017, p. 2).

***Transportation***

Eliminating a day per week of transportation costs is believed to be where school districts that implement a four-day week save the most financially (Heyward, 2018). Griffith (2011) found that if a district implemented a four-day school week, the financial savings would potentially be around 0.85% of the overall budget (p. 4). However, extracurricular activities often occur on the non-teaching day, and the potential savings are closer to 0.43% of a district's budget (Griffith, 2011, p. 4). Thompson (2019b) found the area of transportation to be one of the largest areas of savings when a district transitions to a four-day school week with a reduction of 7% (p. 10). The decrease in transportation is likely due to a one-day-a-week loss of most transportation services (Thompson, 2019b).

### *Personnel and Associated Cost*

According to Heyward (2018), teacher salaries, which represent the bulk of a school district's spending, do not decline in districts implementing a four-day school week. Thompson (2019b) reiterated the low economic impact the transition to a four-day week has on instructional costs by finding a 1.7% reduction in the area of instructional costs (p. 10). This area is difficult to reduce in large part due to teacher contracts which are not directly impacted by the transition to a four-day school week (Thompson, 2019b).

### *Energy*

Expenditures associated with heating and cooling costs, as well as janitorial services and supplies, yielded a potential savings of 1.36% of a district's overall budget when a four-day school week was implemented (Griffith, 2011, p. 3). However, to experience a 1.36% savings, a district would have to not be in operation and be without maintenance staff on the non-teaching day (Griffith, 2011, p. 3). Most schools remain open on the non-teaching day and therefore report an overall savings of 10-15% in energy costs, translating into a 0.05% savings in the overall district budget (Griffith, 2011, p. 3). In addition, districts have continued to utilize maintenance staff on non-teaching days or have transitioned the maintenance to staff for longer hours, thereby experiencing little to no savings in maintenance costs (Griffith, 2011). Thompson (2019b) found savings of 4/5% in the area of maintenance following the transition to a four-day school week (p. 10).

### *Concerns*

The opportunity to implement a four-day school week was intended to give financially challenged school districts options (Turner & Finch, 2018). However, those

savings, typically around 5% of a district's budget, are not why many districts choose to maintain a four-day school week (Turner & Finch, 2018, p. 53). A 2017 study in Oklahoma showed that since 2011–2012, of 16 school districts that implemented a four-day school week, nine districts actually spent more money following the transition (Heyward, 2018).

For financially challenged districts, even savings of up to 2.5% of the overall budget is still cost-saving (Griffith, 2011, p. 6). When the Duvall School District in Denver, CO, implemented a four-day school week, the district experienced an overall savings of 0.7%, which equated to a reduction of $7 million for the district (Griffith, 2011, p. 6). Thompson (2019b) expressed caution when utilizing financial rationales to drive a district's decision to transition from a five-day to a four-day week. While a district will experience some savings, those savings are statistically insignificant and result in $187 of total savings per student (Thompson, 2019b, p. 12). A concern stated by Thompson (2019b) "is the tradeoff between this level of cost savings and educational impacts of these cost reduction policies" (p. 17).

## Other Claims

### *Reduced Discipline*

Hewitt and Denny (2011) reported a lower rate of student disciplinary incidents in four-day school weeks than five-day weeks. Thompson (2019a) reiterated this lower student discipline rate in his research on student achievement utilizing evidence from Oregon. In these data, Thompson (2019a) found that students in four-day school weeks experienced 0.188 discipline incidents compared to 0.333 student discipline incidents in five-day school weeks (p. 10). However, Thompson (2019a) stated that while there are

noticeable differences in the area of student discipline between four-day and five-day school weeks, it is difficult to ascertain whether these differences are causally due to implementing a four-day school week.

### *Improved Morale*

Turner and Finch (2018) stated that a common theme emerging from school districts that have implemented a four-day school week was that now teachers have more time to plan and collaborate, which increased retention and the ability to attract new staff. Even though all school staff work roughly the same number of hours per week regardless of the days school is in session, the benefit of a regular three-day break was cited as being "very attractive" (Turner & Finch, 2018, p. 13) to school staff. Turner et al. (2018a) conducted a survey of staff members of a four-day school, and among the benefits stated by staff members, improved teacher morale was listed and was a reason given for continuing to work in the district. Turner et al. (2018a) concluded in their study that 91% of the respondents favored working in schools with a four-day week (p. 59).

### *Juvenile Crime*

Thompson et al. (2020) reported that not all school districts provide services on the non-teaching days of a four-day week, creating potentially unsupervised time for children. Fischer and Argyle (2018) attempted to examine a relationship, if any existed, between an increase in juvenile crime and the adoption of a four-day school week. Due to the long hours students are in school, juvenile crime rates could decrease (Fischer & Argyle, 2018). However, adding one full day off per week where underage students will likely be unsupervised could increase juvenile crime rates in those districts (Fischer & Argyle, 2018). Using data from local law enforcement agencies, Fischer and Argyle

(2018) found a rise in property crimes, particularly larceny, in areas where a four-day school week policy was adopted. In a study conducted by the Oklahoma Department of Health (2017), the conclusion was the impact of the four-day school week on juvenile crime rates was mostly inclusive. However, there was an increased likelihood of juvenile crime rates increasing within low-income families (Oklahoma Department of Health, 2017).

**Summary**

Chapter Two included a review of various research on the topics of the traditional school calendar, the year-round calendar, and the four-day school week calendar. In this review of literature, the history of the traditional calendar and the history and different formats of the four-day school week were examined. In reviewing the four-day school week, themes became apparent through the research. These themes included the impact of the four-day school week on student academic achievement and attendance. Opinions were mixed regarding the impact on student achievement, with Thompson et al. (2020) concluding a negative impact, Anderson and Walker (2015) concluding a positive impact, and Morton (2018) reporting no significant statistical impact from implementing a four-day school week.

The original intent of a district's transition to a four-day school week was believed to be financial (Turner & Finch, 2018). However, Griffith (2011) stated a district could save up to 5.43% (p. 1), and Thompson (2019b) found that a school district could increase spending by implementing a four-day school week. The findings were that the advantages or disadvantages of a four-day school week were inconclusive or anecdotal and therefore provided evidence this topic requires more in-depth scientific study.

Chapter Three includes details on the methodology of this study. An overview of the problem and purpose is presented, and the research design of the study is outlined. Following the design, a description of the population, sample, and an overview of the instruments that were utilized to collect data are presented. Finally, the process of collecting and analyzing data is explained, and the chapter concludes with an examination of the ethical considerations.

# Chapter Three: Methodology

## Introduction

According to Hewitt and Denny (2011), the idea of a four-day school week is not a new phenomenon. Four-day school week calendars date back to 1936 but gained prevalence in 1973 due to the need to reduce energy consumption during the energy crisis of the 1970s (Hewitt & Denny, 2011). However, research on the long-term effects of a four-day school week is still new and needs further exploring (Wallace, 2020). For example, Hill and Heyward (2017) argued the savings gained from a four-day school week are short-lived as there are now off-setting costs of keeping schools open for longer hours per day and the potential fifth day for teacher meetings. On average, Oklahoma districts that implemented a four-day week spent more money following the transition (Heyward, 2018). School districts in five states that attempted a four-day school week have reinstated the traditional five-day week for various reasons, including declining test scores, failing to make adequate academic progress, and failing to prepare students for the reality of a five-day workweek (Heyward, 2018).

Interest in the four-day school week in Missouri continues to grow (Turner & Finch, 2018). This research study was conducted to determine the impact of the four-day week on student achievement. A mixed-methods approach was utilized to gather principal and teacher perceptions of how a four-day school week affects teacher morale, school finance, student discipline, and overall attendance (teachers and students).

Chapter Three includes a description of the research methodology and procedures used in this study of district implementation of the four-day school week. Topics included in Chapter Three are an overview of the problem and purpose, the research questions, and

the research design. The population and sample, data collection methods, data analysis techniques, ethical considerations, and summary complete the chapter.

## Problem and Purpose Overview

Research on the long-term effects of a four-day school week is still somewhat new and needs to be explored further (Wallace, 2020). The purpose of this study was to examine MAP data provided through the MODESE to ascertain if a change to the traditional school calendar is best for student achievement. The goal was to identify the impact a four-day school week might have on students' academic performance and gain further insight into teacher and principal perceptions of the effectiveness of a four-day week. A mixed-methods approach incorporating qualitative and quantitative data was implemented to analyze MAP data before and after a school implemented a four-day week. In addition to MAP data, principal and teacher perceptions were collected through interviews on teacher morale, finance, overall attendance (student and teacher), and discipline.

### *Research Questions and Hypotheses*

1. What difference, if any, exists between the MAP math scale scores of 7th-grade students who attended a school that implemented a transition from being in session five days per week to four days per week?

   $H1_0$: There is no difference between MAP math scale scores in 7th-grade students after transitioning to a four-day week.

   $H1_a$: There is a difference between MAP math scale scores in 7th-grade students after transitioning to a four-day week.

2. What difference, if any, exists between the MAP math scale scores of 8th-grade students who attended a school that implemented a transition from being in session five days per week to four days per week?

$H2_0$: There is no difference between MAP math scale scores in 8th-grade students after transitioning to a four-day week.

$H2_a$: There is a difference between MAP math scale scores in 8th-grade students after transitioning to a four-day week.

3. What difference, if any, exists between the MAP ELA scale scores of 7th-grade students who attended a school that implemented a transition from being in session five days per week to four days per week?

$H3_0$: There is no difference between MAP ELA scale scores in 7th-grade students after transitioning to a four-day week.

$H3_a$: There is a difference between MAP ELA scale scores in 7th-grade students after transitioning to a four-day week.

4. What difference, if any, exists between the MAP ELA scale scores of 8th-grade students who attended a school that implemented a transition from being in session five days per week to four days per week?

$H4_0$: There is no difference between MAP ELA scale scores in 8th-grade students after transitioning to a four-day week.

$H4_a$: There is a difference between MAP ELA scale scores in 8th-grade students after transitioning to a four-day week.

5. What are the perceptions of school principals who are employed by a school district that implemented a transition from being in session five days per week to

four days per week related to teacher morale, school finance, student discipline, and overall attendance (teachers and students)?

6. What are the perceptions of teachers who are employed by a school district that implemented a transition from being in session five days per week to four days per week related to teacher morale, school finance, student discipline, and overall attendance (teachers and students)?

**Research Design**

According to Fraenkel et al. (2019), a mixed-methods approach allows researchers to ascertain the cause or consequences of differences among individuals. Quantitative data were collected utilizing de-identified secondary data through the MODESE. The analysis of MAP data from 7th and 8th-grade students in ELA and math determined if a difference exists between students' scores prior to and following the transition to a four-day school week. To accomplish this comparison, data were collected from the last three years of the five-day school week to create a baseline and then compared to the three years following the implementation of the four-day school week.

Qualitative data were collected using semi-structured interview questions to examine principal and teacher perceptions of a four-day school week compared to a five-day school week. Interviews were voluntary and conducted at the convenience of the participant. The principal and teacher interview results provided a better understanding of teacher morale, finance, student discipline, student achievement, and overall attendance (both teachers and students) in districts implementing a four-day school week compared to a five-day school week. In total, seven interviews with principals and seven interviews with teachers were conducted; the results were recorded, categorized, and analyzed.

Before any interviews, the Lindenwood University Institutional Review Board (IRB) approval was received (see Appendix A). Following approval by the dissertation committee, superintendents from school districts that implemented a four-day school week in 2017-2018 were contacted to request access to 7th and 8th-grade principals and teachers who the school district employed before and after the transition from a five-day to a four-day school week (see Appendix B). The principals and teachers who met the criteria were contacted via email to participate in a voluntary interview through video conference. The email served as a letter of participation (see Appendix C). Attached to this email were the Lindenwood University research information sheet outlining the purpose of the study, a statement of voluntary participation with the ability to withdraw at any time, and steps taken to protect the participant's privacy (see Appendix D). Interview questions were attached to the email for the participant to review before the video conference (see Appendices E & F). The goal was to include 14 participants in the study, seven principals and seven teachers.

**Population and Sample**

The population of this study included seven school districts within Missouri that implemented a four-day school week at the start of the 2017-2018 school year. This sample was comprised of schools that operated under a four-day school week for at least three years to create a post-implementation average. Secondary data from current and former students in each of the seven school districts selected for participation in the study were utilized. This secondary information on MAP scores was acquired through the MODESE website, and the results were then analyzed for each school before and after the transition to a four-day school week.

The qualitative portion of this study was determined through separate criteria for population and sample. The population of the qualitative portion of this study consisted of principals and teachers currently employed by one of the seven school districts utilizing a four-day school week at the start of the 2017–2018 school year. The criteria necessary to be selected for an interview included the following: (1) employment by the school district before and after the transition to the four-day school week and (2) certified staff member. If multiple principal or teacher participants volunteered, the candidate who fit the criteria and responded first was selected for an interview.

The sample for this study included one principal and one teacher from seven different school districts selected for this study, which produced a total sample size of 14 interviews. Purposive sampling was incorporated, which typically includes a smaller sample size. Purposive sampling allowed generalizations to be made about the sample being studied (Sharma, 2017). The intent was the individuals selected could provide a considerable amount of detailed, in-depth information given their experience with the central concept (Fraenkel et al., 2019). The sample size of 14 interview participants for this research was in the recommended range to reach sufficient depth and breadth for a qualitative study (Ritchie et al., 2013). Reaching over 50 samples in a qualitative study could create a risk of mismanagement of data collection and analysis (Ritchie et al., 2013, p. 84). However, some studies concluded saturation of information could occur within 12 interviews based upon the uniformity of the population and the scope of the study (Baker et al., 2012, p. 18).

**Instrumentation**

For this research, a mixed-methods approach was utilized.

### *Quantitative Data*

Quantitative data were collected from instruments developed and used by Missouri. Each year, Missouri school districts administer the MAP to measure students' skills and knowledge of the Missouri Learning Standards (MODESE, 2020). The information from MAP scores was used to collect data on academic achievement at various levels, including classroom, school, district, and state (MODESE, 2020). Grade level assessments in English language arts (ELA) and mathematics are administered yearly in grades 3–8, while the science assessment is administered only in grades five and eight (MODESE, 2020). Grade level assessments were developed with McGraw Hill, an educational resource company based in New York City, New York (MAP Information for Parents, 2020). Since the MAP is a standardized assessment, the scores were utilized to analyze student achievement within a school district before and after the implementation of a four-day school week.

**Reliability and validity.** In a report commissioned by the Missouri National Education Association, the reliability and validity of the MAP test were examined. According to Schafer (2002), internal homogeneity coefficients and standard error subplots determined the reliability of the MAP test. Contractors of the test addressed MAP test validity through consequential benefits, item fit, sampling designs, and fairness (Schafer, 2002). Those processes determined the MAP test demonstrated a relationship between the tested items and Missouri Learning Standards (Schafer, 2002). Schafer (2002) concluded the MAP test is a valid and reliable measure of student academic achievement with no evidence to suggest otherwise.

### *Qualitative Data*

Qualitative data were collected through a series of semi-structured interview questions to gather the perspectives of principals and teachers. Semi-structured, open-ended interview questions were implemented to allow participants to express their experiences and viewpoints fully. They also enabled follow-up questions as needed to clarify or gather more information. The semi-structured interview questions provided flexibility during the discussion, based upon the participants' responses (Creswell & Creswell, 2018; Ngozwana, 2018). The participants' viewpoints were analyzed to determine the themes which would emerge from the collected data.

The structure of the interview questions was influenced by the works of Creswell (2018), Turner (2010), and Fraenkel et al. (2019), while the content was influenced by the research of Turner et al. (2018a, 2018b, & 2019) as well as Turner and Finch (2018). Turner et al.'s (2018a, 2018b, & 2019) and Turner and Finch's (2018) research included surveys to analyze educator perceptions on the four-day school week in Missouri. Thompson's (2019a, 2019b, & 2020) studies regarding the impact of the four-day school week were also utilized to create the semi-structured interview questions. Upon creating the interview questions, the Validation Rubric for Expert Panel (VREP) was utilized to ensure validity (Simon & White, 2016).

**Reliability and validity.** Interview questions were field-tested to assess the reliability of the questions. According to Fraenkel et al. (2019), pilot testing, or field testing, is a method to ensure the study's reliability and assess the appropriateness of the questions concerning the data being collected. According to Mills and Gay (2018), pilot testing should be conducted with participants who have similar interests as the proposed

participants. Therefore, the pilot test group was composed of educators who had experience in a four-day school week and a five-day school week in the Southwest Central League Conference (SWCL).

All transcriptions were provided to the participants for review following the study interviews to ensure accuracy and that researcher bias did not interfere with the data analysis. According to Creswell (2018), such member checking assures that data collected are not misinterpreted and acts to validate the research. Yin (2016) stated, "A valid study is one that has properly collected and interpreted data, so that the conclusions accurately reflect and represent the real world (or laboratory) that was studied" (p. 78). To strengthen the validity of this study, the use of rival explanations, as suggested by Yin (2016), was utilized. Rival explanations encourage skepticism of the data collected (Yin, 2016). Yin (2016) explained skepticism of the data could be increased by double-checking the data as well as more analysis of the data. The rationale stated by Yin (2016) for this approach was that every facet of the data collected could be subject to other explanations.

**Data Collection**

The quantitative data collected for this study were archival and public records through the MODESE. Data included MAP scores in ELA and math from grades 7–8 for three school years before the four-day school week implementation and two school years following the transition. This de-identified secondary assessment data collected from the MODESE were analyzed from school districts that implemented a four-day school week at the start of the 2017–2018 school year. Data were analyzed from the school years ranging from 2014–2020.

School districts identified as implementing a four-day school week at the start of the 2017-2018 school year were contacted via email to gain permission to participate in the study. For the qualitative aspect of this study, when the district granted permission, principals and teachers were contacted through email, explaining the nature of the research and the requirements of potential participants. An informed consent form, as well as interview questions, were included in this communication.

Virtual Interviews were recorded through both audio recordings via cell phone and audio and visual recordings through the computer once approved by the participant. Interviews were transcribed following the interview. During the interview, field notes were taken to add observational data regarding the interviewee's behavior, including body language and hesitations, throughout the interview (Creswell, 2018). As noted by Fraenkel et al. (2019), field notes give a written account of what the interviewer sees, hears, experiences, and thinks throughout the collection and reflection of the interview. The use of paraphrasing and clarifying questions were utilized during the interview to capture the complete thoughts of the interviewees.

**Data Analysis**

This mixed-methods study involved two distinct phases of data collection. Data were collected sequentially, beginning with quantitative data collection, allowing ample reflection of data findings throughout the research or further literature reviews. Quantitative data were analyzed using a *t*-test to determine if there was a statistically significant difference between middle school student achievement in a five-day school week compared to a four-day school week, based on MAP ELA and math data. According to Bluman (2019), the purpose of a *t*-test is to compare the means of two

independent variables to determine a statistical difference. Tests were performed using the Microsoft Excel statistical package.

Qualitative data in the form of recorded interviews and notes were gathered and analyzed following the collection and analysis of the quantitative data. Recorded interviews were transcribed into an electronic document. To ensure ethical methods were utilized, all participants were assured of confidentiality, anonymity, transparency, and security of data (Gupta, 2017). Participants were emailed a copy of their transcript as a means of member checking to validate the data collected (Maxwell, 2020). Interview questions for both groups included topics focused on the perception of the impact of a four-day school week in the areas of teacher morale, finance, overall attendance, and student discipline.

Once data are organized, Creswell (2018) suggested reading and rereading to gain an overall sense of the information. In this study, responses were analyzed using coding methods to identify trends, key phrases, and words. Coding is a means of arranging the data into categories, allowing one to observe comparisons (Maxwell, 2020).

**Ethical Considerations**

Risks in this research study included participants' loss of privacy or confidentiality during data collection or that participants might become identifiable during the research process. After the Lindenwood University IRB approval, strategies were implemented to keep the names of school districts and participants confidential and allow participants to opt-out of data collection. Participants received a letter of participation via email. A Research Information Sheet explaining the purpose of the research and the opportunity to leave the study at any time was attached. Codes were

assigned to each school district and participant to maintain confidentiality and ensure the anonymity of each school district and participant. All data and documents relating to the school district and the participants included in the research were housed in a secure location. Electronic files and documents and video and audio recordings were housed in a locked cabinet on a password-protected storage device.

**Summary**

The research design of this mixed-methods study was outlined in Chapter Three. This chapter included a description of the research methodology and procedures used in this study of district implementation of the four-day school week. The chapter consisted of an overview of the problem and purpose, followed by the research questions and hypotheses guiding this study. Next, the research design was outlined, followed by an explanation of the population and sampling methodology. An examination of the instrumentation utilized to collect data for this study was provided. An analysis of the data collection methods and details regarding the analysis of the collected data, followed by related ethical considerations, concluded Chapter Three.

In Chapter Four, quantitative data were analyzed to determine the differences in academic achievement scores of students attending a five-day school week versus a four-day school week. Qualitative data from principals and teachers regarding the four-day school week are presented, and the analysis is provided. Quantitative data in the form of MAP scores from 2015-2019, as well as qualitative data in the form of responses to semi-structured interview questions, are summarized. Table and figures are presented to portray the impact of the four-day school week related to each of the research questions.

## Chapter Four: Analysis of Data

The purpose of this study was to examine data to determine if a transition in the traditional school calendar, specifically implementing a four-day school week, was best for student achievement. Principals and teachers were interviewed to gather their perceptions of the calendar change. Various claims have been attributed to the four-day school week in student academic achievement as measured through state assessment data and positive perceptions by staff members (Turner et al., 2017). As mentioned in the previous chapter, the method decided upon for the current study was a mixed-methods approach. The mixed-methods analysis involved collecting qualitative and quantitative data to determine the impact of the four-day school week on student academic achievement, teacher morale, finance, student discipline, student achievement, and overall attendance (both teachers and students).

Research is relatively new, and at this point, varied and inconclusive on how a four-day school week impacts student academic achievement and the educational process (Thompson et al., 2020). Turner et al. (2017) found strong staff support for the four-day school week and no impact on student academic achievement. However, Thompson (2019a) indicated a decrease in student performance in districts implementing a four-day school week. Through this study, a clearer picture of the four-day school week and how the change in calendars impacts students and staff were achieved.

Quantitative data were collected through the MODESE website (MODESE, 2021b). Seven school districts in Missouri were selected, and MAP data were extracted from the 2015–2019 school years. These districts implemented a four-day school week beginning in the 2017–2018 school year. A *t*-test was administered to compare MAP data

in the areas of 7th-grade ELA and math and 8th-grade ELA and math from the three years before the four-day school week to the two years following implementation of the four-day school week. Due to the global pandemic of COVID-19 in the spring of 2020, Missouri did not administer the MAP to students to conclude the 2019–2020 school year, and therefore no data could be collected from the year 2020.

The qualitative portion of this study was conducted to understand the perceptions of principals and teachers regarding the four-day school week. Qualitative data were collected through video interviews with principals and teachers employed by school districts in Missouri that implemented a four-day school beginning in the 2017–2018 school year. Participants were asked semi-structured questions regarding their perceptions of the four-day school week in the areas of teacher morale, finance, student discipline, student achievement, and overall attendance (both teachers and students). To ensure anonymity, each participant interviewed was provided a data code unique to the participant.

**MAP Data**

MAP data were collected from the MODESE website for each of the seven school districts that implemented a four-day school week beginning in the 2017–2018 school year (MODESE, 2021b). The percentages of students in each district who scored proficient or advanced in 7th-grade ELA and math and 8th-grade ELA and math were utilized for analysis. One of the seven districts analyzed was a K–8 district, while the remainder sampled served grades K–12.

The MAP scores were categorized to formulate two groups; one group represented the three years before implementing the four-day school week, and the

second group represented two years following the implementation. As displayed in Table 1, the difference in the mean of proficient or advanced MAP scores among 7th-grade students in ELA ranged from -23.9% to 3.6%. Only one district showed an increase in 7th-grade ELA proficient or advanced scores following the implementation of a four-day school week. A *t*-test produced critical values of ± 2.57; *t*-values must be less than -2.57 or greater than + 2.57 to reject the null hypothesis. The *t*-statistic was 2.655, which falls in a critical region. The null hypothesis for this aspect of the study stated *there is no difference between MAP ELA scale scores in 7th-grade students after transitioning to a four-day school week.* With $\alpha = .05$, the *p*-value for the two-tailed *t*-test calculated was 0.045; therefore, the null hypothesis for Research Question Three was rejected, and the alternate hypothesis was supported. The alternate hypothesis stated *there is a difference in ELA scale scores of 7th-grade students after transitioning to a four-day school week*.

**Table 1**

*Three-Year Average of Proficient/Advanced 7th-grade Student Achievement in ELA According to MAP Data Prior to and Post-Implementation of the Four-Day School Week*

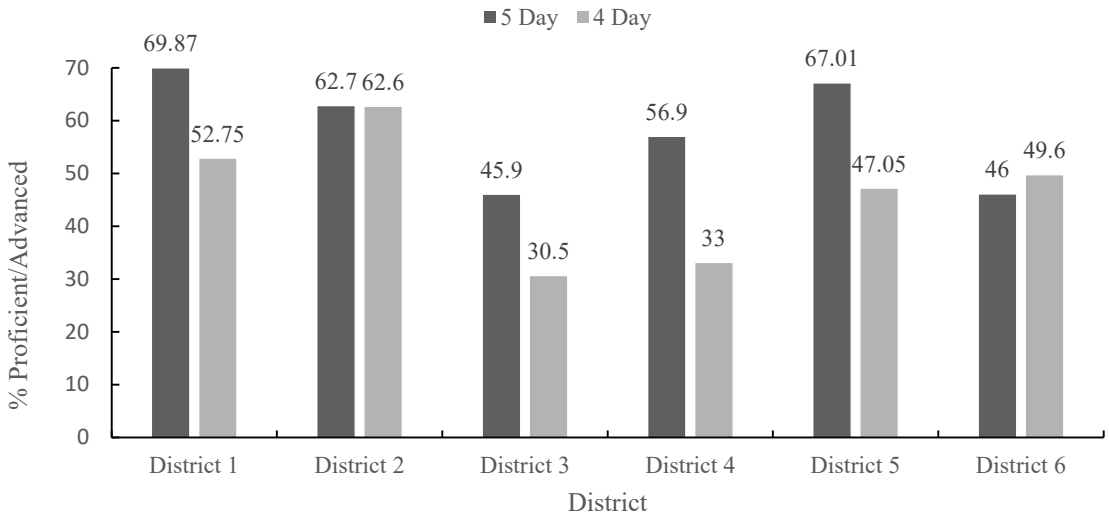
| School District | Five Day MAP 7th-grade ELA Proficient/Advanced % | Four Day MAP 7th-grade ELA Proficient/Advanced % | Change in Proficient/Advanced % |
|---|---|---|---|
| District 1 | 69.87 | 52.75 | -17.12 |
| District 2 | 62.70 | 62.60 | -0.01 |
| District 3 | 45.90 | 30.50 | -15.40 |
| District 4 | 56.90 | 33.00 | -23.90 |
| District 5 | 67.01 | 47.05 | -19.96 |
| District 6 | 46.00 | 49.60 | 3.60 |

Figure 1 shows the three-year aggregate 7th-grade ELA MAP scores prior to and following a district's transition to a four-day school week. Those data indicated, within the six districts examined, that five districts experienced varied decreases in students performing at a proficient or advanced level on the ELA section of the MAP after implementing a four-day school week. District 4 experienced the greatest decline in student achievement in 7th-grade ELA, dropping from the three-year average of 56.9% to the two-year average of 33% for a 23.9% decrease.

District 1, District 3, and District 5 experienced a similar decrease in student achievement as District 4, with declines in the percentage of students achieving at a proficient or advanced level of 17.12%, 15.4%, and 19.96%, respectively. District 2 experienced a less notable decrease in student achievement of 0.01%. Only District 6 experienced an increase in student achievement, growing from 46% to 49.6% proficient or advanced, or an increase of 3.6%.

**Figure 1**

*7th-grade ELA Proficient/Advanced %*




*Note.* Three-year average 7th-grade ELA MAP scores prior to and following four-day school week for six Missouri school districts.

As displayed in Table 2, the difference in the mean of proficient and advanced MAP scale scores among 7th-grade students in math ranged from -14.617% to 8.917%. Two districts demonstrated an increase following the transition to a four-day school week, while the remaining districts all showed a decrease in student achievement. The *t*-test produced a *t*-statistic of 1.075, which was not less than -2.57 or greater than +2.57, the critical values of ± 2.57. With $\alpha = .05$, and the *p*-value for the two-tailed *t*-test calculated as 0.331, the null hypothesis stated in Research Question One was not rejected. While differences existed in math MAP scale scores for 7th-grade students, these differences were not statistically significant, as noted by the *t*-test.

**Table 2**

*Three-Year Average of Proficient/Advanced 7th-grade Student Achievement in Math According to MAP Data Prior to and Post-Implementation of the Four-Day School Week*

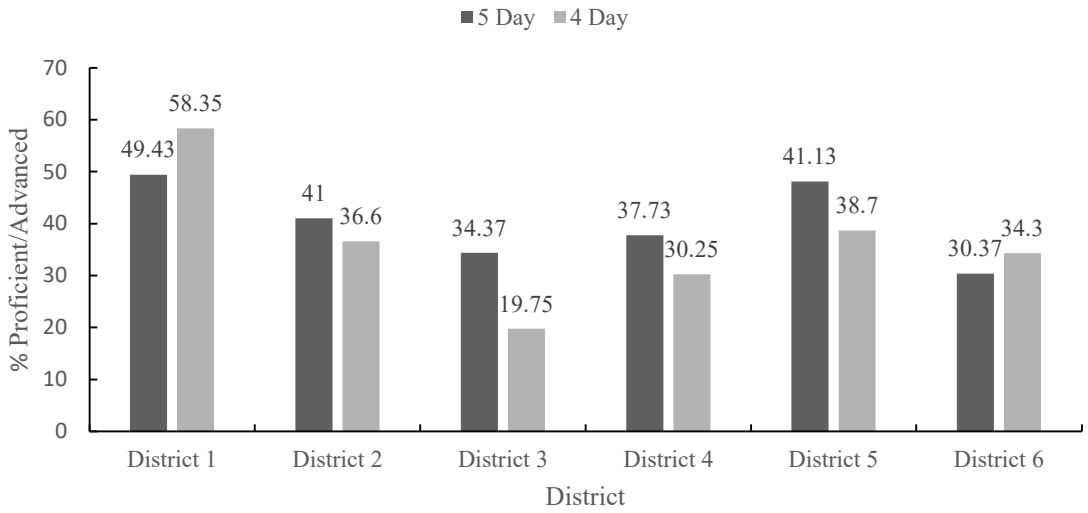
| School District | Five Day MAP 7th-grade Math Proficient/Advanced % | Four Day MAP 7th-grade Math Proficient/Advanced % | Change in Proficient/Advanced % |
|---|---|---|---|
| District 1 | 49.43 | 58.35 | 8.92 |
| District 2 | 41.00 | 36.60 | -4.40 |
| District 3 | 34.36 | 19.75 | -14.62 |
| District 4 | 37.73 | 30.25 | -7.48 |
| District 5 | 48.13 | 38.70 | -9.43 |
| District 6 | 30.36 | 34.30 | 3.93 |

Figure 2 shows the aggregate three-year 7th-grade math MAP scores prior to and following the implementation of a four-day school week. These data indicated that of the six districts analyzed, four experienced varied decreases in the percentage of proficient or advanced level students according to MAP math assessments. District 3 experienced the greatest decline, from 34.367% to 19.75%, or -14.617%. District 1 experienced the greatest increase in proficient or advanced level performance, following the transition to a four-day school week, from 49.433% to 58.35%, an increase of 8.917%.

District 5 experienced a similar decline in student achievement as District 3, with a decrease of 9.433%. District 4 produced a decrease in student achievement of 7.483%, while District 2 saw a decline of 4.4%. In addition to the increase experienced by District 1, District 6 saw a rise in student achievement of 3.933%.

**Figure 2**

*7th-grade Math Proficient/Advanced %*




*Note.* Three-year average 7th-grade Math MAP scores prior to and following four-day school week for six Missouri school districts.

Table 3 displays the difference in the mean of proficient and advanced MAP ELA scale scores among 8th-grade students three years prior to implementing a four-day school week and two years following implementation. As displayed, the difference in mean scores ranged from -26.7% to 10.033%. One district demonstrated the only increase in ELA MAP scale scores following the implementation of a four-day school week. All other districts demonstrated a decrease in the percentage of 8th-grade students proficient and advanced scores in ELA following a four-day school week. The *t*-test produced a *t*-statistic of 1.321, which was not greater or less than the critical values of ±2.57. With $\alpha$ = .05, and the *p*-value for the two-tailed *t*-test calculated as 0.243, the null hypothesis for Research Question Four was not rejected. While differences exist in ELA MAP scale

scores for 8th-grade students, these differences were not statistically significant, as noted by the *t*-test.

**Table 3**

*Three-Year Average of Proficient/Advanced 8th-grade Student Achievement in ELA According to MAP Data Prior to and Post-Implementation of the Four-Day School Week*

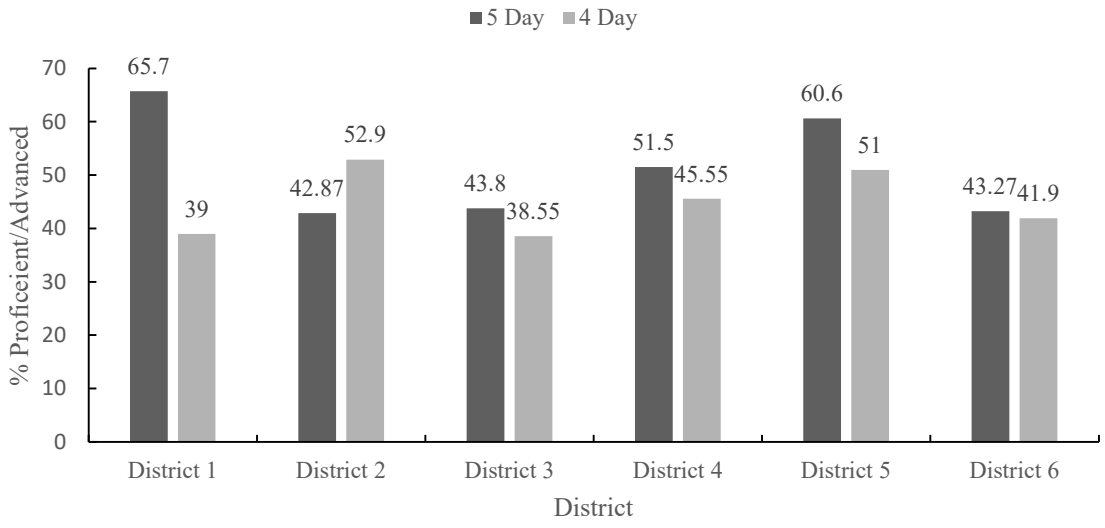
| School District | Five Day MAP 7th-grade ELA Proficient/Advanced % | Four Day MAP 7th-grade ELA Proficient/Advanced % | Change in Proficient/Advanced % |
|---|---|---|---|
| District 1 | 65.70 | 39.00 | -26.70 |
| District 2 | 42.87 | 52.90 | 10.03 |
| District 3 | 43.80 | 38.55 | -5.25 |
| District 4 | 51.50 | 45.55 | -5.95 |
| District 5 | 60.60 | 51.00 | -9.60 |
| District 6 | 43.27 | 41.90 | -1.37 |

Figure 3 shows the aggregate three-year 8th-grade ELA MAP scores prior to and following the implementation of a four-day school week. These data indicated that of the six districts examined, five displayed varied decreases in the percentage of proficient/advanced level students, according to MAP ELA assessments. District 1 experienced the greatest decrease in student academic achievement from 65.7% to 39%, or a drop of 26.7%. District 2, however, saw an increase in student achievement following the implementation of a four-day school week. While District 2 experienced a rise in student academic achievement, it should be noted that District 2 had the lowest percentage of advanced/proficient students prior to the implementation of a four-day week.

District 5 experienced the second greatest decline from 60.6% proficient/advanced to 51% following the implementation of a four-day school week, a decrease of 9.6%. District 3 and District 4 experienced similar decreases following the transition, with District 3 experiencing a drop of 5.25% and District 4 a decline of 5.95%. District 6 showed the lowest reduction in student academic achievement, from 43.267% to 41.9%, or a decrease of 1.367%.

**Figure 3**

*8th-grade ELA Proficient/Advanced %*




*Note.* Three-year average 8th-grade Math MAP scores prior to and following four-day school week for six Missouri school districts.

As displayed in Table 4, the difference in the mean of proficient and advanced MAP scale scores among 8th-grade students in math ranged from -6.55% to 27.50%. Only one district demonstrated a decrease in math MAP scale scores following a four-day school week implementation. The remaining districts showed an increase in the percentage of 8th-grade students proficient and advanced in math following a four-day

school week. The *t*-test produced a *t*-statistic of -2.207, which was not greater than or less than the critical values of ± 2.57. With $\alpha = .05$, and the *p*-value for the two-tailed *t*-test calculated as 0.078, the null hypothesis stated in Research Question Two was not rejected. While differences exist in math MAP scale scores for 8th-grade students, these differences were not statistically significant, as noted by the *t*-test.

**Table 4**

*Three-Year Average of Proficient/Advanced 8th-grade Student Achievement in Math According to MAP Data Prior to and Post-Implementation of the Four-Day School Week*

| School District | Five Day MAP 7th-grade ELA Proficient/Advanced % | Four Day MAP 7th-grade ELA Proficient/Advanced % | Change in Proficient/Advanced% |
|---|---|---|---|
| District 1 | 27.83 | 42.65 | 14.82 |
| District 2 | 9.10 | 36.60 | 27.50 |
| District 3 | * No Score Given | 21.95 | * |
| District 4 | 25.90 | 29.65 | 3.75 |
| District 5 | 37.40 | 30.85 | -6.55 |
| District 6 | 25.80 | 32.20 | 6.40 |

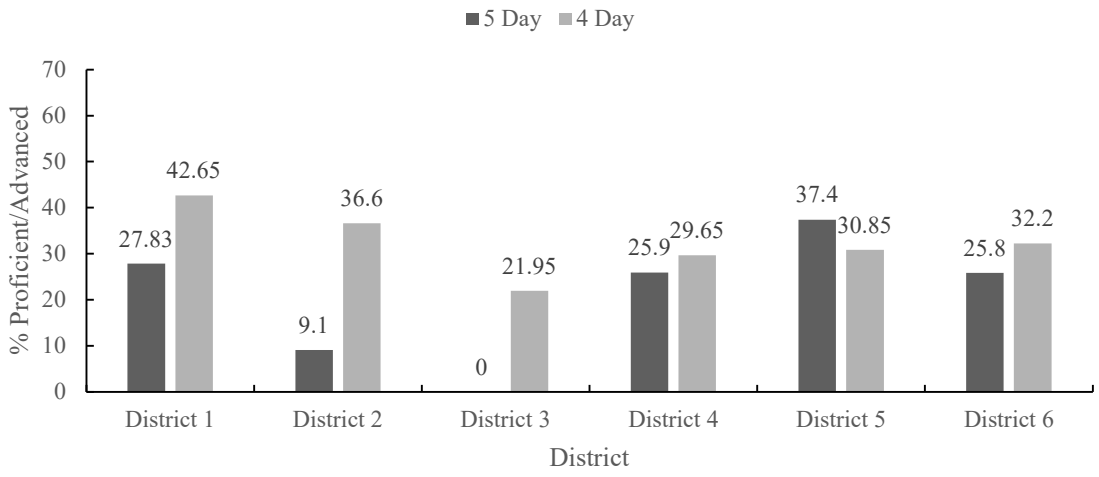
Figure 4 shows the aggregate three-year 8th-grade math MAP scores prior to and following a four-day school week implementation. These data indicated that of the six districts studied, four displayed varied increases in the percentage of proficient/advanced level students according to MAP math assessments. District 2 experienced the greatest rise following a four-day school week implementation, climbing from 9.1% to 36.6%, or an increase of 27.5%. While District 2 showed the greatest increase in student achievement, it also experienced the lowest percentage of proficient/advanced students

prior to implementing the four-day school week. District 5, however, experienced a drop in student achievement from 37.4% to 30.85%, or a decrease of 6.55%.

District 1 showed the second highest improvement in student achievement, from 27.833% to 42.65%, or a rise of 14.817%. District 6 and District 4 showed similar increases. District 6 improved from 25.8% to 32.2%, an increase of6.4%, and District 4 increased from 25.9% to 29.65%, an improvement of 3.75%. District 3 did not report any results in 8th-grade MAP math for the three years prior to the implementation of a four-day school week and was therefore excluded from the results.

**Figure 4**

*8th-grade Math Proficient/Advanced %*




*Note.* Three-year average 8th-grade Math MAP scores prior to and following four-day school week for six Missouri school districts.

**Interviews**

Qualitative data were collected through virtual interviews with teachers and principals from Missouri schools. All participants were asked semi-structured questions regarding their perceptions of the implementation of a four-day school week. Each

interview was audio recorded as well as video recorded. Participants were divided into two categories based on their role within the school as either a principal or teacher. The 14 participants were comprised of seven principals and seven teachers from varying grade levels, experience, and subject areas. All participants were principals or teachers prior to and following the implementation of a four-day school week.

To ensure anonymity, each participant was provided a data code corresponding to their position or role within the school. For example, the first principal interviewed was coded P1, the second principal as P2, and so on through P7. Teachers were assigned similar data codes with designations of T1, T2, and so on through T7.

### *Principal Responses*

The purpose of the seven interviews with school principals was to examine their perceptions of the four-day school week's impact on teacher morale, finance, student discipline, student achievement, and overall attendance (both teachers and students). Principals were asked a series of semi-structured interview questions through a virtual interview. Interviews were transcribed and sent back to the principals to check for accuracy. These interviews serve as the primary data for Research Question 5.

**Principal Interview Question One.** What was the rationale for the adoption of a four-day school week in your district?

Allegretto (2016) believed that benefits, such as an additional day off to teachers per week, could attract and retain teachers. The majority of the principals interviewed believe this, with six of the seven principals citing teacher retention as the driving force behind implementing a four-day school week. Only one of the principals interviewed stated financial reasons as the rationale for implementing the four-day week.

The need to attract and retain quality staff was the overwhelming theme stated by P1, P2, P3, P4, P5, P6, and P7. Principal P5 stated the drive to implement a four-day week was to increase student and teacher attendance as well as to "entice veteran teachers from surrounding districts to apply for positions in our school." Only one principal, P6, cited financial reasons to implement a four-day week. However, P6 also noted that finances only played a minor role, and teacher retention was the driving force to implement the four-day week.

The principals shared varying levels of success in teacher retention since implementing the four-day school week. Principal P1 noted that there had been minimal turnover, and most often, when a staff member chose to leave, they were "either retiring from education or moving to another district for less of a daily commute." Principal P2 shared a similar response, "Teacher retention, since we switched to the four-day week, has been better. Our teachers are energized, excited, and really not interested in going to a district with a traditional week." Every principal commented on the increased retention rate of teachers and attributed this increase to the four-day school week and the effect the implementation had in promoting a higher level of job satisfaction for teachers.

Principal P3 noted an increase in teacher retention since implementing a four-day school week. In the years before the transition to a four-day week, P3 indicated that it was a "struggle to get teachers to apply for our jobs and veteran staff would seemingly leave for better opportunities and benefits in larger districts." Principal P4 shared similar experiences prior to transitioning to a four-day week and stated since implementing the new model:

> Teachers prefer to stay even though they could make more money in larger districts. They prefer the four-day week over a raise in salary, from what I can tell. Larger districts may have more money, but we can offer a day off a week for mental wellness, family time, etc. It has been a game-changer!

Principal P4 cited specific examples of staff staying even though other, higher-paying jobs were available. Staff retention, according to P4, has increased following the implementation of a four-day week.

One note of caution was mentioned by P1 regarding possible stressors during the first year of implementation and fitting the curriculum into a reduced number of days. Principal P1 and P7 both found a decrease in teacher retention following the first year, mainly attributed to the stresses the staff encountered. However, following the first year of implementation, P1 and P7 did note a gradual increase in the teacher retention rate.

**Principal Interview Question Two.** What differences, if any, have you noticed in teacher morale since implementing a four-day school week?

All principals noted a positive impact regarding teacher morale since the implementation of a four-day school week. These results reflected research from Turner et al. (2018a), who found 91% of teachers who responded to their survey favored working in a district that utilized a four-day school week, and improved morale was a reason for continuing to work in that district (p. 59). One principal shared mixed results, noting it as a positive overall and that the implementation was a struggle in the first year. Common themes that emerged from these interviews included additional family time and active engagement in professional development offerings.

Principals used a variety of tools to gather information from their staff, including surveys, discussions, and observations. Principal P1 noted that with the additional day off each week, teachers get more family time, encouraging teachers to "give their all the four days they are at school." However, P1 noted the additional stresses associated with the four-day week, including fitting all instruction into only four days. Principal P1 reported that "the first year was stressful for teachers attempting to fit their curriculum into four days and make sure everything was covered and taught effectively." P1 also shared that once the first year had passed, morale seemingly increased. Principal P1 attributed this increase to teachers having already modified their curriculum to the four-day school week during the first year. In the second year, teachers were only required to "fine-tune" their classroom instruction.

Principals P2, P3, P4, P5, P6, and P7 all noted positive results from teachers. Principal P2 shared, "Teachers are more positive and seem to be more engaged in our professional development," which led to teachers trying new strategies in their classrooms. Principal P4 shared similar sentiments noting, "Teachers are more positive, engaged, and willing to try new things," as evidenced by classroom observations and surveys. Principal P6 noticed teacher buy-in occurred quicker than in years before the implementation of a four-day week. This principal believed the buy-in to be impacted by a positive atmosphere in the building and the staff feeling more support from district and building administrators since the transition. Principal P7 shared, "Teacher morale has been the highest I have ever seen in the building. Teachers feel rested and that they finally have time for family and mental wellness."

**Principal Interview Question Three.** What changes in student morale have you noticed since implementing a four-day school week?

All principals noted a positive impact on student morale since the implementation of a four-day school week. None of the principals interviewed believed the four-day week harmed student morale. The common rationale for improved student morale was the additional day off each week; however, principals shared other reasons.

The majority of responses from principals were based upon direct observation of students in classrooms and hallways. Principal P1 shared, “Students are genuinely happy to be at school. They don’t seem to get on each other’s nerves,” and that in previous years, at least by later in the week, students were ready to fight or seemed “too exhausted” to be engaged in classroom activities. Principal P6 noted a similar impact on student engagement, sharing, “Students seem more alert and interested in the four days than they did spread out over five. There are also fewer absences with another day for appointments.” Principal P7 noted a positive change in student behaviors towards the end of each week by sharing, “Students seem to be more rested and able to be engaged throughout the week, including Fridays!”

Other principals, such as P2, P4, and P5, noted the positive student morale in other areas as well. Principal P5 shared:

> Students have positive feelings about the extra day added to their weekend when practices and games are scheduled in the late afternoon or evenings on those days. Our high school students like the extra day to work. They feel it gives them an added edge when applying for jobs because they can work that extra weekday.

Principal P4 shared a similar observation but added, “Students have claimed to have more time for jobs, activities, and other extracurriculars, which keeps them engaged in school.” Principal P2 noted that the extra day off gives students in multiple activities, enrolled in honors or dual credit classes, or who choose to work a breath of fresh air and time to work on their needs.

Only P3 shared a non-impact statement, stating, “I have heard from middle school and elementary teachers that there really isn’t an impact on student morale” in their respective buildings. Principal P3 believed this was due to students not holding jobs or enrolling in advanced classes at the lower levels as high school students might. However, P3 noticed that students are generally happier at the high school level, specifically to have more time for work and activities outside the classroom.

Principal P7 did note one concern among students following the implementation of a four-day school week. Principal P7, while noting the positive changes in some students, voiced concern for at-risk students academically and socially with eliminating one school day a week. Principal P7 explained further:

> While for most of the student body, a four-day week is beneficial, I do question the effectiveness of losing one day a week for at-risk students. With some of our students, it is taking away one day of the only positive influence these students have, or even eliminating a breakfast and lunch for these students. I just wonder how we can better see to those students needs during a four-day week.

P7 noted the challenge some of these students experienced adjusting academically to the first year’s four-day week. Another concern voiced by P7 for this group of students was

feeling more stressors at home for more extended periods and not feeling "refreshed" on Tuesday mornings.

**Principal Interview Question Four.** Do you believe the four-day week has had an effect on your working conditions? Why or Why not?

All principals noted a positive impact in the area of working conditions since the implementation of a four-day school week. The theme of increased family time was noted in multiple interviews. Another emerging theme included additional planning time for meetings as well as a spread of positivity due to higher staff morale.

Principal P1 shared a personal example of how the four-day week has influenced the working conditions for their building by noting, "I have utilized the 'Monday off' to catch up on work and plan for the week ahead. This helps me to feel fully present for my family on the weekend." The increased family time noted by P1 has created a positive effect on the building with teachers as well, according to P1. Principal P3 shared a similar reaction to the four-day week, explaining, "We all have more time with family and another day to plan and to get caught up on work without losing time with family on the weekend." Principal P6 noted the additional time for planning and professional development for administrators and teachers and shared, "Personally, I feel better having the day off to plan or for professional development and meetings. I can't imagine going back to a district with a five-day schedule."

The positive effect of increased planning and family time on teachers seemingly created a ripple effect on the building. The positivity from teachers has spread to the students, as shared by P2, "It [four-day week] has made a positive learning environment for kids because teachers are more positive." Principal P4 explained a similar response to

the four-day week, “Teachers and staff are more positive, which leads to our student body being more positive. Our building has been great ever since we switched.”

Principals P5 and P7 shared similar thoughts regarding the overall positive climate of the building following the implementation of a four-day week. Principal P5 noted, “I believe that teachers and students are more refreshed and ready to learn through the week and that they are more motived to get their work completed.” Principal P5 commented that change in motivation had helped students academically, even though they are in seated classrooms fewer days than other students. Principal P7 shared that overall, “students and staff are happier to be in school when they come back from their three-day break a week.” This positive climate, noted by P7, has helped in multiple areas, such as daily discipline and attendance. With students in classrooms more often, P7 concluded that it would only be a matter of time to demonstrate this effect academically.

**Principal Interview Question Five.** What savings or additional costs have the district encountered as a result of implementing a four-day school week?

All principals noted either minimal or no savings since implementing a four-day school week. None of the principals interviewed experienced any additional costs since implementing a four-day school week. A repeated theme included savings in the areas of busing and food service. Another theme that emerged was that the district’s rationale for implementing a four-day week was not to save money but to attract and retain personal.

When examining savings, some responses were brief, and very little explanation was given in some instances, such as P2, P5, and P7. Principals P2, P5, and P7 shared minimal to no savings, no additional costs, and differing explanations as to why. Principal P2 commented that they had experienced less than 1% of savings, with a similar

report from P7. Principal P5 shared the difficulties in calculating savings due to multiple variables, including differentiating fuel costs from year to year.

Principals P3 and P4 reported a similar theme of implementing a four-day week to retain and attract quality instructors. Principal P3 shared, “We have had very minimal if any savings, but we were prepared for this. We did not go to a four-day week to save money. We went to a four-day week to keep and attract quality teachers.” Principal P4 shared a similar comment in that the district did not implement a four-day week for financial reasons. However, P4 noted that the district had experienced the biggest savings by not utilizing substitute teaches as often as in previous years.

Principal P1 reported the district’s largest savings in the areas of transportation costs and a small amount in the salaries of bus drivers and kitchen staff. This principal also indicated some savings in the area of substitute expenditures. Principal P6 shared a similar response, stating the largest savings the district experienced were in the transportation department. Principals P1 and P6 concluded those results were due to eliminating one day of fuel costs, bus driver route pay, and not requiring the kitchen staff for one day a week.

**Principal Interview Question Six.** Has discipline been impacted by the implementation of a four-day school week? If so, how?

To this question, all seven principals noted a decrease in the severity and frequency of student discipline. None of the principals interviewed found increased student discipline following the implementation of a four-day school week. Common themes that emerged from the principal interviews included the preservation of instructional time in classrooms and decreased student burnout by the end of the week.

All principals interviewed felt the four-day school week has impacted the amount of discipline they attend to over the year. Principal P1 shared that the four-day week has had a positive impact on student discipline since implementation. P1 shared an illustration, “It seems fewer kids were sent to my office over the last three years than in the previous three years,” although P1 had no quantitative data to show as evidence. Another example was P5, who shared that the frequency and severity of student discipline decreased dramatically. Principal P5 added that the four-day school week had added discipline options that would be impossible to utilize in previous years by having students attend school on Monday when staff is on campus for professional development. Principal P5 stated, “I have the option of assigning ‘Monday’ detention for students who need to make up time. This could be assigned for suspension or for multiple absences.”

Principals P2, P4, and P7 shared that more teachers are attempting to protect instructional time, creating an emphasis on engaging strategies within the classroom. Principal P4 shared, “Instructional time is more ‘sacred’ than in years past, forcing teachers to use more engaging strategies to keep students hooked and in the classroom.” Principal P4 added, “Students generally do not want to leave the classroom in fear they might miss something fun.” A similar sentiment was shared by P2, who noted that instructional time was “protected” by teachers and added that there was less time for students to be off-task throughout the day. Finally, P7 said that teachers utilize professional development more effectively, increasing the amount of “engaging” activities in classrooms. Principal P7 explained that students engaged in the classroom do not have as many chances to be off-task or cause disruptions. Principal P7 continued, “I have also witnessed students who want to be in classrooms enforcing classroom

expectations on students who become a disruption. They honestly want to keep the class moving and focused on the topics."

A decrease in student burnout or stress was noted by P1, P3, P5, and P6. Principal P1 stated, "Students don't seem to get on each other's nerves" by the end of the week since the district implemented the four-day week. Principal P1 attributed the decrease in student stress and inappropriate behavior to having more time for work, family and friends, and other activities. Other principals, such as P3, P5, and P6, added that students seem more "focused" in the classroom and not as stressed. Principal P5, however, noted that this could be due to more engaging and hands-on teaching strategies utilized in classroom instruction. Therefore, it was hard to discern whether the four-day school week or engaging instructional strategies played a role in decreasing student discipline incidents.

**Principal Interview Question Seven.** How have student attendance rates been impacted since the four-day week has been implemented?

This question provided various responses, including no perceived change, an increase in student absences, or a decrease in student absences. One of the seven principals interviewed noted an increase in student absences, but this increase was attributed to COVID-19 throughout 2020–2021. One of the seven principals interviewed observed no change in student attendance. Five of the seven principals interviewed reported a decrease in student absences since implementing a four-day school week.

Principal P5 noted an increase in student absences for the 2020–2021 school year, as measured by the Missouri 90/90 rule, which requires 90% of students to be in attendance 90% of the time or better (MODESE, 2021c, p. 3). Although, P5 explained

this increase could be due to COVID-19 and the precautions taken by schools and families. During the 2020–2021 school year, families were instructed to keep students at home if the students did not feel well or had a fever. Before the 2020–2021 school year, P5 shared that attendance was trending positively for the school since implementing the four-day school week.

Principal P1 reported no change in student attendance since implementing the four-day school week. When asked to explain this further, P1 shared that attendance is "fairly consistent" regardless of the number of days students are in school each week. Principal P1 continued, "The building is yearly around 94% to 96%, and this really hasn't changed since we switched." Finally, P1 felt as though the attendance factor of the four-day week was often overstated: "We will always struggle with some kids and their attendance, whether we are in school for four days or five days."

Principals P2, P3, P4, P6, and P7 reported decreased student absences since implementing the four-day school week. Small, marginal, or minimal decreases in student attendance were reported by P2, P3, and P4, respectively. P2 noted, "Students will always have absences, but we had a small decrease in student absences," and supported this statement by explaining that in previous years, during the five-day school week implementation, the district average daily attendance (ADA) was typically between 89% and 91%. Since transitioning to a four-day school week, the building's ADA had increased to 93%. Principal P3 shared a similar increase in attendance and attributed the marginal gain to "students and families scheduling appointments on the Monday off." This principal shared the building's ADA has increased from 94% during the five-day

school week to 95% following the implementation of the four-day school week. Principal P4 shared similar results as P2 and P3 for the same reasons as P3.

Principals P6 and P7 noted significant increases in student attendance following the implementation of a four-day school week. According to P7, the building struggled to maintain an ADA around 85% as measured by the 90/90 rule. Once the four-day school week was implemented, the school's ADA increased to "over 90% for the first time the second year of the four-day week." Principal P6 shared similar results as P7, stating their building has broken the school's attendance records for "two straight years" following the implementation of the four-day school week. Principal P6 shared that the attendance has been around 95% or higher since implementing the four-day week. Principals P6 and P7 attributed these gains to the four-day school week and the districts' efforts to educate parents on the importance of attending school daily.

A common subtheme discovered among the principals as they explained their schools' increases in daily attendance was due to parents and students scheduling appointments on the scheduled day off. Principal P3 shared, "Parents are actively taking advantage of our Mondays off to schedule regular appointments that would normally take a student out of a class." P4 noted, "Appointments for therapy, going to the orthodontist, or other appointments that can be made ahead of time, are being made for Mondays" which limits student absences during instructional time. Principal P2 repeated a statement from earlier in the interview to reflect this subtheme, "Regardless of how many days a week students are in school, there will always be groups within the student body that push the limits of attendance." Due to these groups within the schools, the improvements in attendance will vary, according to P2.

**Principal Interview Question Eight.** Due to the implementation of the four-day school week, were any modifications needed to your attendance policy? If so, what was changed?

To this question, three of the seven principals did not change their attendance policy following the implementation of a four-day week. In comparison, four principals noted a policy change was required. The most common policy modification included reducing the number of days a student can miss a year. This change was seen as a necessary policy change due to the reduction in student instructional days. Principal P1 explained further, "When students miss a day of school in the week, they miss 25% of the instructional week. This time lost is more significant because they don't have as much time in class as they used to." A similar statement was shared by P7, who continued, "The time lost if a student is absent is crucial. That is why we have placed such an emphasis on good attendance" since transitioning to the four-day week.

Principal P3 described the change in the district's attendance policy as simple math:

> Our first step in our attendance notification system alerted us when a student was at six absences. This was a great number when the district calendar was at 170 days of instruction. But we are now at 146 days with students. Missing six days is already 5% of the year and is too late in my opinion for a first notification. We made the decision to change it to three days for a first alert.

Other principals, such as P5, indicated a similar change within their district of decreasing the number of days students could miss. However, P5 added:

> We require students to have 90% attendance to participate in extracurricular activities. We had to make some adjustments and add an appeals process because it is very easy to fall below the 90% cut-off at the beginning of the year.

The appeals process allows students a chance to justify absences in order to maintain their eligibility in the case of extenuating circumstances.

Principals P2, P4, and P6 noted their district and school policies remained the same following the transition to a four-day school week. Principals P4 and P6 noted they recognize and focus on rewarding attendance as they did during the five-day week, including incentives for perfect student attendance at the semester and the end of the year. Principal P2 explained, "We have not changed our policy, and we have still seen an increase in student attendance." Principals P2, P4, and P6 commented that they still contact parents and juvenile offices at various and specific steps according to policy to address excessive student absences.

**Principal Interview Question Nine.** Have you noticed any changes to teacher attendance patterns since the implementation of the four-day school week? If so, how do they differ?

All of the principals interviewed noted a change in teacher attendance patterns, and all noted positive changes regarding teacher attendance. Responses from principals varied from a marginal improvement to a significant improvement. None of the principals interviewed indicated a decrease in teacher attendance following a four-day school week implementation.

Principals P1, P3, P4, P5, and P7 noted significant increases in teacher attendance following a four-day school week implementation. Principal P1 shared, "Teacher

attendance is definitely increased! I don't get as many early morning emergency calls for subs as I used to." As evidence of this increase in teacher attendance, P1 shared a review of substitute expenditures. This review showed a decrease in substitute expenses since the district implemented a four-day school week. Principal P4 reiterated a statement from a previous question, "Teachers can now take the time to schedule appointments on Mondays not to miss instructional time. Again, instructional time is now 'sacred' and used in that way. Teachers realize this and do not want to miss." Principals P3 and P5 shared similar thoughts as P4, but P5 added that appointments still become an issue during the second semester. P5 explained, "When you use your days off as weather make-up days, we would use a lot of subs on those days, as many teachers had appointments scheduled." Principal P7 noted that in previous years, Fridays were the some of the busiest days for subs and attributed this to "mental exhaustion at the end of the five-day week" for teachers and staff. Since the implementation of the four-day week, P7 noted the Friday routine of requesting subs has decreased, in large part because "teachers are mentally rested and prepared to stay sharp throughout the week."

Principals P2 and P6 indicated a marginal, or slight, increase in teacher attendance following the implementation of a four-day school week. Principal P2 stated that the number of teacher absences was "underwhelming" and thought there would be a more significant impact based upon independent research. Principal P6 commented, "Some appointments just cannot be made on Mondays. And when you're sick, you're sick regardless of the day of the week." Both principals believed teachers were attempting to schedule appointments on Mondays, but overall, the transition did not make a significant increase in teacher attendance.

### *Teacher Responses*

The purpose of the seven interviews with teachers was to examine their perceptions of the four-day school week's impact on teacher morale, finance, student discipline, student achievement, and overall attendance (both teachers and students). Teachers were asked a series of semi-structured interview questions through a virtual interview. Interviews were transcribed and sent back to the teachers to check for accuracy. These interviews serve as the primary data for Research Question 6.

**Teacher Interview Question One.** Has the four-day week influenced your desire to remain at this school district, either positively or negatively?

To this question, the most common theme was the four-day week was a positive change for teachers. Six of the seven teachers interviewed reported a positive work environment since the transition, with three of those six clearly asserting they would not want to return to a five-day school week. Only one teacher commented that the four-day week had not impacted their desire to remain with their current district. None of the teachers interviewed indicated a negative effect on their willingness to stay with their school district.

Teachers T2, T3, T4, T5, T6, and T7 noted a positive change in the work environment since implementing a four-day school week, which influenced their decision to stay. Teacher T2 explained the extra day off was used for planning for the week, which allowed for more time at home over the weekend to spend with family and friends. Teacher T4 shared similar thoughts as T2 but added that the extra day of planning was beneficial due to the longer instructional days. Teacher T5 explained, “I really enjoy the

four-day week. I can use Mondays to catch up, and I have the opportunity to schedule personal appointments on Mondays."

Teachers T3, T6, and T7 further indicated their desire to continue working for a four-day district over a five-day district. Teacher T3 commented that their family schedule has been adjusted to fit the four-day school week, mentioning, "It would be extremely difficult for me and my family to return to a traditional five-day week." Teacher T6 shared a similar statement regarding family priorities and asserted, "I would definitely choose to work for a district that is a four-day week over one that is not." Teacher T7 commented simply not wanting to return to a five-day school week, "I feel as though I wouldn't want to go back to a five-day district after working on this schedule." Upon further explanation, T7 stated that this was due to arranging schedules to meet the needs of their family.

Teacher T1 commented that while teachers enjoy the four-day week, it has not influenced the decision to stay:

> I have been with my district for almost three decades. One thing I have experienced that has kept me here, whether it is a four-day or a five-day school week, is the support and dedication to helping not only our students achieve success but also for me as an educator.

Teacher T1 explained that the climate has been more positive since the four-day week, and T1 attributed that to less stress for teachers and students.

**Teacher Interview Question Two.** Do you believe the four-day week has had an effect on your working conditions? Why or Why not?

The majority of teachers indicated the four-day week has an effect on working conditions at their school. Six of the seven teachers noted a positive effect on working conditions. One of the seven teachers interviewed indicated no change in working conditions. None of the teachers interviewed indicated a negative effect on working conditions since implementing a four-day school week.

Teachers T1, T2, T3, T5, T6, and T7 noted a positive impact on the working conditions at their current school. Teacher T1 explained that the four-day week has "allowed me to maintain my health appointments, or my family's on my free Monday's, which gives me peace of mind in not having to prepare for a substitute." Teacher T1 went on to say the professional development offered on Mondays is more beneficial and effective than in previous years, and now T1 has the "freedom to use my free Monday's as a day of rest or a mental health break." Teacher T5 indicated the positive impact was due to a decrease in student behaviors and explained, "Students have an extra day to themselves," which makes for easier classroom management. Teacher T5 continued by noting the four-day school week allows for more planning time without sacrificing time with family in the evening or weekends. A similar rationale was shared by T6, "I believe employees and students feel more motivated now that they have that extra day off." Additionally, T7 reported a difficult transition for the first year, but once T7 became familiar with the routine, they found themselves more productive and "reinvigorated" on Tuesday mornings.

Various teachers in their responses repeated the subtheme of mental wellness, or mental health. Along with T1, T2 shared the teachers are less stressed in the building by the end of the week, which was similar to T3, who noted they had observed less burnout

and stress throughout the school year from other teachers and themselves. Teacher T5 expressed gratitude towards their administration, who made mental wellness a priority, "We can't do a good job if we stay worn out or get burned out."

Teacher T4 indicated no significant impact on the working conditions. The only change T4 noticed is now the school day is longer, "I get to school earlier and stay later to get my work done." Teacher T4 shared they have witnessed other teachers working the same long hours and felt as though the four-day week has not changed the actual hours worked for the staff.

**Teacher Interview Question Three.** What changes in student morale have you noticed since implementing a four-day school week?

To this question, the majority of teachers interviewed noted a positive change in student morale. Six of the seven teachers interviewed mentioned positive changes in student morale. One of the seven teachers indicated a negative impact on student morale. None of the teachers interviewed noted no impact on student morale.

Teachers T1, T2, T3, T5, T6, and T7 shared a positive change in student morale since transitioning to a four-day school week. Teacher T1 believed that well-rested students are better-behaved students. In addition to being well-rested, T1 noted the extra plan time has allowed T1 to create better lessons, which promotes student engagement and focus and decreases behavior. Teacher T3 shared a similar impact on student engagement, adding that the students are just easier to work with throughout the week, and the building is overall more positive since the transition. Teacher T6 stated that students are "more relaxed and teachable" throughout the week as opposed to being burned out by the end of a five-day week. Teacher T7 reported a similar observation as

T6 by noting the students seem to "keep chugging along" with the knowledge that there are only four days in the school week as opposed to five.

Teacher T2 observed a positive impact on student morale but noted that students "don't get on each other's nerves as often" since the transition to the four-day school week. When asked to explain this further, T2 shared:

> In previous years, by the end of the week, my students were annoyed with each other, and drama between students always was at the highest by the end of the week. I think this happened because students didn't have a chance to relax and take time to get away from each other and were stressed out, just as I was.

Teacher T2 concluded by reporting the four-day school week has definitely had a positive impact on students and staff alike.

Teacher T4 indicated a negative impact on student morale. Teacher T4 started by sharing the students like not having school on Mondays; however, the students disliked the scheduling of extracurricular activities. According to T4, since implementing a four-day school week, practices have been scheduled later in the day to accommodate the longer school day. A similar impact has been associated with the scheduling of athletic events and other after-school activities. As T4 indicated, "Students don't get home until seven at night, and then still have to do homework. Game nights are even later." Teacher T4 would like to see this change but could not offer a solution at the time of the interview.

**Teacher Interview Question Four.** What impact do you think the four-day school week has had on student learning within your building?

The majority of teachers interviewed indicated a positive impact on student learning. Five of the seven teachers shared that the four-day school week has positively influenced student learning. Two of the seven teachers noted no significant impact on student learning. None of the teachers shared a negative impact on student learning since the transition to a four-day school week.

Teachers T1, T2, T3, T4, and T5 shared positive comments on the four-day school week's impact on student learning. Teacher T1 noted their building administrative team had shared reports "demonstrating growth" in student academic achievement. Teachers and building administration used these reports to be intentional with teacher professional development and focus on areas of low achievement. Teacher T3 shared a similar observation as T1 by seeing reports of student academic growth and continued, "I am sure there are some students still struggling academically, but I have not seen evidence of that in my classes." Teacher T5 described the positive impact on student academic achievement might have a correlation with the rise in student attendance, "Because students tend to be absent less, they are able to be here at school learning more."

Teachers T2 and T4 reported similar positive observations to student academic achievement as T1, T3, and T5. However, a different subtheme emerged from the interviews with T2 and T4 who noted students were more engaged due to more focused lessons. Teacher T2 shared students were more focused and engaged in the content by the elimination of "content and lessons that were simply not needed" in the classroom. This allowed T2 to create engaging and hands on lessons, which has resulted in the benefit of more focused students throughout the week. Teacher T4 shared a similar comment and

noted the students have more time in the classroom which provides more opportunities to work with the directly with the teacher and allow "more hands on" learning of the material.

Teachers T6 and T7 indicated a negative impact on student learning. Teacher T6 shared, "Student learning has not gotten worse, but it also test scores haven't gone up a ton" since the implementation of a four-day school week. Teacher T6 believed a lack of rigorous classroom assessments could be the cause of this discrepancy. Teacher T6 continued, "Students appear to be retaining more content in the classroom, but the results do not show up on benchmark assessments." Teacher T7 shared a similar comment regarding the negative impact, but mostly concerning younger students:

> Routine is always the key for younger students. Sometimes it is hard for the little ones to adjust to the four days on, three days off because there may not be that structure at home. The first day back for little ones is usually spent relearning how to be in school, which takes away from their learning time.

The loss of learning time on the day students return from their break is what is causing the negative impact on student academic achievement, according to T7. Teacher T7 noted that older students do not seem to be as affected by the loss of an instructional day.

**Teacher Interview Question Five.** How do you think the change in the length of the school day has affected students?

To this question, the most common response indicated no significant change or effect on students. Six of the seven teachers interviewed shared no perceived impact on students. One of the seven teachers indicated a negative impact on students. None of the seven teachers interviewed described a positive impact on students.

Teachers T1, T2, T3, T5, T6, and T7 noted the longer school days had no significant change or effect on students. Teacher T1 shared:

> I believe that how you use the time is important. For example, in the morning, pre-pandemic, we had students either going to breakfast or the gym to walk, sit and visit, or read while kids played appropriate music. When breakfast kids met in the gym with the others, we did the pledge, announcements, and positive shout-outs. When the pandemic happened, we still had breakfast kids going to the cafeteria and non-breakfast kids to classrooms where they could read, catch up on work, etc., until our principal did the pledge and announcements over the intercom. At the end of the day, we had our RTI time for all students until we dismissed. It did not seem like the extra 15-20 minutes made it seem longer for them or for myself because we were busy with a purpose.

Teacher T2 shared a similar outlook on the extra time for students, noting that students seemed to be more preoccupied with not being in school on Mondays that they had not noticed the change in length. Teacher T6 shared a similar description as T2 stating the longer school day as having no effect on students, “They like having four days more than the traditional five, so they get used to the longer days fairly quickly.”

Teacher T3 described the professional development offered to staff has been useful to staff and students since the transition to a four-day school week. The professional development, as shared by T3, has been designed to address the unique needs of students in longer school days and class periods. The focus of these professional development offerings includes instructional strategies such as brain breaks and active engagement methods to increase student engagement. Teacher T7 shared similar

perceptions as T3, noting the professional development of the district has been directed towards addressing student engagement. Teacher T7 continued, “Active engagement strategies keep the students focused on the content and not on the time. I feel if we continued to teach as we did in the five-day week, our students would be bored to tears.”

Teacher T4 commented on the negative impact the longer school day has had on students. Teacher T4 first indicated no impact on students, “As stated earlier, students and teachers like having shorter weeks.” However, T4 did note the problematic scheduling of practices and events caused by the longer school days forcing these events to be later in the evening. The later scheduling causes students to get home later in the evening with less time to complete assigned coursework.

**Teacher Interview Question Six.** Have you had to adjust your daily learning expectations to accommodate the four-day school week? If so, how?

The majority of teachers interviewed noted that they had to adjust their daily learning expectations following the four-day school week. Five of the seven teachers interviewed indicated they felt the need to adjust their daily learning expectations. Two of the five teachers did not feel they had to change or modify their daily learning expectations.

Teachers T1, T2, T3, T4, and T5 commented on the adjustments they had to make to their daily learning expectations following the implementation of a four-day week. The most common response was the need to alter learning expectations to adjust for the changes in instructional time. Teacher T1 shared they had to “learn how to manage my time more effectively” upon transitioning to the four-day week. Teacher T3 revealed their

attempt to eliminate “fluff” from lessons and units in an effort to “focus in on what is the most important pieces of my curriculum.”

Adjustments incorporated by T4 included a similar process of eliminating unnecessary items from the content as well as the philosophy of no tests on Tuesdays. As T4 shared, “Students have had a three-day weekend to forget all of the information” so to be more successful, Tuesdays are a day to review content prior to an assessment. Teacher T5 noted a sense of urgency and intentionality in their planning in order to cover all required material.

Upon further analysis, a subtheme of a struggle to adjust to the four-day week was noted by T2, T3, and T5. Teacher T2 explained the loss of an instructional day in addition to longer class periods was a challenge the first year. Similarly, T3 shared the loss of an instructional day was a struggle at first, “Friday gets here fast.” Teacher T5 stated the loss of the instructional day was extremely difficult the first year, and they had to learn how to be “more intentional with planning” to address all standards and required content in the class. Teacher T5 made a similar comment as T3 in “Friday gets here fast.”

Teachers T6 and T7 indicated no change was necessary while transitioning to the four-day school week. Teacher T6 shared expectations remain high in the classroom, “I still expect all work to be completed by the due dates. If anything, I am stricter about that.” Teacher T7 described a similar assertion as T6, “I haven’t had to adjust what I expect my students to know.” Both T6 and T7 viewed the restructuring of class time as a purely format adjustment and not an alteration of learning expectations. Teacher T6 continued, “We cover the same material and the same subjects in the same amount of

time.” The only difference noted by T6 is the days are condensed into four rather than five.

**Teacher Interview Question Seven.** Has your discipline been impacted by the change to the four-day school week? If so, how?

To this question, various responses were given, with the majority indicating a positive impact on student discipline. Four of the seven teachers interviewed shared a positive change in the area of student discipline. Three of the seven teachers noted no significant impact on student discipline. None of the teachers interviewed shared a negative impact on student discipline.

Teachers T1, T2, T5, and T7 indicated the four-day school week had a positive impact on student discipline. Teacher T1, as in previous responses, praised the district’s professional development offerings in the assistance of a decline in student discipline in the building. Teacher T1 explained, “Because the professional development is more effective, collaborative ideas and committee communication has provided ways to help our teachers with more support.” Teacher T2 attributed the decrease in student discipline to providing more engaging and active lessons that the students do not want to miss. Teacher T5 explained they had experienced fewer discipline issues due to students feeling refreshed and less stressed by the end of the shortened week. Teacher T7 indicated they had seen students in the office less following the transition to a four-day school week.

Teachers T3, T4, and T6 shared they had not witnessed any significant change in student discipline. Teacher T3 asserted that discipline was never an issue during a five-day week, and therefore has not been a problem during a four-day week and has had “no

impact on my classroom." Teacher T4 stated, "I have not noticed a significant difference" in student discipline in their building and indicated discipline has remained the same in their classroom but was unsure of the rest of the building.

A common response to this interview question regarding student discipline was that seven teachers interviewed shared they did not feel the need to adjust expectations in the classrooms to address student discipline. Teacher T1 explained, "I haven't really changed how I discipline students. I continue to review and teach expectations and procedures to students. I just do it over four days instead of five." This was shared by T2, who explained, "Honestly, I have addressed discipline the same as I did while teaching five days a week." The most notable change in discipline structure was noted at the building level and not the classroom level, as indicated by T7. Teacher T7 revealed the four-day school week had given district and building administrators the opportunity to assign students Monday school as a consequence.

**Teacher Interview Question Eight.** Is there any comment you would like to make about the four-day school week that you believe would be pertinent to this research?

All teachers interviewed shared their personal comments regarding the four-day school week. Teacher T1 stated:

> Given the opportunity to work in both a four-day and five-day workweek, I sincerely appreciate having both experiences. I do believe that no matter how many days I teach, that my expectations nor the expectations of my students should be lessened. I do, however, appreciate my four-day work week just because I believe it has helped me professionally be able to manage what my

> students and families need and importantly, with all that is going on in, not only in education but our world, mental health for all stakeholders is needed. I value and appreciate the training my district provides and the day given for my families, students, and myself to benefit in this area.

Teacher T2 shared, “I love the four-day week and will only look to teach in districts that use this model for the rest of my career.” Teacher T3 shared, “If first responders and other professionals and workers can utilize a four-day week effectively, then education should not have an issue. The traditionalists do not like it because it is different, but different can be a good thing.”

Teacher T4 reported, “I have enjoyed the four-day school weeks thus far. But it can be harder to fit in the same amount of information into fewer days of learning.” Teacher T5 said, “I feel like the four-day week is beneficial for teachers, students, and families.” Teacher T6 declared, “The biggest thing is that I believe the extra day off gives teachers a chance to be better in their mental game during the four-day weeks.”

Teacher T7 explained:

> I definitely think kids are hungry at the end of the long day, so if your school participates in an after school snack or supper program such as CACFP (Child and Adult Care Food Program) there needs to be a study period at the end of the day K-12 to pass out meals/snacks before kids get on buses to go home.

Teacher T7 noted the school participates in a snack program to make sure students are not as hungry at the end of the longer school day.

### *Emergent Themes*

Perspectives of principals and teachers were mostly aligned and various themes were produced as a result. While subthemes emerged within each separate group, several themes were noted and shared between the groups. These themes included an improved building or district morale and climate, additional time, decreased student discipline incidents, and more engaging teaching strategies.

**Improved Morale and Climate.** The most overt similarity was the overall positive impact noted by both principals and teachers. Principals and teachers also shared the same perspective regarding the positive impact the four-day school week has had in the area of district or school morale and overall climate. Principals were quick to note the focus on teacher retention as the catalyst to implementing a four-day week, while teachers shared their preference to seek employment only in a district that implemented a four-day school week due to the positivity that resulted from implementing a four-day week. Both principals and teachers attributed an improvement in overall student morale as having a positive effect on the building climate. Teachers claimed students felt empowered and given an advantage over students enrolled in five-day school weeks when applying for jobs. Another rationale given for the improvement in staff and student morale was less stress due to more time with family and friends and for teachers, more time to collaborate and plan effective lessons.

**Additional Time.** The most common reason attributed to the positive impact was the additional time to plan as well as time with family. Multiple principals and teachers noted the additional time to plan and collaborate had increased their effectiveness as educators. Teachers shared that the added time was also a positive for students, who

seemed more rested and less stressed. Additional time with family was shared by several participants and was noted as a reason to stay employed in a district that implemented a four-day school week. The additional time with family allowed principals and teachers an opportunity to balance work and home more efficiently, which many attributed to a possible decrease in educator burnout.

**Decreased Student Discipline Incidents.** The four-day school week was perceived to have a positive impact in the area of student discipline as noted by both principals and teachers. There were various rationales as to why discipline incidents decreased. The most prevalent rationale was that students experienced less stress throughout the week, which equated to less burnout by Friday and more student engagement throughout the week. Another rationale credited the decline in student discipline to more engaging lessons and strategies utilized by teachers. Teachers spent the additional plan time eliminating tedious and unimportant lessons in an effort to focus on the important topics, which resulted in students becoming more interested in the classroom.

**Engaging Teaching Strategies.** Another common theme expressed by both groups of participants included development of more engaging teaching strategies to motivate students to stay in classrooms. Both principals and teachers noted the increased offering of professional development opportunities focused on engaging classroom strategies. Such professional learning was seen as a necessity when transitioning to a four-day school week as the days are longer, but a full day a week is eliminated. Teachers noted a willingness to try new things in order to keep students engaged, while principals

shared that teachers were more motivated to utilize skills learned in professional development in an effort to increase student learning within the abbreviated week.

**Summary**

This mixed-methods study was designed to determine the impact of the four-day school week on student academic achievement. The comparison included student performance data provided through MAP assessments before and after implementing a four-day school week, along with examining principal and teacher perceptions of four-day school weeks. Through analysis of interview responses, insight was gained regarding the four-day school week and the impact on student academic achievement, teacher morale, finance, student discipline, student achievement, and overall attendance (both teachers and students).

Chapter Five includes the findings of this study. The six research questions are revisited, and conclusions are drawn. Implications for practice are addressed, and recommendations for further research concerning the four-day school week are presented.

# Chapter Five: Conclusions and Implications

According to Turner et al. (2018a), the approach to addressing the length of the school calendar in American public schools remains stagnant, even in the face of the constant need for innovative strategies to address the ever-changing dynamic of family structures, information, technology, and student learning. The approach of incorporating a four-day school week, while not new, has gained in popularity in rural districts for a myriad of reasons, including finance and a perceived positive impact on student academic achievement (Hewitt & Denny, 2013; Turner, 2018a; Thompson et al., 2020). Anglum and Park (2021) noted that the research on the impact on student academic achievement in four-day school weeks remains mixed and requires more study.

The purpose of this mixed-methods study was to assess the overall impact of the four-day school week by collecting student achievement data along with the perceptions of principals and teachers. To measure student academic performance, quantitative data from MAP scores in the areas of 7th-grade and 8th-grade ELA and math prior to and following the transition to the four-day school week were analyzed. Perceptions of principals and teachers were gathered to determine the perceived impact of the four-day school week in the areas of teacher morale, finance, overall attendance (student and teacher), and discipline. The answers to the research questions that guided the study are found in this chapter. Corresponding data are provided to support these findings. Conclusions, implications for practice, and recommendations for future research regarding the impact of the four-day school week on student academic achievement are also provided.

## Findings

This study was designed to answer six research questions. Data from each portion of the study were then analyzed to understand the real and perceived impacts of the four-day school week. In the subsequent section, the findings are summarized. These findings are then applied to the six research questions, in addition to supporting literature from Chapter Two.

As the primary indicator used to measure student academic performance in Missouri school districts, MAP testing is an important tool to diagnose student progress towards mastery of the Missouri Learning Standards (MODESE, 2021). To determine the impact of the four-day school week on MAP performance, the composite score data of students performing at a proficient or advanced level in 7th-grade and 8th-grade ELA and math in six Missouri school districts were analyzed prior to and following the implementation of a four-day school week. Data from three years prior to the transition and two years following the transition to the four-day school week were averaged to discover if a difference in MAP scores occurred. All of the districts analyzed implemented a four-day school week beginning with the 2017-2018 school year.

### *Research Question One*

*What difference, if any, exists between the MAP math scale scores of 7th-grade students who attended a school that implemented a transition from being in session five days per week to four days per week?*

Data were collected on students who scored proficient or advanced on 7th-grade MAP ELA for six school districts that implemented a four-day school week beginning with the 2017-2018 school year. Three years of data prior to the implementation and two

years following the transition were compiled and averaged, producing a difference in the mean of students scoring proficient or advanced that ranged from a decrease of 14.62% and an increase of 8.92%. Four districts experienced a decline in students performing at a proficient or advanced level in 7th-grade math following the implementation of a four-day school week. Conversely, two of the six districts increased 7th-grade student academic performance, as indicated by the MAP math assessment. Through a *t*-test performed on the available data, it was determined the difference was not statistically significant. Studies completed by Turner et al. (2019) and Morton (2018) supported the results indicating a four-day school week has no significant impact on student academic achievement.

***Research Question Two***

*What difference, if any, exists between the MAP math scale scores of 8th-grade students who attended a school that implemented a transition from being in session five days per week to four days per week?*

The data analysis resulted in a difference in the mean of students scoring proficient or advanced in 8th-grade math ranging from a decrease of 6.55% to an increase of 27.50%. Four of the six districts in the study experienced an increase in student academic achievement as indicated by the percentage of students at a proficient or advanced level. One district experienced a decline in student academic achievement following the implementation of a four-day school week. One district reported no scores in 8th-grade math for the three years prior to the implementation of a four-day school week and therefore was excluded from the results. Through a *t*-test performed on the available data, it was determined the difference in 8th-grade MAP math scores was not

statistically significant. A study from 2011 completed by Hewitt and Denny corroborated these findings of little to no impact of increased student academic achievement following the implementation of a four-day school week. Morton's (2018) study analyzing student academic achievement in Oklahoma schools following a four-day school week's implementation also supported the results of no significant statistical impact.

***Research Question Three***

*What difference, if any, exists between the MAP ELA scale scores of 7th-grade students who attended a school that implemented a transition from being in session five days per week to four days per week?*

The study showed a difference in the mean of students scoring proficient or advanced in 7th-grade ELA ranging from a decrease of 23.9% to an increase 3.6%. Through a *t*-test performed on the available data, it was determined the difference in 7th-grade MAP ELA scores was statistically significant. Of the six districts analyzed, only one district saw an improvement in 7th-grade MAP ELA scores. The five other districts experienced decreases in 7th-grade MAP ELA scores ranging from a decrease of 0.01%. to 23.9%. These results are similar to Thompson (2019a), who found a negative impact on student academic achievement following the implementation of a four-day school week in 3rd through 8th-grade math and ELA. Hill and Heyward (2017) expressed a similar concern in their study regarding a decline in student academic achievement in large part from absences being more impactful.

***Research Question Four***

*What difference, if any, exists between the MAP ELA scale scores of 8th-grade students who attended a school that implemented a transition from being in session five days per week to four days per week?*

Data were collected on students who scored proficient or advanced on the 8th-grade MAP ELA for six school districts that implemented a four-day school week starting with the 2017-2018 school year. Three years of data prior to the implementation and two years following the transition were compiled and averaged, producing a difference in the mean of students scoring proficient or advanced ranging from a decrease of 26.70% to an increase 10.03%. Only one district experienced an increase in student academic achievement following the implementation of a four-day school week. The other five districts saw a decline in student academic achievement in 8th-grade ELA, ranging from a decrease of 1.37% to 26.70%. Through a *t*-test performed on the available data, it was determined the difference was not statistically significant.

The findings from this study are similar to the results found by Turner et al. (2019), which also concluded that a transition to a four-day school week had no significant statistical impact on student academic achievement. However, with five districts experiencing various declines in 8th-grade ELA, the findings from Thompson (2019a) are also supported. Thompson (2019a) concluded that there is a negative impact on student academic achievement following the implementation of a four-day school week, specifically in grades 3–8 and in the areas of math and reading.

***Research Question Five***

*What are the perceptions of school principals who are employed by a school district that implemented a transition from being in session five days per week to four days per week related to teacher morale, school finance, student discipline, and overall attendance (teachers and students)?*

All seven of the participants were current Missouri principals who had transitioned to the four-day school week within their districts. These principals were asked to give their perceptions of the four-day school week and its impact on various aspects within the building or district. All principals were asked about the rationale for implementing a four-day school week. Three additional questions were regarding school climate in an effort to gain an understanding of the impact of the four-day school week on teacher, student, and principal morale. All participants were asked to share their perceptions on the impact of the four-day school week on district finance. One question was asked about the impact of the four-day school week on student discipline and if there were any adjustments or changes following the transition. Finally, three interview questions were aimed at attendance rates following the transition to the four-day school week of both teachers and students.

All seven participants in the study perceived the four-day school week as having a positive impact on their school districts as a whole. Benefits of the four-day school week varied between each participant, but all stated at least one positive influence in at least one area of teacher morale, school finance, student discipline, and overall attendance (teachers and students). Out of the seven principals interviewed, all seven attributed the rationale for implementing a four-day school week as an attempt to attract or retain

quality staff members. As stated by P4, “Being a small, rural district, it is difficult to retain and recruit staff. The four-day week gives us an edge that the larger districts in the area cannot compete with.”

All seven principals indicated a positive influence in teacher morale stemming from implementing a four-day school week. Turner and Finch (2018) found a similar theme emerge from school districts that transitioned to a four-day week. According to Turner and Finch (2018), the increase in morale was primarily due to an increase in the amount of plan time and an increased amount of time for teacher collaboration. Principal P1 shared, “For the most part, teachers and staff seem happier and feel they get more family time which helps them give their all the four days they are at school.”

In addition to teacher morale, principals were asked how the four-day school influenced student morale. All principals interviewed noted a positive impact on student morale since transitioning to a four-day school week. Principal P6 responded, “Students seem more alert and interested in the four days than they did spread out over five.” The findings of Hanson (2017) and Israel et al. (2020) supported this claim; they found that students’ affinity for attending school increases while discipline incidents decrease. Long’s (2016) findings that 70–80% of middle and high school students favor the four-day school week over the five-day week were also congruent with the principals’ beliefs (p. 8).

The last component of student, teacher, and principal morale was analyzed using a question designed to obtain participants’ perceptions of how the four-day school week had influenced working conditions at the school or district. All seven principals noted a positive impact since the transition to a four-day school week. An example of this was

shared by P3, “We all have more time with family and another day to get caught up on work without losing time with family on the weekend.” Based upon the principals’ responses to all of the questions regarding morale, the four-day school week had a positive influence on the morale of teachers, students, and principals.

Principal perceptions were collected to examine the financial implications following the implementation of a four-day school week. All seven principals shared no additional costs were experienced by the district following the adoption of a four-day school week. The seven principals noted there was either minimal or no savings by the district following the transition. Principal P2 noted less than a 1% savings in the district budget, and P4 shared the biggest area of savings was in not having to utilize substitute teaches as often as in previous years. These perceptions aligned with Thompson’s (2019b), Griffith’s (2011), and Heyward’s (2018) findings that school districts, on average, did not experience a high level of financial savings by implementing a four-day school week.

Perceptions regarding the impact of the four-day school week on student discipline were also collected and interpreted. Of the seven principals who participated, all seven shared a decrease in the severity and frequency of student discipline following the transition to a four-day school week. Several principals noted a decrease in student burnout or stress since implementing a four-day school week, and as a result, student discipline has declined. These results align with the findings of Hewitt and Denny (2011) and Thompson (2019b), who found incidents of student discipline decreased in four-day school districts compared to five-day school districts.

The final aspect examined through principal perception data were the areas of student and teacher attendance patterns following the implementation of the four-day school week. When asked to describe the impact of the four-day school week on student attendance, one of the seven principals reported increased student absences, another principal reported no change in student attendance, and the remaining five principals observed decreased student absences. Principal P5, who reported an increase in student absences, explained this rise in absences could be due to COVID-19 and the mitigations taken by the district and families. The perceived benefit in the area of student attendance aligns with the research of Turner and Finch (2018), Heyward (2018), and Thompson (2019a), who found that students in four-day school weeks generally have better attendance rates than those in five-day school weeks.

Principals were also asked whether they had changed their attendance policies to accommodate the four-day school week. Four of the seven principals indicated a policy change was required following the transition to the four-day school week. The remaining three principals noted there was no change in their attendance policy. The principals who changed their attendance policies reported they felt it necessary to align attendance policies to reflect the new number of school days with the percentage of allowable absences. The principals who did not feel a policy change was necessary indicated they still contact parents and juvenile offices at specific steps in their respective attendance policies to address excessive student absences.

Finally, principals were asked to share their perceptions regarding teacher attendance since transitioning to the four-day school week. All seven principals indicated a positive change in teacher attendance patterns following the implementation of the four-

day school week. These perceptions aligned with the available literature from Turner and Finch (2018) and Heyward (2018), who found attendance rates generally rise for students and staff following the transition to a four-day school week. Upon analyzing the principal responses to questions about student and teacher attendance, the perception of the four-day school week was that it was beneficial in the areas of student and teacher attendance rates.

Upon analyzing the perception data gathered through the interviews of seven principals regarding the impact of the four-day school week in the area of culture, it was revealed the four-day school week had a positive effect on the morale of students, teachers, and principals. Based on principals' perceptions, the impact of the four-day school week on finance was negligible. Concerning student discipline, the perception was the four-day school week created an environment where student discipline decreased in severity and frequency. Analyzing responses to questions regarding student and teacher attendance rates revealed that the four-day school week had a positive impact on student and teacher attendance.

***Research Question Six.***

*What are the perceptions of teachers who are employed by a school district that implemented a transition from being in session five days per week to four days per week related to teacher morale, school finance, student discipline, and overall attendance (teachers and students)?*

All seven participants were current Missouri teachers who had transitioned to the four-day school week within their districts. These teachers were asked to give their perceptions of the four-day school week and its impact on various aspects within the

building. Four interview questions centered on the working conditions and student and staff morale since the transition to the four-day school week. Two additional questions were aimed at gaining insight on the impact the four-day school has had on daily learning expectations, cognitive fatigue, and student achievement. Participants were also asked a question regarding the perceived impact the four-day week has had on student discipline. Finally, all participants were invited to discuss their general thoughts regarding the four-day school week and the impact it has had on their building.

Of the seven teachers interviewed in this study, all seven noted a positive outlook regarding the impact of the four-day school week within their schools. When determining the impact on staff morale, six of the seven teachers interviewed reported a positive impact following a four-day school week implementation. Conversely, one teacher noted no impact since the transition. There was no mention of negative effects on staff morale. Three of the seven teachers interviewed indicated their desire to continue working for a school district that implements a four-day school week instead of a five-day school week. Teacher T1, however, noted the four-day week has no impact on their choice to remain with their current district but reported the working conditions have improved since the transition. Teachers overwhelmingly perceived the four-day school week as having a positive impact on their working conditions. As an example, T7 reported being more productive and “reinvigorated” on Tuesday mornings. Teacher T4, however, indicated no significant changes to their working conditions. The overall findings were aligned with research from Turner and Finch (2018) and Turner et al. (2018a), who found a benefit of the four-day school week to be improved teacher morale.

Perception data were also collected from teachers on student morale. Teachers were invited to share their opinions on perceived differences in students' behaviors or attitudes in school since implementing a four-day school week. In response to this question, six of the seven teachers indicated improved student attitudes since implementing a four-day school week, while one teacher noted a negative impact on students. Teacher T6 noted that students were "more relaxed and teachable" throughout the week, which was repeated by a host of other participants. The findings of this perception data were in line with the findings of Turner and Finch (2018) as well as Hanson (2017) and Israel et al. (2020), who found that students' affinity for attending school increases while discipline incidents decrease. Long's (2016) findings that 70–80% of middle and high school students favor the four-day school week over the five-day week were congruent with most teachers' perceptions (p. 8).

The next set of questions were designed to address teachers' perceptions of student learning following the implementation of the four-day school week. When determining the impact on student learning, five of the seven teachers interviewed felt the four-day school week offered a variety of benefits to their students. Those benefits included focused and engaging instruction, improved attendance of students and staff, and improved student and staff morale. However, two of the seven teachers noted a negative impact on student learning, including the loss of instructional time and the perception that classrooms may not be as rigorous as in the five-day school week.

The wide variety of positive and negative responses reflected the current literature concerning the four-day school week. Anglum and Park (2021) found mixed results in the area of student achievement, while Thompson (2019a) cited a negative impact on student

achievement in math and reading. Going further, Anderson and Walker (2015), Long (2016), and Turner et al. (2018a) found that the four-day school week positively impacted student academic achievement.

Going further into student learning led to the collection of perception data regarding the impact of change in the length of the school day. Six of the seven teachers shared no perceived impact on students, while one teacher noted a negative influence following the transition to the four-day school week. The theme of effective professional development appeared in these responses, noting an emphasis had been placed on instructional strategies to combat student cognitive fatigue and increase active engagement. The only negative impact reported was in extracurricular activities being scheduled later, which caused students to be home later and less time to complete assigned coursework.

An additional question was utilized to explore perception data in the area of daily student learning expectations and any adjustments teachers had to make in that area. To this question, five of the seven teachers interviewed felt the need to modify their learning expectations following the implementation of the four-day school week. The most common rationale for adjusting daily learning expectations of students was summarized by T3, who stated, "I have had to eliminate 'fluff' from my lessons, units, and curriculum in order to focus in on what is the most important pieces of my curriculum." The ability to focus on the essential elements and eliminate unnecessary elements was directly aligned with the findings of Turner et al. (2018a) and a key attribute to increased student academic achievement. Conversely, two of the seven teachers interviewed reported the four-day school week as having no impact on daily student learning expectations. Both

T6 and T7 viewed any adjustment as purely a format change and not an alteration of daily learning expectations.

One question was utilized to collect teacher perception data on the impact of the four-day school week on student discipline. Four of the seven teachers interviewed shared a positive impact on discipline following the implementation of the four-day school week. A common theme discovered during interviews regarding student discipline included effective teaching strategies impacting the reduction of student discipline incidents. Teacher T2 felt daily lessons were engaging and active, prompting students not to miss or distract others from the activity, summarized this perception. Teacher T5 believed students were more refreshed and less stressed by the end of the four-day school week. This perception data were aligned with the current literature from Thompson (2019a), who found a decline in discipline incidents in four-day school weeks compared to five-day school weeks. Hewitt and Denny (2011) reported a similar decline in student discipline in four-day school weeks.

Three of the seven teachers, however, noted no significant change in student discipline. The commonality between these three teachers included the low discipline rate prior to the transition to a four-day school week. All teachers, regardless of their perceptions of student discipline, indicated they did not feel the need to adjust expectations in the classroom to address student discipline.

The final question utilized to collect perception data regarding the impact of the four-day school week allowed all seven teachers to share any comment they felt would be pertinent to this study. All seven teachers shared a positive outlook on the four-day school week. The data collected from their responses aligned with the research findings

from Turner et al. (2018a). Turner et al. (2018) surveyed teachers employed in a four-day school week and found that 91% of respondents favored the four-day format (p. 59). Turner and Finch (2018) found similar results, and even though teachers in a four-day week work around the same number of hours as teachers in a five-day week, the four-day week format was still reported as "very attractive" to school staff (p. 13).

The responses of the seven teachers regarding the impact of the four-day school week on teacher morale, finance, student discipline, and overall attendance (teachers and students) were varied. Upon the analysis of the perception data gathered through the interviews of seven teachers regarding the impact of the four-day school week in the area of culture, it was revealed the four-day school week had a positive effect on the morale of students and teachers. Regarding the impact on student learning, the four-day school week impacted some districts while producing little to no influence in others. Concerning student discipline, the perception was the four-day school week created an environment where student discipline decreased.

**Conclusions**

Six research questions were utilized to assist in integrating quantitative and qualitative data regarding the impact of the four-day school in multiple areas (Creswell & Creswell, 2018). Conclusions were based on analysis of MAP assessment data from 2014–2019 in the areas of 7th and 8th-grade math and ELA, in addition to the responses provided by principals and teachers to semi-structured interview questions. Each of the interview questions was guided by the research questions of this study. This section includes the common themes that emerged from the analysis of the quantitative and qualitative data.

**While data analysis revealed the impact was statistically insignificant, there were differences in student academic achievement following the transition to a four-day school week in 7th-grade math MAP data.** After analyzing data collected through the MODESE website, it was determined that the transition to a four-day school week had no statistically significant impact on student academic achievement in the area of 7th-grade math. A two-tailed *t*-test was performed on the data provided, and the results showed the decrease in student academic achievement to be statistically insignificant. Overall, based on the MAP assessment data, the percentage of students performing at a proficient or advanced level in 7th-grade math dropped an average of 3.85%, with only two districts experiencing an increase in achievement. From this data analysis, the findings corresponded to Turner et al.'s (2019) and Morton's (2018) conclusions. Turner et al. (2019) and Morton (2018) found the four-day school week had no significant impact on student academic achievement. Results from analysis of the data collected contradict the findings of increased student academic achievement as noted by Anderson and Walker (2015), Long (2016), and Turner et al. (2018a).

**While analysis of the data showed the impact was statistically insignificant, there were differences in student academic achievement following the transition to a four-day school week in the area of 8th-grade math, according to the analysis of the MAP data.** After analyzing data collected through the MODESE website, it was determined that the transition to a four-day school week had no statistically significant impact on student academic achievement in the area of 8th-grade math. The data collected revealed an average increase in the percentage of students performing at a proficient or advanced level in 8th-grade math as 9.18%, with only one district

experiencing a decline in student academic achievement. A two-tailed *t*-test was utilized, and the test results indicated the percentage was not statistically significant. The results were aligned with the conclusions of Turner et al. (2019) and Morton (2018), whose findings indicated no statistically significant impact on student academic achievement following the transition to a four-day school week. However, even though statistically insignificant, it is worth noting that students performed better on average, which corresponded to the findings of Anderson and Walker (2015) and Turner et al. (2018a), who found a rise in student academic achievement after transitioning to a four-day school week.

**A difference existed between student academic achievement in the area of 7th-grade ELA according to MAP data.** Upon examining the data collected through MODESE in the area of 7th-grade MAP ELA, it was determined that a significant difference existed following the implementation of a four-day school week. The data indicated the percentage of proficient or advanced students in 7th-grade ELA, according to their performance on the MAP assessment, decreased an average of 12.13%, with only one district experiencing an increase. Upon performing a two-tailed *t*-test, the decline in advanced or proficient students was found to be statistically significant. The current study data analysis aligned with Thompson's (2019a) results. Thompson (2019a) concluded that student academic achievement was negatively impacted following the transition to a four-day school week, specifically in reading and math. The conclusions of Heyward and Hill (2017), who reported a decline in student academic achievement, could be due to absences being more impactful following the transition to a four-day school, are also supported in this study.

**While analysis of the data showed the impact was statistically insignificant, there were differences in student academic achievement following the transition to a four-day school week in the area of 8th-grade ELA, according to the analysis of the MAP data.** After analyzing data collected through the MODESE website, it was determined that the transition to a four-day school week had no statistically significant impact on student academic achievement in the area of 8th-grade ELA. Analysis of the data collected indicated an average decrease in the percentage of students performing at a proficient or advanced level in 8th-grade ELA by 6.47%. In fact, only one district experienced a rise in 8th-grafde ELA academic achievement with the implementation of a four-day school week. Utilizing a two-tailed *t*-test, the difference in percentages was found to be statistically insignificant. The outcome of this data analysis corresponded with the studies of Turner et al. (2019) and Morton (2018), who found the four-day school week had no significant impact on student academic achievement. Analysis of the data collected contradicted the findings of increased student academic achievement as noted by Anderson and Walker (2015), Long (2016), and Turner et al. (2018a).

**Building principals who have served in both a five-day and four-day school week perceived a four-day school week as a positive gain.** All seven principals interviewed described the four-day school week as an overall benefit to their building or district. Utilizing the interpretivist framework, the search for patterns in the areas of teacher morale, finance, student discipline, and overall attendance (teachers and students) was commenced by asking semi-structured questions to elicit the direct experiences of seven principals. All seven principals described the four-day school week as positive and

explained the benefits included a positive school climate within their buildings and other benefits that did not exist before implementing the four-day school week.

All seven principals supported the idea that the four-day school week improved working conditions and student morale. The conclusions of Turner et al. (2018a) echoed the perceptions of the principals. According to Turner et al. (2018a), 91% of respondents to their survey favored working in school districts that implemented a four-day week (p. 59). This finding aligned with the perceptions of the seven principals interviewed with the common theme of additional family time cited by most principals.

In the area of finance, all seven principals interviewed noted minimal to no savings since transitioning to a four-day school week. The common rationale for implementing the four-day week, expressed by six of the seven principals, was not to save money but rather to attract quality candidates and retain personnel. Turner and Finch (2018) found similar results in their study. Thompson (2019b) agreed with Turner and Finch and the principals interviewed in this study and found the savings experienced by school districts to be statistically insignificant.

According to Thompson (2019a), students in a four-day week experienced fewer discipline incidents than students in a five-day week. The perceptions of all seven principals interviewed were aligned with the findings of Thompson (2019a) and Hewitt and Denny (2011) in that student discipline was reduced in a four-day school week setting. A small majority of the principals interviewed noted a decrease in student stress could be the catalyst for the reduction in student discipline, while three of the seven principals believed the decline in discipline to be from more engaging classroom activities.

A slight majority of building principals noted a decline in both teacher and student absences following the transition to a four-day school week. This decrease in absences was believed to be from scheduling routine appointments on the scheduled day off of school. These perceptions are supported by the literature and studies completed by Thompson (2019a), Turner and Finch (2018), and Heyward (2018), who found improved attendance rates for both teachers and staff following the transition to a four-day school week.

**Teachers perceived a four-day school week as primarily positive for teachers and students.** All seven teacher respondents described the four-day school week format as providing positive benefits to both students and staff in various ways. The teachers interviewed also provided diverse opinions when describing school climate, student learning, student discipline, and attendance. All seven teachers agreed that their students enjoyed the four-day school week format. When asked about how the transition to a four-day school week impacted school climate, all seven teachers indicated the schedule had a positive influence on either staff retention, working conditions, or student morale. Turner et al. (2018a), who found that 91% of respondents to their survey indicated the four-day school week was favored over a five-day school week by school staff, reinforced these findings (p. 59). Less agreement occurred in the area of student learning.

A slight majority of teachers indicated a positive influence concerning student learning, cognitive fatigue, and daily learning expectations following a four-day school week implementation. The theme of teachers utilizing more engaging lessons and eliminating “fluff” from the curriculum was often cited as the reason for the increase in student learning. These findings corresponded with those from Long (2016) and Turner et

al. (2018a), which pointed to increased plan time and the necessity to create more engaging lessons as reasons for improved student academic achievement. The variance of opinions in the areas of student learning was echoed in the perceptions of teachers and quantitative findings displayed throughout the literature. Teachers felt discipline did not change following the transition to the four-day week, and a small majority cited a positive change in the severity and frequency of student discipline. Even though the teachers' viewpoints may have been diverse, overall, they felt the four-day school week was a better format for students and staff than a five-day school week.

**Implications for Practice**

This study was designed to determine whether a statistically significant difference existed regarding student academic achievement in schools that implemented a four-day school week. This study made contributions to school leaders by providing an analysis of student academic achievement prior to and following the implementation of a four-day school week and principal and teacher perceptions concerning teacher morale, finance, student discipline, and overall attendance (teachers and students). From this study, district leaders were provided with quantitative evidence, which indicated no significant statistical impact on student academic achievement in three of the four areas examined. Qualitative data analysis revealed a positive effect with the four-day school week. When moving forward with discussions and decisions about the four-day school week in their districts, district leaders could use the data provided from this study.

Analysis of the quantitative data collected from MAP student achievement scores showed potential for an overall decrease in student academic achievement. While statistically insignificant, according to three of the four *t*-tests performed, most school

districts experienced a decline in MAP scores in either ELA or math. In the area of 7th-grade ELA, five of the six school districts experienced a decline in student academic achievement, while in 7th-grade math, four out of the six had decreased scores after transitioning to the four-day school week. In 8th-grade ELA, five of the six districts had lower MAP scores; however, only one district experienced a decline in student academic achievement according to 8th-grade MAP math data.

Several variables could impact the scores for each school. One impact could result from an existing gap between wealthy students and students in poverty (Maxey, 2018). Hattie (2003) stated that other confounding variables could include feedback from teachers and relationships with teachers, which could have influenced student academic performance. District leaders considering implementing a four-day school week should determine to what degree the transition had, if any, on student academic achievement through further research.

The qualitative data collected from the perceptions of principals and teachers suggested a positive outlook following the implementation of a four-day school week in the areas of teacher morale, finance, student discipline, and overall attendance (teachers and students). School district leaders should recognize, however, that each school district is unique. District leaders should also assess the needs of their school district before deciding to implement a four-day school week. This assessment would include ascertaining the current rates of teacher retention in the district, teacher morale, current student discipline data, and the attendance rates of the district.

District leaders should also analyze the district's current financial standing to determine if the implementation of a four-day school week could positively impact the

district budget. Many districts began transitioning to a four-day week from budgetary concerns as the transition would possibly allow the district to cut spending (Turner et al., 2018). School district leaders should consult with surrounding districts of like size and demographics that have implemented a four-day week to examine the effects of the transition on those districts and whether a calendar change had a positive impact.

**Recommendations for Future Research**

This mixed-methods study was designed to examine the impact of implementing a four-day school week on student academic achievement as reported by MAP data in 7th and 8th-grade math and ELA. Perceptions of principals and teachers were also collected to analyze how the four-day school week was viewed concerning teacher morale, finance, student discipline, and overall attendance (teachers and students). Through the data gathered by this study, various gaps were identified that could assist in understanding the impacts associated with the implementation of the four-day school week.

The need to assess the perceptions of other school personnel, including non-certified staff and district office personnel, could determine if these data are applicable throughout school districts or unique to the respondents in this study. Non-certified staff, especially in rural districts, typically live in the community and represent the voting tax base. By allowing the perspectives of non-certified staff to be heard concerning the four-day school week, another area of school personnel, representing a small sample of the community, would be gathered.

In addition, student perception data could be informative to assess if student, teacher, and principal perceptions regarding the four-day school week were aligned. According to Van Eck et al. (2017), students who perceived a more positive school

climate displayed increased levels of academic achievement. Allowing students to share their perspectives on the four-day school week would give first-hand data on the benefits and drawbacks for students in the four-day school week. These valuable data student perceptions could benefit administrators and school boards contemplating implementing a four-day school week.

All participating building principals cited increased teacher retention and recruitment during interviews as the rationale for implementing the four-day school week. However, more time is required to depict a statistical trend in the school districts selected for this study. Therefore, future studies examining the impact of the four-day week on teacher retention and recruitment should utilize an extended research timeframe. The longer timeframe could offer valuable data to the body of knowledge regarding the impact of the four-day school week on teacher recruitment and retention.

Finally, further studies concerning the impact of the four-day school week on student academic achievement are necessary. Prior research demonstrates a degree of variance on the effect of the four-day school week on student academic achievement without an agreed-upon conclusion. The findings of this study revealed no significant impact on student academic achievement according to MAP data, except for 7th-grade ELA. At the same time, principals and teachers interviewed indicated noticeable rises in student performance on standardized assessments. A study comparing student performance on standardized assessments in cohorts of five-day and four-day schools could enrich the analysis of the impact on student academic achievement.

**Summary**

In Chapter One of this study, various aspects were introduced, including the significance and background of school calendars. Additionally, interpretivism, the theoretical framework which guided this research, was introduced. The focus of this study was to examine the impact the four-day school week had on student academic achievement. In addition, principal and teacher perceptions were analyzed to determine the effect the four-day school week had on teacher morale, school finance, student discipline, and overall attendance (teachers and students).

Chapter Two was a review of literature. An in-depth review of the theoretical framework, interpretivism, which allows researchers to interpret participant understanding of a topic, was included (Creswell & Creswell, 2018). Various school calendar options were reviewed, including the history, benefits, and challenges of traditional calendars, year-round calendars, and the four-day school week format. Additionally, in the chapter was a brief history of the MAP. Finally, in Chapter Two, a review of the literature regarding the impact of the four-day school week in student achievement, attendance, finance, and other claims associated with the four-day school week was included.

A description of the research methodology and procedures utilized in the research study were included in Chapter Three. The mixed-methods approach incorporated quantitative data in the form of de-identified MAP data from 7th and 8th-grade students in ELA and math and qualitative data in the form of responses from semi-structured interviews of principals and teachers. According to Fraenkel et al. (2019), a mixed-methods approach allows researchers to ascertain the cause or consequences of

differences among individuals. This process allowed the study's six research questions to be answered.

Chapter Four included data from de-identified MAP scores in 7th and 8th-grade math and ELA from school districts in Missouri that implemented a four-day school week starting in 2017-2018. The quantitative data were displayed in various tables and figures to show the differences in students' proficiency or advanced scores from the six districts selected for the study. Additionally, qualitative data in the form of principal and teacher interviews were analyzed and presented.

In Chapter Five, the critical findings and conclusions of the research study were presented. . The conclusions included the statistically insignificant differences in student academic achievement in 7th and 8th-grade math and 8th-grade ELA following the transition to the four-day school week. However, there was a statistically significant difference in 7th-grade ELA following the transition to a four-day school week. In addition, it was concluded that both principals and teachers viewed the four-day school week as an overall benefit over the traditional five-day school week.

Implications for practice were developed and presented based upon the findings and theoretical framework of this mixed-methods study. Recommendations for future research were offered. These recommendations included the need to assess the perceptions of other school personnel and examine students' perceptions for a longer timeframe to gather data regarding teacher retention rates. Comprehensive, detailed research was recommended concerning student academic achievement following the transition to the four-day school week.

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## Appendix A

## IRB Approval

Jun 15, 2021 3:26:35 PM CDT
RE:
IRB-21-178: Initial - Modernizing the School Calendar to Fit the Needs of the 21st Century Student

Dear David Baker,
The study, Modernizing the School Calendar to Fit the Needs of the 21st Century Student, has been Approved as Exempt.

Category: Category 1. Research, conducted in established or commonly accepted educational settings, that specifically involves normal educational practices that are not likely to adversely impact students' opportunity to learn required educational content or the assessment of educators who provide instruction. This includes most research on regular and special education instructional strategies, and research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

The submission was approved on June 15, 2021.

Here are the findings:
IRB Discussion

- The PI is reminded that compliance with the recruitment policies at an external site resides with the PI. Should the policies of an external site require authorization from that site's IRB or another office, the PI must obtain this authorization and upload it as a modification to their approved LU IRB application prior to recruiting subjects at that site.

Regulatory Determinations

- This study has been determined to be minimal risk because the research is not obtaining data considered sensitive information or performing interventions posing harm greater than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests.

Sincerely,
Lindenwood University (lindenwood) Institutional Review Board

## Appendix B

## Permission Letter

Date:

RE: Permission to Conduct Research in (School District)

To: (Superintendent's name), Superintendent of Schools

I am writing to request permission to conduct research in the (School District). I am currently pursuing my doctorate through Lindenwood University and in the process of writing my dissertation. The study is entitled, *Modernizing the School Calendar to Fit the Needs of the 21st Century Student.* I am asking permission to interview, via video conference, a principal and a teacher employed by your district.

If you agree, please sign below, scan this page, and email to me, David Baker, at db065@lindenwood.edu.

Your approval to conduct this study will be greatly appreciated. I would be happy to answer any questions or concerns you may have regarding this study.
Sincerely,

David Baker,

Doctoral Student at Lindenwood University

Approved by:

_____

Print name and title here

_____ _____

Signature Date

## Appendix C

## Letter of Participation

Date:

Greetings,

My name is Dave Baker, and I am a doctoral student at Lindenwood University. I am conducting a study for a dissertation titled, *Modernizing the School Calendar to Fit the Needs of the 21st Century Student.* The purpose of this study is to examine, using data provided through the Missouri Department of Elementary and Secondary Education, if a change in the traditional school calendar is what is best for student achievement.

As a participant in this study, you will have the opportunity to participate in an interview via video chat. The interview questions will be sent prior to the actual video chat in an email. The amount of time required to complete the interview is approximately 45 minutes.

If you are willing to talk about your experiences and perceptions of the implementation of a four-day school week, please email me at db065@lindenwood.edu. The interview video chat will be scheduled at your convenience. If you are selected to participate, a letter of consent will be provided in advance.

If you have any questions about the interview or the study, please feel free to contact me. Thank you in advance for your time and participation!

Sincerely,

Dave Baker
Doctoral Student
Lindenwood University

**Appendix D**

**Research Information Sheet**

LINDENWOOD

## Research Information Sheet

You are being asked to participate in a research study. We are doing this study to examine, using data provided through the Missouri Department of Elementary and Secondary Education (MODESE), if a change in the traditional school calendar is what is best for student achievement. During this study you will be asked a series of questions to gain your perception regarding the implementation of a four-day school week. It will take about 45 minutes to complete this study.

Your participation is voluntary. You may choose not to participate or withdraw at any time.

There are no risks from participating in this project. There are no direct benefits for you participating in this study.

We will not collect any data which may identify you.

We will do everything we can to protect your privacy. We do not intend to include information that could identify you in any publication or presentation. Any information we collect will be stored by the researcher in a secure location. The only people who will be able to see your data are: members of the research team, qualified staff of Lindenwood University, representatives of state or federal agencies.

**Who can I contact with questions?**

If you have concerns or complaints about this project, please use the following contact information:

David Baker, db065@lindenwood.edu

Dr. Kathy Grover, kgrover@lindenwood.edu

If you have questions about your rights as a participant or concerns about the project and wish to talk to someone outside the research team, you can contact Michael Leary (Director - Institutional Review Board) at 636-949-4730 or mleary@lindenwood.edu.

## Appendix E

## Interview Questions - Principals

1. What was the rationale for the adoption of a four-day school week in your district?

2. What differences, if any, have you noticed in teacher morale since implementing a four-day school week?

3. What changes in student morale have you noticed since implementing a four-day school week?

4. Do you believe the four-day week has had an effect on your working conditions? Why or Why not?

5. What savings or additional costs have the district encountered as a result of implementing a four-day school week?

6. Has discipline been impacted by the implementation of a four-day school week? If so, how?

7. How have student attendance rates been impacted since the four-day week has been implemented?

8. Due to the implementation of the four-day school week, were any modifications needed to your attendance policy? If so, what was changed?

9. Have you noticed any changes to teacher attendance patterns since the implementation of the four-day school week? If so, how do they differ?

## Appendix F

## Interview Questions – Teachers

1. Has the four-day week influenced your desire to remain at this school district, either positively or negatively?

2. Do you believe the four-day week has had an effect on your working conditions? Why or Why not?

3. What changes in student morale have you noticed since implementing a four-day school week?

4. What impact do you think the four-day school week has had on student learning within your building?

5. How do you think the change in the length of the school day has affected students?

6. Have you had to adjust your daily learning expectations to accommodate the four-day school week? If so, how?

7. Has your discipline been impacted by the change to the four-day school week? If so, how?

8. Is there any comment you would like to make about the four-day school week that you believe would be pertinent to this research?

# Vita

David K. Baker earned his undergraduate degree, a Bachelor of Science in Secondary Education with an emphasis in Social Sciences, from the University of Nebraska-Omaha in 2007. He continued to grow educationally and earned a Master of Science degree in Educational Leadership from Doane University in 2015. His determination and love of education, as well as encouragement from family and friends, convinced him to keep going in education and begin the pursuit of an Educational Doctorate (Ed.D) from Lindenwood University in the fall of 2018.

David pursued a career in public education, which began at Omaha Westside Middle School in Omaha, Nebraska as a 7th-grade social studies teacher in the fall of 2008. During his time at Westside, he took on other roles such as head football coach, head wrestling coach, and head boys track and field coach. In the summer of 2015, David took the role of Summer School Coordinator for Westside Middle School in addition to his teacher and coach responsibilities. In the fall of 2016, he was asked to serve as the dean of students in an interim role. His dream was realized in the summer of 2017 when David accepted the position of principal at Sparta Middle School in Sparta, Missouri. He has occupied that position since, serving the fifth through eighth-grade students and staff. David is a member of the National Association of Secondary School Principals and the Missouri Association of Secondary School Principals.