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Elementary Educator Perceptions of the Impact Breaks have on Student Engagement

Sarah-Bo Kirchhoff

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the Impact Breaks have on

Student Engagement

by

Sarah-Bo Kirchhoff

A Dissertation submitted to the Education Faculty of Lindenwood University

in partial fulfillment of the requirements for the

degree of

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This dissertation has been approved in partial fulfillment of the requirements for the

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at Lindenwood University by the School of Education

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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 here at Lindenwood University and that I have not submitted it for any other college or university course or degree here or elsewhere.

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Abstract

According to the US. Department of Labor, 1991, the United States education has shifted the focused to student performance and academic success (NCEE, 2006). School districts across the nation have increased students' academic demands, including increased academic instruction time, while the allotted time for recess and academic breaks continuously decrease, significantly impacting the school day's structure (Brusseau & Hannon, 2015; Ginsburg et al., 2007; Stonehill et al., 2011). However, research asserted that instructional time increase does not significantly impact student achievement. In contrast, the increase of academic instruction time could stimulate behavioral problems and sedentary behaviors, while the continuous decrease of recess time could, as cited by Stapp and Karr, p. 22, "be detrimental to students' physical activity levels, social development, and academic achievement" (McManus et al., 2015; Thapa et al., 2013). Taking purposeful, frequent breaks from academics is an essential part of the school day for students; conversely, schools' primary focus is improving scores and increasing academic rigor, rather than teaching and enriching the whole child (Ramstetter et al., 2010; Dewey, 1938). The qualitative study was initiated to gain elementary teacher perception regarding the impact breaks have on student engagement. The study's design included the instrumentation of a researcher-created teacher survey and classroom observations in the elementary setting. The survey and classroom observation data were analyzed through an inductive and deductive data analysis process, by forming reasonable themes through coding the data collections and verifying theme validity through an analysis of the supporting data under each theme (Burkholder et al., 2020;

Creswell & Creswell, 2018). The data analysis of the teacher survey and classroom observations indicated a positive association between student breaks and student engagement behaviors, specifically after a break. Elementary teacher effectiveness plays a crucial role in student engagement, including implementing appropriate classroom-based breaks at the appropriate time. The culmination of qualitative data indicated that breaks between scheduled recess breaks are essential for student engagement stamina and decreasing distracting behaviors. The study and prior research align, as elementary students must receive frequent, adequate, and appropriate breaks throughout the school day (Barr-Anderson et al., 2011; Ramstetter & Murray, 2017; Yogman et al., 2018).

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Chapter One: Introduction

Current research suggests recess impacts students through "increasing their level of physical activity, improving memory, attention, and concentration, helping them stay on-task in the classroom, reducing disruptive behavior in the classroom, and improving their emotional development (e.g., learning how to share and negotiate)" (Centers for Disease Control and Prevention and SHAPE America, 2017, p. 2). Other researchers suggested recess contributes to improved student behavior in the classroom and reduces students feeling excluded (Thapa et al., 2013). Therefore, recess promotes feeling safe, engaged, and more connected in a positive school climate. Instructional leaders and school principals play a crucial role in creating and fostering a climate supporting professional learning. Comparable to the steps educators take to create an empowering culture and learning environment for students, school leaders can foster an environment where students feel safe, valued, and respected (EL Education, 2018). School climate impacts student engagement and achievement (Thapa et al., 2013). Taking breaks from academics is an essential part of the school day for students; however, for the last decade, United States schools' primary focus has been improving scores and increasing academic rigor, rather than teaching the whole child (Dewey, 1938; Ramstetter et al., 2010).

In the United States, schools focus on research-based instructional and assessment practices, using student performance data, and supporting curriculum to increase student learning. Educational organizations are continuously making instructional and assessment adjustments to ensure student academic success through various methods. However, student breaks continue to decrease while the focus on learning time and rigor increases. According to Dintersmith (2018), the United States public school system has not changed

in over a century, as teachers continue to administer tests and teach students using an outdated educational system that is no longer applicable for our current world. Schools continue to move away from being student-centered, especially recess time and student breaks.

Chapter One introduces the study by explaining the problem statement, purpose, and rationale of this study. Next, the chapter presents the research questions, limitations, and defined terms used in the study. Finally, Chapter One concludes with a summary and a description of the remaining chapters.

Statement of the Problem

In recent decades, the United States public schools increased instructional or learning time inside during the school day (Stonehill et al., 2011). As cited by Stapp and Karr, (2018, p.449), the reductions in recess time for students allocated "more time for English and math instruction" (Brusseau & Hannon, 2015; Ginsburg et al., 2007). Even with the vast amount of research supporting many benefits recess has on students (Bergen & Fromberg, 2009**;** Bodrova & Leong, 2003; Canning, 2007; Singer et al., 2006; Waite-Stupiansky & Findlay, 2001), students' time spent at recess continued to decrease (Ginsburg et al., 2007). Subsequently, teacher instruction time occupied most of a child's school day, intending to increase student engagement. Contrarily, critics suggest that the upward increase in instructional time does not significantly impact student achievement and can catalyst behavioral problems (Baker et al., 2004; Silva, 2007). Many countries have implemented embedded unstructured recess breaks throughout the day to understand that physical activity can improve classroom engagement (Pellegrini & Bohn, 2005). This type of recess intervention was not happening in the United States. The research

suggested that students risked losing recess breaks during academic instruction entirely (Ramstetter et al., 2010).

The Center on Education Policy (U.S. Department of Education, 2008) examined the No Child Left Behind (NCLB) Act's impact on recess. This study found that 20% of school districts decreased recess time an average of 50 minutes per week after Congress implemented the No Child Left Behind (Center on Education Policy, 2008). The research suggested that "the average child sit for approximately 8.5 hours each day" (as cited by Stapp and Karr, p. 450; McManus et al., 2015). Researchers asserted that the increase of sedentary behaviors and the continuing decrease of recess time could be "detrimental to students' physical activity levels, social development, and academic achievement" (as cited by Stapp and Karr, 2018, p. 449; McManus et al., 2015). Congruently, the Recreation Theory suggested that taking breaks helps student achievement due to restoring energy used in work and allowing students to move, play, and relax (Kraus, 2005; Lazarus, 1883). To further elaborate, Kraus found brain restores its ability to concentrate when students divert from brain-powered work in the form of physical activity (2005). Therefore, recess allows students' bodies to exercise while naturally gaining energy. Consequently, these types of breaks, including but not restricted to brain breaks, mindful moments, and recess, wake up students' natural energizers and make students feel more alert or ready to learn, thus increasing the ability to learn and store information (Jensen, 2005). The researcher examined current recess practices and policies in elementary schools by collecting qualitative data to better understand teachers' and students' perceptions of recess time and its effect on student engagement.

Purpose of the Dissertation

This study examined the perceptions of elementary teachers and student behaviors regarding the influence academic breaks had on student engagement. The researcher collected data from the elementary schools utilizing qualitative data from teachers and students. The researcher investigated the differences, similarities, correlations, and reoccurring themes in teacher perceptions of breaks and student engagement (Kraus, 2005; Lazarus, 1883). The researcher analyzed student behaviors through classroom and recess observations. Additionally, through the teacher survey and student observations, the researcher analyzed if the time of day and length of breaks impacted student engagement. Furthermore, the researcher investigated current research, which suggested positive outcomes from an increased number of break-time students and the time-of-day in elementary schools.

The researcher examined the beliefs teachers have regarding break timing and the effects on student engagement in elementary school during the study. This study could help the school district leaders make informed decisions for academic break timing, including effective student engagement outcomes. The study results provide teacher input on academic breaks and student engagement and provide data suggesting adjusting current practices. Moreover, this study highlights the importance of a student-centered approach to scheduling student breaks. The object of these examinations is to help validate and strengthen the current research on academic breaks and recess best practices while advocating the importance of break length and timing.

Rationale

Recent and past research indicates the importance of play for children. The study of play is essential, as researchers have found that play supports children developmentally. Recess is any unstructured indoor or outdoor play (Pellegrini & Davis, 1993). Understanding how play can impact students in the classroom could assist in closing the gap of research and current practices for play. Most schools do not adequately support children inside and outside the classroom in terms of time allotted for play through recess and breaks throughout the day. The No Child Left Behind of 2001 (NCLB) intended to hold schools accountable through required standardized tests to measure student academic achievement (U.S. Department of Education, 2008; U.S. Department of Education, 2012)

The findings from this study may provide Missouri school leaders and stakeholders empirical data regarding the benefits of providing students breaks during the school day to help students expel surplus energy (Evans & Pellegrini, 1997; Demarest, 1907). The study results may offer school leaders and teachers a better understanding of how breaks impact student engagement (Brophy, 1983). Breaks include short breaks away from academics (Perera et al., 2015). The study's findings could lead to a more informed decision-making process regarding recess, academic breaks, policy development, and scheduling. Furthermore, other researchers could find this research valuable when studying student engagement, student learning, mindfulness, integrated breaks, and recess timing (Kabat-Zinn, 1990; 1995; Lyons & DeLange, 2016). Additionally, teacher and student participants could directly benefit from this study by

applying the results to daily teaching practices. Ultimately, this study can provide

educators with current educational research and results to better serve students.

Research Questions

The researcher investigated the following research questions:

1. What are elementary teacher perceptions regarding the influence breaks have on

    student engagement as it applies to timing, length, and frequency?

2. How do the length, frequency, and timing of breaks impact student engagement based

    on observations?

Limitations

The following limitations bounded the scope of the study:

Time Frame and Location of the Study

The researcher obtained all teacher survey data and classroom observation data

from the Spring 2021 Semester. The data collection included teacher perceptions and

elementary classroom observations. This study took place in a rural school district's

elementary schools in the Midwest. The elementary schools have two sections of each

grade level and small class sizes. As a result, the researcher was aware of the possibility

of a low response rate from the teacher surveys. In addition, participation in the study

was voluntary. Therefore, the research is limited to teachers who were willing to

participate.

The researcher observed the classrooms before, during, and after a break. Due to

the observation timing, the researcher did not observe any classroom-based break, which

could be considered a limitation. The grade levels and variety of assignments and

activities students completed during the observations before breaks could be considered a

limitation. Some tasks could be considered more engaging. These activities included an interactive children's book read aloud. Conversely, a math assignment using multiplication required more engagement, stamina, and self-discipline from the student participants. The type of activities in the classrooms could have caused the students to demonstrate more off-task behaviors during the observations. Furthermore, the outdoor recess observations could be a limitation, as the location for recess was different for the observed grade levels.

Instrument

The survey was considered a limitation in this study. The research included a researcher-created qualitative survey through Qualtrics. However, the instrument limited the study, as prior research had not implemented the teacher survey.

Sample

Regular education elementary teachers and two elementary classrooms participated in this study. The sample was a limitation due to only one school district's elementary schools being the focus of the study. Limitations of research may have included a lack of participation, as teacher participation was voluntary. The differentiated teaching experience and classroom management skills may also have influenced the survey and classroom observation data. Furthermore, the research study excluded special education teachers from this study. The research excluded special education teachers in this study, as special education teachers do not typically participate in recess with special education students.

The researcher disqualified COVID-19 quarantined and isolated students due to being absent during this study. In addition, due to the limited number of participants in

each area, the researcher excluded Special Education, Music, Art, and Physical Education

teachers, administrators, and special education teachers to adequately represent each

population. The participants were not limited by race or gender. This study specifically

focused on perceptions of breaks of regular education elementary teachers.

Criteria

Participants in this study were certified employees at the selected school district's

elementary buildings. The researcher identified and considered certified regular education

elementary teachers eligible for this study.

Sample Demographics

The researcher used a convenience sampling of the teacher and classroom

population (Fraenkel et al., 2019). The sampling included one local, rural school district

with two elementary schools, where teachers could participate in a survey, and where the

researcher observed two classrooms. The sample is a limitation, as the study focused on

only two rural elementary schools within one school district (Creswell & Creswell,

2018). Both schools had small class sizes per grade at the elementary level. Thus, the

researcher hoped for high participation in the survey from the chosen school districts'

teachers to provide valid results (Fraenkel et al., 2019).

Delimitations

The researcher gained approval through the dissertation committee review

process; all committee members agreed that the instrument aligned with the study's

research questions. The researcher created the instruments and hoped all participants

would respond clearly and concisely, accurately explaining their perception of student

breaks. Additionally, participants could choose to end the survey at any time or opt-out of

taking the survey entirely. The research team collaborated to ensure the study's methods had minimal risk and aligned with Lindenwood University Institutional Review Board (IRB). The researcher conducted classroom observations in the back of the classrooms and playground to provide the least amount of distraction possible.

Definition of Terms

For this study, the researcher defined the following terms:

Breaks. Breaks are short breaks away from academics, including physical activity during the school day (Perera et al., 2015). Breaks include but are not limited to:

- **Mindfulness Meditation.** Mindfulness meditation or mindful activities are a form of meditation or contemplation practice used to promote the mind to be nonevaluative of thoughts or emotions. Instead, to be mindful or cognizant of the moment based on the work of John Kabat-Zinn 1990; 1995; Lyons and DeLange, 2016.

- **Recess.** Based on Pellegrini and Davis' (1993) work, recess is any unstructured indoor or outdoor play, socialization, games, and nature exploration free of adult involvement. Recess, free play, and unstructured play are used interchangeably throughout this research. (Pellegrini & Davis, 1993).

Cognitive Immaturity Hypothesis. The Cognitive Immaturity Hypothesis (CIH) suggests that children and adults learn best from tasks spread over time rather than more concentrated (Evans & Pellegrini, 1997; Pellegrini & Bjorklund, 1996).

Friedrich von Schiller-Surplus Energy Theory. The Surplus Energy Theory suggests that children obtain surplus energy when they are still for long periods. This

theory has been used for centuries to justify including play in schools (Demarest, 1907; Evans & Pellegrini, 1997). For example, in the past, humans needed surplus energy for hunting.

Howard Gardner - Theory of Multiple Intelligence. Howard Gardner recognized that each person has varying learning and intelligence used in their daily lives through the Theory of Multiple Intelligence (Al-Wadi, 2011; Gardner & Hatch, 1989).

Karl Groos's Instrumentalist Theory. The Instrumentalist Theory suggests that play enables children to be mentally and physically prepared for adulthood. Thus, Groos emphasizes the importance of play, considering the physical and mental impact on adulthood preparation (Elkonin, 2005; Verenikina et al., 2003).

Moritz Lazarus - Recreation Theory. The Recreation Theory suggests academic performance increases with breaks or play opportunities (Jensen, 2005; Kraus, 2005; Lazarus, 1883).

No Child Left Behind of 2001 (NCLB). The United States No Child Left Behind (NCLB) legislation started the standards-based education reform. This law requires states to administer standardized tests to measure student academic achievement (U.S. Department of Education, 2008; U.S. Department of Education, 2012)

Novelty Theory. The Novelty Theory suggests that as schoolwork becomes less appealing, students become less engaged. A break from schoolwork to play can cause schoolwork to become new or novel (Evans & Pellegrini, 1997).

Public Education. Kindergarten through twelfth grade, public education is available for all students at no cost funded by taxes.

Student Engagement. Student engagement is the time, and effort students put into studies and related academic activities (Brophy, 1983).

Conclusion

The focus and purpose of the research aimed to explore elementary teachers' perceptions regarding the influence academic breaks had on student engagement. This study includes five chapters.

The researcher introduced the study and described the problem of the study in Chapter One. Next, the researcher reviewed the rationale and research questions. After, the researcher provided the limitations and the definition of key terms. Then, the researcher will synthesize literature related to the study in Chapter Two. The literature review will provide an overview of current practices and beliefs in education and explored recess history in the United States.

Chapter Two: The Literature Review

This chapter provides of an overview of recess and breaks of elementary schools in the United States through a thorough investigation of diverse publications of history, theory, and the impact breaks have on children and student engagement. Student engagement is the time, and amount of effort students put into studies and related activities (Brophy, 1983). Curriculum changes have increased curricular demands placed on students in the United States and have significantly impacted the school day's structure. Therefore, the researcher took a student-centered approach to the study and literature review.

The United States education has focused on academic success and the cultivation of twenty-first-century skills (National Center on Education and the Economy, 2006; U.S. Department of Labor, 1991). Typically, breaks and recess in elementary are the only opportunities children have to interact freely with peers in a socially organic or unstructured manner with adult supervision. The Centers for Disease Control and Prevention defined *recess* as "regularly scheduled periods within the elementary school day for unstructured physical activity and play" (2000. P. 2). Congruently, Pellegrini and Davis (1993) defined *recess* as any unstructured indoor or outdoor play, socialization, games, and nature exploration free of adult involvement. Unstructured play is an integral part of childhood where children organically socialize, create games, strengthen muscle groups, and explore nature (London et al., 2015).

Literature and theorists have emphasized the many benefits of play and recess (Jensen, 2005; Piaget, 1991, 1951; Ramstetter & Fink, 2019). Researchers suggest that "unstructured breaks from demanding cognitive tasks seem to facilitate school learning,

as well as more general social competence and adjustment to school" (Pellegrini & Bohn, 2005, p. 17). Recess, free play, and unstructured play are used interchangeably throughout this research (Pellegrini & Davis, 1993).

The literature review will provide an examination of the recess history and current recess practices. Although many theorists studied play, there is very little formally documented research on the history of recess before the 19th century (Clements, 2000). Other contributions to the literature review development and overall focus of the study included examining current practices, contemplative practices in education, theoretical framework, cognitive engagement and development, and children's social and emotional development.

The History of Playgrounds and Recess

Recess and the allotted time for recess have continued to decrease as the child ages in the United States increase; simultaneously, learning time policies have expanded (Stonehill et al., 2011). Subsequently, academic instruction time consumes most of the school day. Expressly, English and math instruction class time is valued more (Brusseau & Hannon, 2015; Ginsburg et al., 2007), while the United States education system is "not keeping pace with the progress of other nations" (U.S. Department of Education, 2008).

A review of the literature revealed that very few studies had evaluated the physical activity levels of elementary school children during the school day (Stewart et al., 2004). Similarly, very few studies have evaluated physical activity's effects on elementary students' classroom behavior and engagement (Mahar et al., 2006). In addition, although recess occupies time in the elementary school day, it has not been

significantly studied (Clements, 2000; Mahar et al., 2006; Pellegrini & Smith, 1993;

Stewart et al., 2004).

The history of recess before the 19th century has very little recorded formal

documentation or research (Clements, 2000; Kahan, 2008; Pellegrini & Smith, 1993).

However, recess time in the United States has been traced back to the mid-1800s (Kahan,

2008; Shapiro, 1983). Recess games included "ball games, pitching games, hopscotch,

hoop rolling, and tag games" (Kahan, 2008, p. 27). In the 1800s, the structure of recess,

schools, and the school day was different. Furthermore, it is not easy to compare the

structure of the historical public schools to the current structure of public schools in the

United States (Frost & Sutterby, 2017). The German-influenced "kindergarten

movement" took place in the United States during the 1850s (Frost & Sutterby, 2017).

A German scholar, Friedrich Frobel, or "the father of kindergarten," coined the

term "kindergarten" and emphasized the importance of playful learning and nature (Frost

& Sutterby, 2017). Frobel felt outdoor games were essential to early childhood learning

and fundamental to the kindergarten concept (Frost & Sutterby, 2017). Unfortunately,

cities developed in the nation, and public play spaces for children were uncommon,

especially in congested neighborhoods in cities (Frost & Sutterby, 2017).

Today, city playgrounds and parks are a common feature of public places.

However, in the late 1800s, children were likely to play in the streets or unsafe places

during construction and city development. Froebel recognized the need for safe outdoor

play as a national issue, which lead to a playground movement and the introduction of

kindergarten in the United States during the 1850s (Frost & Sutterby, 2017). In the 1920s,

Joseph Lee influenced the playground movement in the United States and contributed to

recess inclusion in the school day for young children (Ramstetter & Murray, 2017).

By the 1920s, parks and playgrounds were a city staple. Contrarily, the rural

areas did not have designated play areas for children (Frost & Sutterby, 2017).

Regulations for safe playground equipment came about during the 1950s; many

playgrounds required renovation or rebuilding (Frost & Sutterby, 2017). An educational

reform took place in the 1980s in schools' priorities regarding higher expectations for

students and teachers through the National Commission on Excellence in Education

(United States, 1983). These higher federal expectations included the measurement of

standards of student performance.

In 2001, the No Child Left Behind (NCLB) Act held schools accountable through

standardized testing (U.S. Department of Education, 2008). Implementing the NCLB act

began to hold schools and teachers accountable, with the ultimate goal of student success

in reading, math, and science. Subsequently, the top-down accountability approach

generated a demanding culture of doing well on the test, creating teacher and student

pressure to perform. In the 1980s, the mentioned legislations inherently caused schools to

increase instructional time, which decreased time in other areas, like recess. According to

the American Academy of Pediatrics (2013), reducing recess time can negatively impact

student academic achievement. Furthermore, a study suggested that reducing and

minimizing recess may counter student academic achievement (Ramstetter et al., 2010).

Current Practices

The United States education system is "not keeping pace with the progress of

other nations" (U.S. Department of Education, 2008, p. 1). Today, students learn about

mathematics, literacy, science, social studies, and other skills needed to contribute to society. The focus on high test scores, or student achievement, was a way to hold schools and teachers accountable, with the ultimate goal of student success in reading, math, and science (U.S. Department of Education, 2008).

The GOOD Magazine video explains how the current education provided only prepares students for the present industrial economy yet fails to provide our students with confidence and creativity to apply to the future (2012). The GOOD Magazine video eludes that education is not serving our students fully, and education should redefine creativity and learning to prepare students for the future rather than the current society (2012). The objective of high student achievement on standardized tests created a culture of doing well on the test and pressure to perform (Dintersmith, 2018). This reallocation of time has inherently caused schools to increase instructional time, which decreased time in other areas, like recess. However, there is evidence that increased physical activity and higher student fitness levels are associated with higher academic test scores (Strong et al., 2005).

Schools implement professional development to make certain evidence-based best practices are offered and put into place; however, best practices for recess and movement do not take precedence. Researched based professional development is not simply a list of ideas teachers should be implementing in the classroom (Goodwin et al., 2019), but actual professional development comes when educators meaningfully interact and learn from research-based intervention to accomplish a set vision and goals (Zakharov et al., 2019; Antinluoma et al., 2018). Congruently, school leaders cannot guide staff in professional learning if a shared focus or need has not been identified (Antinluoma et al.,

2018). Furthermore, researchers suggest that research-based, continual professional

learning and development can significantly impact teachers' knowledge and practices

(EL education, 2018; Goodwin et al., 2019). Therefore, continuous professional

development based on the school, student, and teacher needs and best practices enable

educators to stay current with best practices, consequently expanding knowledge, skill,

and confidence in the determined area of focus, such as integrated breaks in the

classroom, as research has suggested a positive relationship between academic

achievement and movement (Sibley & Etnier, 2003).

According to the Every Student Succeeds Act (ESSA) in 2015 (GovTracks.us,

2021), a child's education should include Health and Physical Education curricula.

Physical Education minutes are mandatory in Missouri elementary and middle schools

(DESE, 2021). Furthermore, the United States has not adopted a strategy to increased

recess time as a nation. States and school districts have the autonomy to create and

implement recess policies regarding the allotted recess time. As a result, students spend

most of the school day without breaks and inherently find themselves in a sedentary

environment. Students' physical activity and engagement levels, social development, and

academic achievement can be affected by such sedentary behaviors (McManus et al.,

2015).

Missouri's Department of Elementary and Secondary Education requires

elementary school students to have a minimum of one 20-minute recess per day, which

may incorporate into lunchtimes (DESE, 2020). State laws can "act as a valuable catalyst

for promoting adequate levels of physical activity" (Whitehouse & Shafer, 2017, p.1).

Most states have policies recommending students engage in physical activity during the

school week, but few states have formal laws. Missouri is one of five states in the United

States with required recess minutes for elementary students, while several other states

have recommendations for suggested general activity minutes for students (Whitehouse

& Shafer, 2017). Physical activity opportunities can likely increase in schools by

mandating physical education and recess minutes statewide (Whitehouse & Shafer,

2017). The American Academy of Pediatrics (2013) and the National Association for

Sport and Physical Education (2010) recommends that recess should not be taken away

from students as a punishment. The American Academy of Pediatrics (2013) aimed to

inform parents, teachers, and school decision-makers that:

> Recess is a necessary break in the day for optimizing a child's social, emotional,
>
> physical, and cognitive development. In essence, recess should be considered a
>
> child's personal time, and it should not be withheld for academic or punitive
>
> reasons. (p. 186)

Furthermore, Ramstetter and Fink (2019) suggest, students, guardians, and teachers

"must be of the process of embracing standard practices and explicit language to ensure

recess is not withheld from students for academic or punitive reasons" (p. 36).

Recess "is a complement to, but not a replacement for, physical education"

(American Academy of Pediatrics, 2013, p. 186) as recess and physical education both

accomplish similar but different goals. Physical education is an "academic discipline,"

whereas recess "provides the creative, social and emotional benefits of play" (American

Academy of Pediatrics, 2013, p. 186). However, both recess and physical education can

promote healthy, active habits.

Today, many countries have introduced embedded recess breaks throughout the school day to combat long instruction periods to improve student engagement (Pellegrini & Bohn, 2005). The No Child Left Behind Act (NCLB) was examined by the Center on Education Policy (2008) and found that recess time had decreased substantially after implementing the NCLB Act in the United States. Ramstetter and Fink (2019) suggest that "each school must examine resources and schedules within the context of its environment, it is possible to build in more than one recess, combined with lunch, to provide frequent, regular breaks" (p. 36).

Ramstetter, Murray, and Garner (2010) examined academic breaks and found breaks to remain at high risk in the United States. Furthermore, the school day consists of primarily sedentary activities. The American Academy of Pediatrics (2013) stated, "Recess can serve as a counterbalance to sedentary time and contribute to the recommended 60 minutes of moderate to vigorous activity per day" (p. 186). Additionally, studies have indicated that students' sedentary behaviors can be "detrimental to students' social development, academic achievement, and level of activeness" (as cited by Stapp and Karr, 2018, p.449; McManus et al., 2015). Recess is a developmentally appropriate time outside of academics that allows students to have an opportunity to explore in play and release energy with peers outside of the daily schedule (Jarrett, 2013). As cited by Stapp and Karr, (2018, p. 449), "The Center on Education Policy (2008) examined the impact of the No Child Left Behind (NCLB) Act on recess and found that 20% of school districts decreased recess time, with an average decrease of 50 minutes per week (Center on Education Policy, 2008)". Contrarily, instruction time increases have more impact on behavior issues than

student achievement (Baker et al., 2004; Silva, 2007). Congruent to that, a recent study

indicated that "including recess in a school day's allocated time schedule, in fact,

increases time-on-task" (Stapp & Karr, 2018, pp. 452). According to Pellegrini and

Bohn-Gettler (2014):

> In an era of evidence-based instruction, it is critical that educational decisions be
>
> grounded in empirical evidence. Scientific research consistently documents that
>
> recess plays an important role in the school day and has benefits for children's
>
> cognitive, social, and physical health. Furthermore, it can improve children's
>
> achievement scores. (p. 13)

Research has found that recess impacts students socially, emotionally, physically, and

cognitively while simultaneously reducing stress and increasing student engagement

(Bergen & Fromberg, 2009; Canning, 2007; Singer et al., 2006). The unstructured and

natural recess play offers students a unique atmosphere to explore socially (Jarett, 2002).

Additionally, routine physical activity correlates with lower overweight and obesity rates,

while routine physical activity decreases illnesses; hence, student attendance increases

(Taras & Potts-Datema, 2005).

With increased attendance rates, students are learning more and having more

recess time. Again, the social possibilities throughout recess allow students to learn turn-

taking, sharing, negotiating, sportsmanship, conflict resolution and asking for help

through play (Bergen & Fromberg, 2009; Canning, 2007; Sutterby, 2007). Furthermore,

elementary students do not engage in extracurricular activities to the same extent as older

students participate in compensatory physical activities after school. Therefore, schools

must adopt and implement a policy for student breaks while providing a space for

physical activity during breaks indoors and outdoors.

Benefits of Play

Jean Piaget, known most for his contribution to play (Pellegrini, 2008), revealed that children learn best through cooperative social play, learning moral reasoning skills (Bjorklund & Douglas-Brown, 1998; Blake & Pope, 2008). Piaget proposed that children discover their world through play and pretend play (Bornstein, 2011; Pellegrini, 2008). Furthermore, research has found breaks to have a conglomerate of benefits. One of the most beneficial aspects of the recess break is that it allows elementary students to break from the daily schedule and routine of learning (Stapp & Karr, 2018). This break in routine is also called a "period of interruption" (Ramstetter et al., 2010, p. 522). Ramstetter et al., 2010, found this period of interruption followed by a period of direct instruction is "for optimal cognitive processing in children" (as cited by Stapp & Karr, 2018, p. 449).

When unstructured breaks, like recess, occur during the school day, the stresses and distractions that generally interfere with cognitive processes diminish (Stapp & Karr, 2018). Furthermore, Jarrett (2002) described breaks in the elementary school day as necessary for "satisfaction and alertness" (p.2). Researchers have suggested that short and unstructured breaks can improve student success and concentration (Barr-Anderson et al., 2011; Stapp & Karr, 2018; Yogman et al., 2018). According to the American Academy of Pediatrics (2013), there are four significant recess benefits: increased physical activity, improved attention, improved cognition, and social skills practice with peers. Just as physical education has recognized benefits for academic and physical performance, recess provides unique benefits. Research suggests that recess represents an essential,

planned respite from rigorous cognitive tasks and allows time to rest, play, create, move, and socialize (Loebach & Cox, 2020; National Association of Early Childhood Specialists in State Departments of Education, 2011).

Brown and Vaughan (2009) found that play is a natural way of learning and "important to our development and survival that the impulse to play has become a biological drive" (p. 42). Breaks from academics are a vital part of a students' day in elementary and reflect the classroom. A Swiss developmental psychologist, Piaget acknowledged and supported play's significant contribution to cognitive development (Yawkey, 1973). According to Piaget, play aids children in developing thinking skills through the application of learned concepts, situations, and facts previously learned (Piaget, 1991, 1951). According to Ramstetter and Murray (2017), "It is imperative to treat recess time as a child's personal time and to make this explicit in policy and in practice" (p. 23). Recess time is often taken from children by teachers and administrators for various reasons, including classroom behavior. However, educators should ensure that "every child's recess is protected regardless of classroom behavior, and that teachers have supportive leaders, peers, and strategies to carry out such an important policy" (Ramstetter & Fink, 2019, p. 37).

Ramstetter and Fink (2019) dive into understanding recess time through elementary teachers' perceptions and current practices. Ramstetter and Fink (2019) describe the results from teacher interviews and gathered a common theme that "recess offers important benefits to students" (p. 35). One-hundred percent of the teacher participants said recess is beneficial. Contrarily, of those teacher respondents, 68% divulged they had withheld all or part of a recess period from at least one student that

school year (Ramstetter & Fink, 2019). The reason being, "a 'Student's words or actions violated behavioral expectations'" (Ramstetter & Fink, 2019). Research suggests engaging elementary teachers in creating recess-related policies and making decisions to make the policies more specific and applicable at the classroom level. Congruently, according to Ramstetter and Murray (2017), "It is imperative to treat recess time as a child's personal time and to make this explicit in policy and in practice" (p. 23). Recess time is often taken from children by teachers and administrators for various reasons, including classroom behavior. However, educators should ensure that "every child's recess is protected regardless of classroom behavior, and that teachers have supportive leaders, peers, and strategies to carry out such an important policy" (Ramstetter & Fink, 2019, p. 37).

Mahar et al. (2006) found that students who experience long periods of academic instruction become fidgety. Subsequently, these students experience a loss of concentration (Mahar et al., 2006). Due to the loss of concentration and student engagement, the researchers introduced energizers (Mahar et al., 2006). The mentioned energizers or brain breaks include movement during various activities. Elementary students and (as cited by Stapp & Karr, 2018, p. 449) "people of all ages and in all professions benefit from breaks in throughout the daily routine." Also, as cited by Stapp and Karr (2018, p. 449), "According to Jarrett (2002, p.2), breaks throughout the day are necessary for 'satisfaction and alertness'" during the school day. Short, structured breaks integrated throughout the school day can improve "physical activity levels, academic achievement, and concentration" (Stapp & Karr, 2018, p. 450). Congruently, researchers (Jarrett, 2002; Pellegrini & Bohn, 2005; Ramstetter et al., 2010; Stapp & Karr, 2018)

support the conjecture suggested by Stapp and Karr (2018), "that short breaks which include physical activity during the school day enable students to remain on-task for longer periods of time" (p. 453). Research indicates that students who are physically active during the school day have increased academic success and are more focused (Hillman et al., 2008).

Mahar et al., 2006, emphasized that the importance of physical activity for overall fitness and health is understood in our society today. However, the multifaceted relationship between physical activity and concentration, cognition, and academic performance are not as understood (Pelligrini & Bohn, 2005). For example, academic breaks in the classroom significantly increase children's energy expenditure and help children stay on task during subsequent lessons (Stewart et al., 2004). Mahar et al., 2006, described a type of brain break or energizers, explained in the study, as "short classroom-based physical activities" (p. 2087). The breaks, ordinarily 10 minutes in duration and occurring one to two times per school day, add an activity component to the academic lesson. Furthermore, the researchers found that on-task behavior during academic instructional time increased by about 20% after participating in an energizer activity, thus improving student achievement (Mahar et al., 2006).

Research suggests that the student's ability to concentrate on a task or lecture is one of the best predictors of student success (Abdelbary, 2017). Mahar et al. found that short activity breaks in the classroom can increase student performance, while extended periods of uninterrupted instructional time causes students to work less efficiently (2006). During a study, these brain breaks, or energizers were incorporated into classrooms after teachers received training to increase their students' physical activity and on-task

behavior (Mahar et al., 2006). Mahar et al.'s (2006) study concluded that teachers who incorporated brain breaks found that on-task student behavior significantly improved following the participation in the energizers, especially with the students who struggled with staying on-task.

Pediatric occupational therapist, Angela Hanscom, said, "children spend too much time in a constant upright position which limits their ability to pay attention because their core muscles are not developed enough to keep from fidgeting" (Korbey, 2014, p. 3). Hanscom also mentioned that one of the keys to keeping students' attention in school is to develop the vestibular, or balance system, located in the inner ear; it still would not help to go from sitting to standing. Children would need to move their heads in all different directions to create a vestibular movement. This type of beneficial movement is essential for children to ideally do whole-body movements like swinging, spinning, and rolling (Jensen, 2005; Loebach & Cox, 2020). In addition, brain breaks in the classroom enhance circulation, get more oxygen to the brain, and stimulate brain function (Jensen, 2005; Loebach & Cox, 2020). Childhood, when play is most prevalent, is the most significant period of brain development (Brown & Vaughan, 2009). Brown and Vaughan (2009) concluded that play in animals influences brain development, and the brain is actually "making sense of itself through simulation and testing. Play activity is helping to sculpt the brain" (p. 34).

Short brain breaks and activities can provide that opportunity and occur in a classroom; consequently, student participation is high. Classroom-based breaks provide an effective strategy to encourage meaningful physical activity (Stewart et al., 2004). In a recent study, Yogman et al. (2018) concluded that "play is not frivolous, it is brain

building" (p. 5). Movement breaks between cognitive engagement increase oxygen flow to the brain, restoring students' attention, while extended cognitive tasks, or without movement, result in mental fatigue and decreased blood flow (Abdelbary, 2017; Jensen, 2000). A study analyzed the impact of breaks and fatigue on students' performance on the Danish National Test, and results revealed that student fatigue influenced test scores. The researchers noted that specifically, for every hour later in the school day, test scores decreased by 0.90 standard deviations, while a break of 20-30 minutes improved average test scores by a 1.70 standard deviation. (Sievertsen et al., 2016). According to Sievertsen et al. (2016), struggling students had more significant fatigue, benefitting more from breaks.

Schools have systems in place that require responsiveness and flexibility in the classroom to meet the needs of students. Educational organizations are continuously making data-informed instructional and assessment adjustments to ensure student success through various methods. Research has determined that using data in instructional decision-making can improve student performance (Lewis et al., 2010). However, schools' focus is on instruction rather than providing students time and a place to release energy in the form of a break.

Unstructured play can happen inside and outside the classroom at recess or during Physical Education classes but typically happens during recess. Singer et al., 2006, found the benefits of play include supported cognitive, emotional, physical, and social behaviors. According to Yogman et al. (2018), "play usually enhances curiosity, which facilitates memory and learning" (p.6). Singer et al., 2006, explained the barriers students

face starting as early as preschool and found that unstructured play can provide children an outlet and time to learn from play.

The study conducted by Singer et al., 2006, found that students learn to be good citizens through recess social experiences. For example, a student can learn how to share toys, take turns on equipment, and resolve natural conflicts during play. The research implied that taking time to include unstructured play at school has many considerable benefits for students. Students can relieve the stress of academics while releasing energy and having real, natural social experiences while at recess.

Combining movement and academics may be complicated; moreover, teachers must integrate movement and allow time for breaks in the schedule. In addition, the integration of movement in the classroom allows additional physical activity outside of physical education class. According to Kahan (2008), educators must continually and intentionally create a movement and academic-centered classroom through evaluation, pivoting, and providing what the students require to succeed. However, teachers may need further professional development to integrate the nontraditional classroom movement into instruction and the classroom.

Providing breaks and play opportunities for elementary students provide many health benefits. Regular physical activity correlates with lower rates of overweight and obesity for any population. Yogman et al. (2018) stated, "Exercise not only promotes healthy weight and cardiovascular fitness but also can enhance the efficacy of the immune, endocrine, and cardiovascular systems" (p. 7). By reducing the rates of obesity and overweight, related illnesses decrease, which inherently causes higher student attendance rates, suggesting more learning is taking place (Taras & Potts-Datema; 2005).

Recess provides students an opportunity to learn through unstructured play. Students could encounter opportunities to share, take turns, develop conflict resolution skills and self-advocacy skills, and other learned skills needed to be a good citizen (Berge & Fromberg, 2009; Canning, 2007; Chmelynski, 2006; Singer et al., 2006; Sutterby, 2007). Providing regular and adequate recess time cultivates education of the whole child, which meets students' social, emotional, physical, and cognitive developmental needs (File et al., 2012; Stuckart, 2010).

Contemplative Practices in Education

Pedagogical strategies have become more student-centered, focusing on student learning, engagement, and experience. As aforementioned, research continually indicates that physical activity positively impacts children's academic, social, and physical development (Pellegrini & Davis, 1993; Perera et al., 2015; Sarath, 2006). In this study, these breaks from academics include but are not limited to brain breaks, recess, and mindfulness meditation. The researcher examined the relationship between contemplation and reflection in terms of application in education while considering reflection an essential metacognitive component of education that provides further conceptual and theoretical linkages to contemplative practices in education. Bishop et al. (2004) described contemplative practices as a process to cultivate the capacity for evoking mindfulness. Contemplative practices are "systematic methods of invoking heightened states of consciousness, or awareness" (Sarath, 2006, p. 216). Mindfulness meditation includes activities that provide an opportunity to be cognizant of the moment while promoting the mind and emotions to rest (Kabat-Zinn, 1995; Lyons & DeLange, 2016). Meditation is a term that encompasses many practices "that self-regulate(s) the body and

mind, affecting mental events by engaging a specific attentional set" (Cahn & Polich, 2006, p. 180). Bishop et al. (2004) found components that constitute mindfulness including attention to the present, accompanied by a non-judgmental, accepting disposition.

Humans have been practicing mindfulness skills, such as ancient yogic practices, for at least 2,500 years (Miller et al., 1995; Teasdale, 1999). Mindfulness activities can result in relaxation (Baer, 2003; Cahn & Polich, 2006); however, mindfulness is not a relaxation technique (Bishop et al., 2004). The mindfulness process is a meta-cognitive skill described as an attention self-regulation process while simultaneously monitoring and controlling the cognitive process (Bishop et al., 2004). Mindfulness is a mode of awareness by nature, and anyone can learn it and practice it (Bishop et al., 2004). Teachers can incorporate many forms of contemplative practice activities in the classroom, including mindful walking, yoga, contemplative reading, chanting, mindful listening, mindful free writing, mindful reading, mindful breathing, and meditation (Haynes, 2005; Sarath, 2006; Zajonk, 2016). The implementation of contemplative practice activities serves to help concentration and deepen understanding in students while learning tools in the classroom to facilitate reflection (Haynes, 2005).

Theoretical Framework

Play in the classroom has essential contributions to cognitive development, although play is not the first term that most commonly describes learning in a classroom. Swiss developmental psychologist, Jean Piaget, recognized and promoted play and its significant contribution to cognitive development (Yawkey, 1973). According to Piaget (1951), play enables thinking skills by practicing previously learned concepts, situations,

and facts. Piaget categorized play into developmental stages ranging from practice play to complex play with rules, developing as children grow and requiring high-order thinking (Yawkey, 1973). Children learn social situational adaptation and practice social encounters through playtime while simultaneously practicing language development (Loebach & Cox, 2020; Piaget, 1991; Yawkey, 1973). Recess is an opportunity to foster play Piaget described where children learn or practice learned concepts (Bodrova & Leong, 2003; Lynch & Simpson, 2010). Play at recess fosters the described type of learning through play (Bodrova & Leong, 2003; Lynch & Simpson, 2010).

Surplus Energy Theory

Friedrich von Schiller suggested that play is the evidence of surplus energy children and young animals have after all basic needs are met (Rubin et al., 1983). However, Herbert Spencer, a British psychologist, is usually linked to the Surplus Energy Theory (SET). SET also suggests that if children are still for long periods, children obtain surplus energy, based on the characteristics of humans who had to hunt to survive. This theory has been used for centuries to justify including play in schools (Evans & Pellegrini, 1997; Demarest, 1907). Congruently, SET suggests that students need breaks to work off the energy acquired from sitting for long periods in the classroom (Pellegrini & Smith, 1993). Unfortunately, today students live a sedentary life both in and out of school. Subsequently, students lack the opportunity to physically use the accumulated energy, allowing students to concentrate more in the classroom (Demarest, 1907; Evans & Pellegrini, 1997; King, 1987).

Educators have indicated the need for physical activity and the positive effect these breaks from academics have on student behavior, health, and academics;

conversely, long periods of sedentary time adversely impact students' ability to perform and focus in the classroom (CDC, 2000; 2016; Evans & Pellegrini, 1997; King, 1987; Loebach & Cox, 2020; Mahar et al., 2006). Most students stay physically active during the short breaks from academics during the school day (Chmelynski, 2006; Perera et al., 2015). United States organizations have urged schools to provide regular and consistent movement opportunities throughout the school day (CDC, 2016). Just as schools schedule recess, schools could ensure teachers provide short, scheduled breaks for students (Chmelynski, 2006).

Multiple researchers have questioned the SET, including Evans and Pellegrini (1997) and Smith and Hagan (1980). Both sets of researchers argued that SET could not be the only reason for play, and the idea of built-up energy is physiologically impossible (Evan & Pellegrini, 1997; Smith & Hagan, 1980). However, the researchers all agreed that children become restless with long periods of being sedentary (Evan & Pellegrini, 1997; Smith & Hagan, 1980).

Multiple Intelligences Theory

Howard Gardner's Theory of Multiple Intelligence introduced a new approach to understanding intelligence that each person has varying preferred methods of learning and intelligences (Gardner, 1993, 1983; Gardner & Hatch, 1989). The intelligences, according to Gardner, are musical, linguistic, logical-mathematical, spatial, interpersonal, intrapersonal, bodily-kinesthetic, and naturalist (Gardner, 1993, 1983; Gardner & Hatch, 1989). The core idea of multiple intelligences assists people in recognizing strengths and weaknesses in humans, cultivating the strengths, and improving weaknesses (Gardner,

2006). Gardner found eight main intelligences, and there is a possibility to add more (Gardner, 2006).

Gardner (1993) theorized that humans possess intelligence in more than one area and learn and understand differently. The theory suggests people can favor or excel in one intelligence over others. The bodily-kinesthetic intelligence is the ability of the body to solve problems (Davis et al., 2011) and challenges the theory that mental and physical activity are independent of each other (Brualdi, 1996). However, Jensen (2005) demonstrates that when students are active and energized, the students' brains get the oxygen-rich blood needed for high-performance tasks. Physical movement or play can increase student energy, enhance engagement, and be less disruptive while active (Boone, 2016). Educators should be aware of students' strengths and weaknesses to provide effective instruction and interventions in the classroom.

Recreation Theory

German philosopher, Moritz Lazarus, crafted the Recreation Theory. This theory suggests academic performance increases with a break or play opportunities (Jensen, 2005; Kraus, 2005; Lazarus, 1883). Lazarus recognized playtime as a necessary break from academic work. This break time allows the brain to relax from consistently being on-task in the classroom (Kraus, 2005). Lazarus described the recess break's function as breaking from the structured mental work to renew the brain's used energy. Recess and breaks allow movement between on-task, learning activities, which increases oxygen flow to the brain. Hence, breaks from academics restore students' attention (Jensen, 2000). When teachers allow recreational time or breaks from academics, students feel

refreshed with a restored ability to acquire more information following the physical

activity (Jensen, 2000).

Instrumentalist Theory

   Karl Groos's Instrumentalist Theory of play suggests that play is vital and holds a

significant role in the child's development (Elkonin, 2005). Psychologist Karl Groos

theorized that play allows children to practice for adulthood through the playful imitation

of adult situations (Elkonin, 2005; Jensen, 2000; Verenikina et al., 2003). Groos

considered the practice of adult activities as fundamental for children to be mentally and

physically prepared for adulthood. (Elkonin, 2005; Verenikina et al., 2003).

Novelty Theory

   The Novelty Theory describes students' ability to be engaged in the classroom.

The Novelty Theory suggests that students become less interested or engaged as the work

in the classroom becomes less appealing (Evans & Pellegrini, 1997). However,

incorporating play allows students to have a break subsequently, and causes schoolwork

to become new and novel (Evans & Pellegrini, 1997). Thus, play counters the effect of

time on task, though offering more appealing activities for students to participate in

(Evans & Pellegrini, 1997).

Engagement- Cognitive Engagement and Development

   The research surrounding cognitive engagement is extensive, considering the

many factors of motivation and learning connected to this construct. Research examining

cognitive engagement considers the intrapersonal influence, which occurs within the

individual through examining the cognitive and motivational processes. Cognitive

engagement is the extent to which students expend mental effort in learning tasks

(Chapman, 2003). For example, cognitive engagement can involve students integrating new materials with prior knowledge and monitoring or guiding task comprehension using cognitive and metacognitive strategies (Chapman, 2003).

Student instruction should be engaging, where students actively participate and work collaboratively. Students must have the opportunity or option to engage with each other in the classroom. The Cognitive Immaturity Hypothesis (CIH) suggests that children and adults learn best from tasks spread over time rather than no breaks in academic activities (Evans & Pellegrini, 1997; Pellegrini & Bjorklund, 1996). The CIH suggests that children need breaks to play after cognitive tasks to reduce cognitive interference and facilitate optimal learning. In addition, the CIH suggests that unstructured play may maximize student performance by reducing cognitive interference (Tomporowski & Qazi, 2020). Cognitive interference is any occurrence that diverts a student's attention away from a cognitive task, interfering with the level of concentration, participation, and performance (Tomporowski & Qazi, 2020). Breaks during cognitive tasks should reduce cognitive interference and maximize learning (Tomporowski & Qazi, 2020). Children require more of a change in tasks. Solely changing from one academic, cognitive task to another is not enough to reduce cognitive interference in young students (Pellegrini & Bohn, 2005). Recess provides a break for students through an unstructured social and cognitive environment.

The immaturity of children's nervous systems keeps students from performing cognitive tasks at the level of older students or adults. The inefficiency of active participation can influence academic performance; therefore, children are highly susceptible to cognitive interference after sustained work periods (Dempster, 1992). The

cognitive immaturity of the brain simplifies what is analyzed. Researchers have found

that children overestimate their cognitive skills. For example, children believe they can

perform tasks at a higher level, leading to perceived success. Children's perceived

success allows students to attempt challenging tasks; this process can help children feel

successful and begin to accurately identify their skill level in upper elementary (Evans &

Pellegrini, 1997; Hertzig, & Farber, 2013).

Congruent to the CIH, Long (2019) suggests the classroom teachers should offer

various opportunities for students to participate in active cooperative learning structures,

reflections, and analysis over content memorization. The human brain requires process

time for new information, and the human brain can only learn a limited amount of new

information (Jensen, 2000). The brain needs time to form memory to remember

information (Jensen, 2000). Jensen stated:

> Strong evidence supports the connection between movement and learning.
>
> Evidence from imaging sources, anatomical studies, and clinical data shows that
>
> moderate exercise enhances cognitive processing. It also increases the number of
>
> brain cells. And as a bonus, it can reduce childhood obesity. Schools that do not
>
> implement a solid physical activity program are shortchanging student brains and
>
> their potential for academic performance. Movement activities should become as
>
> important as so-called "bookwork." We need to better allocate resources to
>
> harness the hidden power of movement, activities, and sports. This attitude has
>
> become more and more prevalent among scientists who study the brain. It's time
>
> for educators to catch on. (p. 67)

Piaget's play theory emphasized the role play possesses in children's representational language and cognitive development (Jackman, 2012). Cognitive development includes acquiring information to reason, understand, problem-solve, and improve language skills (Jackman, 2012). Piaget acknowledged and supported play's significant contribution to cognitive development and found that play aids children in developing thinking skills (Piaget, 1991, 1951; (Yawkey, 1973). Children practice language skills and development through breaks from academics or recess (Loebach & Cox, 2020; Piaget, 1991; Yawkey, 1973). Language skills are essential for academic success, and children's cognitive maturity and natural communication and development occur among peers during play (Jackman, 2012; Waite-Stupiansky & Findlay, 2001). Unstructured play promotes complex language development in children to communicate in ways that would not happen during structured play or instruction time (Green & Piel, 2010).

Piaget (1951) found children's playtime as an instrument to nurture children's thinking. The type of play students engage in during recess and breaks with unstructured play contributes to cognitive development and increased creativity. Children explore the world through pretend play and imagination, improving cognitive function (Piaget, 1951; Hoffman & Russ, 2012; Jackman, 2012). Yogman et al. (2018) found that countries that offer more recess to young students have found more significant and lasting academic success among the children. Play, especially unstructured outdoor play, enables students to learn through creating, imagination, and problem-solving created through exploration using acquired knowledge (Singer et al., 2006; Yogman et al., 2018). The trajectory of future jobs and societal needs will require innovative, creative people (Hoffman & Russ,

2012; Singer et al., 2006). Researchers suggest that play can improve cognition and language skills due to the creative, unstructured nature of recess, which allows children to make connections between oral expression and the written language (Bodrova & Leong, 2003).

Outside of play, educators utilize various effective pedagogical practices to increase student engagement with varying factors for each teacher and group of students, such as student engagement strategies, teaching styles, and differing grade levels. However, engagement pedagogies can include problem-based learning, service learning, cooperative learning structures, and group work (Bringle & Hatcher, 1996; Kagan, 1991). The method each teacher uses to incorporate the engagement practices will and should vary. Cognitive engagement research is extensive as there are various factors of motivation and learning and teacher and student preference.

Hirsch et al. (2018) found that when students have various chances to participate in academic learning through different opportunities to respond actively, the students choose to respond and engage. Teachers choose if students respond independently or as a group. Examples of opportunities to respond can include choral responses, gestures, thumbs up or down, independent response cards, and electronic student response systems (Hirsch et al., 2018).

With the increase of varied opportunities for students to respond, the researchers found that students are more likely to be engaged and exhibit on-task behavior, increased active participation, and academic achievement (Hirsch et al., 2018). Teachers can assess students formatively through the implementation of varied opportunities to respond.

Teachers can analyze the data from the student responses and adjust or differentiate instruction based on the needs of the students (Areekkuzhiyil, 2019; Hirsch et al., 2018).

Humans require process time for new information, and the human brain can only learn a limited amount of new information (Jensen, 2000). According to Piaget, play helps develop thoughts and knowledge. Children foster their thought structures by experiencing and adapting to the environment and situations during play (Yawkey, 1973). The brain needs time to form memory to remember information and learn (Jensen, 2000). Yogman et al. (2018) stated, "In human children, play usually enhances curiosity, which facilitates memory and learning" (p.6). Cognitive knowledge is not the only evidence or product of learning. People learn through acquiring and modifying skills, beliefs, attitudes, and behaviors (Schunk, 2008). Most frequently, the only measurement is the students' cognitive learning or academic performance in schools through standardized tests (Stansfield, 2011; Sutton, 2004). This approach, where students take standardized tests frequently to gauge cognitive learning, takes recess time out of the curriculum or decreases the time that schools allocate for a recess (Evans & Pellegrini, 1997; Rayburn, 2004). Subsequently, students are sedentary, sitting in class, with long periods of concentration to acquire and practicing new cognitive knowledge. The American Academy of Pediatrics (2013) policy on recess states that:

> cognitive processing and academic performance depend on regular breaks from concentrated classroom work, [which] applies equally to adolescents and younger children. To be effective, the frequency and duration of breaks should be sufficient to allow the student to mentally decompress. (p. 186)

Research suggests that physical movement increases students' energy, enhancing student engagement; students are less likely to be disruptive when active (Boone, 2016). Researchers have found that "exercise is strongly correlated with increased brain mass, better cognition, mood regulation, and new cell growth" (Jensen, 2005, p. 3). Many researchers have found exercise directly linked to the growth of new brain cells called neurogenesis (Lengel & Kuczala, 2010; Yogman et al., 2018). In addition, advanced technology has allowed the brain's activity to be scanned and analyzed to see the effects exercise has on the brain (Hillman et al., 2008). Prolonged attention to cognitive tasks results in mental fatigue and reduced blood flow to the brain (Abdelbary, 2017). According to Piaget (1991), play aids in developing children's processing and knowledge (as cited by Yawkey, 1973).

Researchers now can examine children's brain functions during physical activity and correlate them to student learning and development due to the recent brain imaging technology (Hillman et al., 2008). Moreover, the researchers have found that changes in the brain's physiology occur when children participate in physical activity. Ploughman (2008) examined changes in the brain found within electroencephalogram (EEG) tests. The EEG tests found increased neurotransmitters, oxygen saturation, and growth in the brain-derived neurotrophic factor, corresponding with children's cognitive development (Ploughman, 2008). Therefore, when students participate in breaks at school, it is suggested that the brain physiology changes can increase cognitive functions required for academic engagement and overall success (Ploughman, 2008). Elementary school schedule decision-makers should consider recess and breaks as essential elements of the school day when developing schedules, policies, and procedures for elementary students.

Social and Emotional Development of the Child

Recess is an essential factor in students' social, emotional, physical, and cognitive development, accompanying aiding in stress management and freeing excess energy resulting in increased expected and on-task classroom behavior (Bergen & Fromberg, 2009; Canning, 2007; Ginsburg et al., 2007; Singer et al., 2006). In addition, children advance their thought structures through experiences while learning to adapt to the play environment and social situations (Yawkey, 1973).

Unstructured, free play creates a unique atmosphere for children's social development and offers self-directed situations that could not occur during structured learning and cannot replace structured play or physical education classes (Jarett, 2002). Play at recess gives children an opportunity to learn through social interaction and exploration safely with adult supervision. In addition, play, mainly free play or recess, gives children a place to practice social problem-solving. Examples of social problems children could encounter during recess include how to play, whom to play with, where to play, or the rules of a game. This level of social problems can encourage children to cooperate and learn compromise. Social experiences at recess allow children to experience emotional intelligence, including empathy, situational flexibility, self-awareness, and self-regulation, which are imperative for adulthood social skills and interactions (Yogman et al., 2018).

Recess or free play may be one of the students' only opportunities to develop peer relationships (Dubroc, 2007). The CIH emphasizes peer play, indicating that play serves an essential role in childhood (Bateson, 2005). Recess encourages students to gain confidence through peer interaction while learning critical social skills necessary for

successful relationships (Pellegrini & Bohn, 2005). Furthermore, researchers have suggested that a young child's social interactions and competencies with peers can predict academic success (Jones et al., 2015; Pellegrini & Bohn, 2005). Therefore, incorporating self-directed free play, the classroom environment can be a more productive environment where student learning can occur (Adams, 2011; Barros et al., 2009; Samuels, 2009). During breaks, children create ideas and solve problems which contributes to cognitive development (Hoffman & Russ, 2012; Singer et al., 2006). For example, students can communicate and create games with rules or pretend play while in constant motion. Recess is a crucial component for the school day, as physical activity is connected to improved brain function, enabling increased student engagement and learning (Ramstetter et al., 2010; Yogman et al., 2018).

Researchers agree that recess reduces off-task fidgety behavior and has the opportunity to decrease depression (Panksepp, 2008; Rhea et al., 2017). Panksepp (2008) hypothesized that "inadequate opportunities for 'real play' throughout early development may lead later to depression and other failures in life, including a higher incidence of Attention Deficit Hyperactivity Disorder (ADHD)" (p. 61). Students have difficulties when expected to sit for long periods. Researchers have found that children who are frequently disruptive or have behavior issues may need additional breaks away from academics and more opportunities to engage in physical activity (Turner et al., 2013). Research indicates that having regular recess plays a significant role in classroom management, as recess creates a unique contribution to increased attention span (Adams, 2011; Canning, 2007; Jarrett et al., 1998; Samuels, 2009). Active play at recess requires students to be attentive and remain engaged to contribute to and continue to play

cooperatively (Adams, 2011; Canning, 2007; Stephens, 2009).

Ramstetter and Murray (2017) found that "Unstructured play, with adult supervision, gives children the opportunity to develop important social and emotional skills, which is essential to a well-rounded education" (p. 18). A study conducted by Singer et al., 2006, mentioned that students learn to be good citizens through recess social experiences. For example, a student can learn how to share toys, take turns on equipment, and resolve natural conflicts during play. Sharing and taking turns promotes managing emotions through learning to recognize other's feelings and needs (Canning, 2007; Jarett, 2002). The research implies that taking time to include unstructured play at school has many considerable benefits for students. Students can relieve the stress of academics while releasing energy and having real, natural social experiences while at recess.

Ramstetter and Murray (2017) explored the benefits of recess and found that teacher supervision allows students to have a safe place to practice and develop social and emotional skills. Student safety is a focus for teachers, parents, and school leaders. The American Academy of Pediatrics (2013) found that schools have chosen to ban games or discontinue recess due to student safety issues. However, the National Association for Sport and Physical Education (2010) mentioned that banning unsafe games may be necessary, but children should not have recess taken away. Schools can prevent safety issues while protecting recess for students (Sibley & Etnier, 2003).

Ramstetter and Murray (2017) mention that recess should be treated equally to adults who take breaks from the workday. The school district policies and practices should include a student-centered recess policy. Elementary education in the United States is missing the mark on providing students with equitable recess time and

contributing to a potential national health crisis concerning childhood obesity (Ramstetter & Murray, 2017).

Humans are social by nature and are not suited for survival alone. Humans depend on each other to share, exchange knowledge, and collaborate (Brewer, 2004). Teachers inherently teach social skills and promote positive interactions, but there is a need to incorporate social skills into the curriculum. School counselors can help with implementing social skills in the classroom. The social skills could include positive interactions with others, sharing, caring, empathy, negotiation, communication skills, respect, and problem-solving (Lynch & Simpson, 2010).

Schools must find time for recess to further promote social skill development in the curriculum. Recess promotes diverse social skill development. First, recess is a natural opportunity for free play, which creates an opportunity for students to form relationships outside the classroom and often with students who are not in the same classroom (Pellegrini et al., 1995). Furthermore, free play allows children to learn ways to interact with each other. During recess, students have the autonomy to choose where and with whom they want to play. Finally, free play, or recess, allows students to practice the social skills required to interact with others (Canning, 2007).

Recess provides children an opportunity to play out real-life situations through pretend play. Children create conflicts, arguments, and scenarios that cause worry. These scenarios during play enable children to develop regulation skills, creating a place to act out emotional experiences (Almon, 2009; Canning, 2007; Hoffman & Russ, 2012).

Many activities during recess can aid children's fundamental social and emotional development (Canning, 2007; Hoffman & Russ, 2012). Recess provides children the

opportunity to practice social skills. Free play allows children to create games and rules

through negotiating and changing the game rules to fit their current play situation

(Bodrova & Leong, 2003; Canning, 2007; Jarett, 2002). Such interaction facilitates social

practices through giving and taking command and asking and giving help. Some

situations, such as taking turns in games or sharing, can provide children the opportunity

to practice self-control, patience, or compromise (Bodrova & Leong, 2003).

Cooperative social interactions and learning to compromise are healthy life skills

necessary for emotional well-being and healthy relationships (Canning, 2007). Recess

games and pretend play allow students to learn how to have and control emotions

(Chmelynski, 2006; Hoffman & Russ, 2012). Emotional development, part of the whole

child, such as nurturing emotions, practicing coping skills, and managing feelings, is

indirectly related to academics and an essential component of success in education

(Casas, 2001).

Recess allows students to choose the activities to create or engage in, which

increases self-efficacy (Canning, 2007). Free play at recess is a social opportunity with

other students, granting children the autonomy to practice social skills with other children

while releasing energy and reducing stress (Canning, 2007; Jarett, 2002). Students can

form relationships with other students, reducing stress and positively influencing

classroom learning (Jarett, 2002). Congruently, researchers suggest a healthy amount of

stress is beneficial for children's development; contrarily, too much stress without proper

coping skills can have a significant, adverse effect on children's development (Jewett &

Peterson, 2002; Swick, 1987).

Researchers indicated that relationship building is key between teachers and students (Peterson, 2018; Rimm-Kaufman & Sandilos, 2019). The student-teacher relationship can, in fact, even be an indicator in the prediction of academic engagement and achievement (Rimm-Kaufman & Sandilos, 2012). One of the most powerful tools a teacher can utilize to create an engaging learning environment is relationship building with students (Peterson, 2018). Furthermore, students are more motivated to have high attendance if they know or feel their teacher cares about them or will help them succeed.

Gutierrez and Buckley (2019) stated, "Strong, positive relationships between teachers and students in the classroom are fundamental to promoting student engagement, social-emotional development, and academic growth" (p. 2). Furthermore, through improved school engagement and relationship building, these relationships can also improve student interest and academic achievement (Peterson, 2018; Rimm-Kaufman & Sandilos, 2019). Therefore, to help students succeed, become more motivated, and become more successful, an emphasis must be put on the building, fostering, and maintaining positive relationships. Congruently, cultivating positive relationships in the classroom has been found to assist students in adjusting to school, by increasing social skills, increasing academic success, and fostering academic growth (Gutierrez & Buckley, 2019; Rimm-Kaufman, & Sandilos, 2019).

School climate, safety, and well-being of students are equally important as building a relationship with students (Kutsyuruba et al., 2015). Therefore, school safety initiatives must be put in place to keep the school and all students safe as necessary, to foster student learning and healthy development (Kutsyuruba et al., 2015; Peterson,

2018). Additionally, research has found significant gains through increasing the school's climate (Rimm-Kaufman & Sandilos, 2019).

Students who feel the teacher is not supportive have less interest in learning and become less engaged (Peterson, 2018; Rimm-Kaufman & Sandilos, 2012). In addition, students are affected by their teachers' responses to them. Students who feel the teachers support them have better achievement outcomes on standardized math tests and English language arts grades (Karadaga, 2014; Rimm-Kaufman & Sandilos, 2012).

Gursky found that improved social skills and relationships directly impact student achievement (1998). Many of Gursky's participants mentioned that students spend more time learning when they feel safe in the open-ended survey and the follow-up interview. Gursky states, "The research really confirms common sense. The benefits boil down to better discipline, more individual attention for students, and opportunities for teachers to use more varied types of instruction that engage students" (1998, p. 17). Students respond to teachers' interactions and responses. Students who feel teachers' support have high engagement and achievement outcomes (Karadaga, 2014; Rimm-Kaufman & Sandilos, 2012).

Ramstetter and Fink (2019) stated, "connecting recess with these whole-school initiatives requires teachers to be included in preparation and adoption" (p. 36). School leaders can involve teachers in the recess policy, classroom break expectations and collaborate to identify specific steps that could turn a vision of a more engaged school into that which works in and out of the classroom. Thus, "ensuring that every child's recess is protected regardless of classroom behavior and that teachers have supportive leaders, peers, and strategies to carry out such an important policy" (Ramstetter & Fink,

2019, p. 37).

Research has indicated the positive outcomes from the distribution of leadership within schools (Antinluoma et al., 2018). Congruently, the distribution of responsibility can increase morale during teachers' professional learning, increased student engagement, and increased awareness of shared goals and commitments (Antinluoma et al., 2018).

Shared leadership is more beneficial for leaders, educators, and students (Antinluoma et al., 2018; Hansen & Lárusdóttir, 2015). Recent research suggests that school leaders should share the decision-making responsibility with other educational leaders and professional staff. Thus, teachers and students should have input regarding school policy for recess and break times within the guidelines of the state policies.

During a Ted Talk, John Hattie explained that not many situations have negatively impacted students' success in the classroom (2013). However, Hattie emphasized the need for school leaders to identify teachers' expertise, similar to how teachers find strengths in individual students (2013). Relationship building and identifying student strengths are as important as school leaders' ability to identify teachers' strengths. The practice of identifying the strengths of students and educators can be accomplished through relationship building and maximizing feedback to teachers regarding the positive impact they have on student success (2013). John Hattie spoke about the substantial positive impact teachers have when teachers work collaboratively to evaluate the positive effect on students (2013). Hattie explained the importance for teachers to illustrate what success looks like in the classroom for students (2013).

Conclusion

The literature review examined the history and existing research of recess, play, and elementary student breaks. Next, the researcher explained contemplative practices in the classroom. The researcher reviewed the theoretical framework, cognitive engagement and development, and the child's social and emotional development. The next chapter explores breaks in elementary schools and aims to verify teachers' perceptions to strengthen current best practices and literature while advocating for a more student-centered, equitable education approach to implementing breaks in elementary schools.

In Chapter Three, the researcher provides this study's methodology. The methodology includes the study's purpose and a description of the research design. Additionally, the researcher introduces the research sites, participants, and the population and sample. Consideration is also given to the data collection methodology and analysis, while the researcher describes the ethical considerations.

Chapter Three: Methodology

This qualitative study aimed to examine elementary teachers' perceptions regarding the influence breaks have on student engagement. Chapter Three begins with a description of the research sites, teacher, and classroom participants. Next, the researcher describes the qualitative approach and design of the study. Additionally, the researcher reviews the population and sample of this research. Finally, the researcher describes the instrumentation, data collection, data analysis, and ethical considerations.

Demographics, Site, and Participants

The study took place in a West-Central Missouri school district's two elementary schools. The researcher examined two kindergarten through fifth-grade Title-1 elementary schools through qualitative methods. The teacher population of this study was from the two rural Missouri elementary schools at the research site. The researcher did not collect student participants' ages, as it was not pertinent in this study. The researcher invited regular education classroom teachers and regular education classrooms from the participating elementary schools to volunteer to participate in the study during the 2021 spring semester. Teachers from two elementary classrooms volunteered to allow the researcher to conduct classroom observations. Each potential teacher participant had the autonomy to participate in the study (Bluman, 2015, p. 14).

The teacher population received the invitation to participate in the study during the 2021 spring semester. The researcher presented the teachers with the survey's Quick Response (Q.R.) code during a school professional development meeting. The elementary teachers had devices at the professional development meeting, and the researcher provided the teachers time to take the survey. The researcher intended to have at least 30

elementary teacher participants and observe two elementary classrooms three times each. The researcher collectively invited 45 teachers to participate in the teacher survey and 38 teachers completed the survey.

Research Questions

1. What are elementary teacher perceptions regarding the influence breaks have on student engagement as it applies to timing, length, and frequency?

2. How do the length, frequency, and timing of breaks impact student engagement based on observations?

Research Design

The researcher utilized a qualitative design to explore teachers' and students' perceptions of breaks and student engagement, including a teacher survey and classroom observations. The study's design intended to draw themes, reoccurring details, and conclusions from the two populations of teachers and classrooms. The researcher collected the qualitative teacher data through an online Qualtrics survey the researcher created. The teachers' responses on the open-ended questions and the researcher's classroom observations contributed to the flexibility of the research design. This fluid design provided a narrative supporting the research questions (Bloomberg & Volpe, 2016). Hence, the qualitative methodology presented an appropriate approach to the study's initial research and data collection, accompanying the literature review (Creswell & Creswell, 2018). Additionally, the researcher utilized classroom observations in two elementary classrooms to gain perspective from observing the students. Maxwell (2013) states, "observations can enable you to draw inferences about this perspective that you couldn't obtain by relying exclusively on interview data" (p.103).

Population and Sample

According to the Missouri Department of Elementary and Secondary Education's (MODESE) Missouri Comprehensive Data System, the school district had 38 elementary teachers, 498 elementary students with 100% free or reduced lunch prices during the 2019-2020 school year. The average length of service for the elementary school's educators was 11.2 years (MODESE, 2021). The school district follows a four-day school week program and has since 2018. Therefore, the school days start earlier and end later than the typical elementary school.

The researcher utilized a convenience sampling of the teacher and classroom population within two elementary schools of the same district (Bluman, 2008, p. 13; Fraenkel et al., 2019). Convenience sampling enabled the researcher to include all willing participants in the study in the chosen elementary schools. Contrarily, the study was limited to small number of potential participants due to the number of teachers at the research site.

The sampling included two elementary schools in a local, rural Missouri school district. The participating elementary schools within the school district had small class sizes and, typically, one to two teachers per grade level at the elementary level. Thus, the researcher hoped for high participation from the chosen school district teachers to provide a valid result (Fraenkel et al., 2019). However, Music, Art, Physical Education teachers, administrators, and special education teachers were excluded from this study, as there were not enough participants in each area to represent each population adequately. Furthermore, the mentioned educators were not as involved, therefore as knowledgeable, in recess as the classroom teachers are.

Students excluded from the study included COVID-19 quarantined and isolated students from the classroom observations due to being absent during the study. The ages of the participants were unknown to the researcher, as it was not a significant piece of information in this study of all the participating elementary teachers and students. However, the researcher recorded the grade levels of the classrooms observed. Forty-five teachers received the survey; however, 38 teachers completed the Qualtrics survey. In addition, the researcher conducted classroom observations in a first-grade classroom and a third-grade classroom. The school principal chose the two classes. The criterion for the two classrooms was to have different scheduled recess times.

Instrumentation

According to Fink (2017), surveys are most effective when the collected data reflects participants' perceptions and knowledge of a topic. Before the initial data collection phase, the researcher obtained approval from the Lindenwood University Institutional Review Board (see Appendix B). The researcher sent the participating school district a recruitment email (see Appendix C) and a recruitment email (see Appendix D) for the teacher survey. The researcher created an instrument to collect data for this study. First, the researcher collected the qualitative data through an online teacher survey utilizing Qualtrics (see Appendix A). Additionally, the researcher conducted classroom observations in two elementary classrooms.

The qualitative, open-ended teacher survey was designed and examined by the researcher through Qualtrics (see Appendix A). The researcher designed the questions to gather descriptive information to achieve a robust triangulation of data and a comprehensive understanding of the results (Creswell & Creswell, 2018). The Teacher

Survey was piloted by the researcher and analyzed by the dissertation committee to ensure validity. The researcher revised the teacher survey and tailored it to meet this study's research questions while also ensuring clarity. The Qualtrics instrument consisted of five open-ended questions, one multiple-choice question, nine questions using a five-point Likert-type, and one optional response gift card drawing submission. The Likert-type scale questions, an attitude scale, included response options, Strongly Disagree, Disagree, Neither, Agree, and Strongly Agree (Burkholder et al., 2020; Fraenkel et al., 2019).

Data Collection

The researcher obtained Lindenwood University IRB and site approval. Upon approval, the researcher communicated with the chosen elementary school leaders to begin the data collection process.

The researcher shared the Qualtrics survey link with the elementary school teachers during a staff meeting. Additionally, the researcher provided an email via the school's superintendent inviting teacher participants to this study through the Teacher Recruitment email to the potential elementary teacher participants (see Appendix D). The researcher received anonymous responses from the Qualtrics survey; however, teacher participation was low. Therefore, the researcher was invited to a school professional development meeting to speak and ask teachers to participate in the survey. The researcher kept all responses on a password-protected laptop used only by the researcher. In addition, the researcher stored a second copy of all Qualtrics data on an external hard drive in a fireproof safe to which only the researcher had access.

The researcher communicated with the participating elementary principal to schedule the classroom observations. The researcher and elementary principal chose potential dates and times to schedule and confirmed the two classroom teachers. Parental consent and student assent were not required, as there were no interactions with the students during the classroom observations, and the researcher did not implement classroom interventions. The researcher observed the two classrooms two times each during the morning and afternoon. The researcher organized and analyzed the teacher survey and classroom observation data according to research questions after conducting the classroom observations.

Data Analysis

The researcher organized the data with the related research question:

RQ 1: The researcher provided an email via the school's superintendent inviting teacher participants to this study. The email provided a survey link to the Qualtrics teacher survey. Consenting teachers took the survey inside the Lindenwood University-managed Qualtrics platform. This platform allowed for confidentiality and a secure place to store data. The survey data was automatically collected through Qualtrics, downloaded, and analyzed by the researcher. First, the researcher analyzed the data; according to Hatchet (2002), "data analysis is a systematic search for meaning" (p. 148).

To effectively analyze the teacher survey data, the researcher searched for themes and commonalities through reading, highlighting, combining like responses, rereading, and building themes. Next, the researcher combined all highlighted phrases, or codes, to form the themes (Burkholder et al., 2020). Finally, the researcher determined that each of the themes was reasonable though analyzing the evidence supporting the themes. The

Qualtrics teacher survey responses were analyzed and synthesized (see Appendix A).

First, the researcher analyzed the open-ended question responses to find commonalities,

differences, and themes. Next, the Likert questions were analyzed utilizing the ordinal

data to gain an overall impression, interpreting teacher perception. Finally, the researcher

individually analyzed each question's response to gain deeper insight into specific

attributes. The researcher's data analysis procedure coincides with Creswell's inductive

and deductive data analysis process (Creswell & Creswell, 2018).

RQ 2: The researcher coordinated times for classroom observations with the

school principal. The researcher and elementary principal corresponded to ensure

appropriate observation times. The school principal chose the first-grade and third-grade

classrooms to conduct observations. To ensure no disruptions in student learning or

natural play, the researcher sat in the back of the classrooms and the recess playground

during the observations. The researcher took notes of student actions, words, and other

occurrences during each observation to gain a unique perceptive that otherwise would not

have been conveyed (Maxwell, 2013). Following the observations and data collection, the

researcher analyzed the observation notes from the classroom and recess observations,

looking for commonalities, differences, and themes (Creswell & Creswell, 2018). The

researcher followed a similar data analysis procedure compared to Research Question

One. The researcher reflected on the observations and observation notes, searching for

meaning (Hatchet, 2002). The researcher read the observation notes multiple times while

creating themes (Burkholder et al., 2020; Creswell & Creswell, 2018). Finally, to ensure

no missing pieces and the themes were congruent to the observational data, the researcher

reflected on each observation, set of notes, and themes (Burkholder et al., 2020; Creswell & Creswell, 2018).

Ethical Considerations

The researcher had no affiliations with the participating schools. The researcher did not know any students or document any student names during the classroom observations. Eichhorn and Matkin (2016) stated, "Any information that can be directly attributed to a student (name, email address, student I.D. number, or pattern of course interaction) must be isolated and protected" (p. 33). The researcher made all the observation data digital on a password-protected account and location.

Conclusion

This chapter explained the methodology for this qualitative study. The researcher examined teacher perceptions and students in the classroom regarding the influence breaks have on student engagement as it applies to timing, length, and frequency. In addition, the researcher collected and analyzed teachers' and students' qualitative data from the teacher survey and student journal responses during the Spring 2021 semester. The following chapter will present the results of the qualitative study.

Chapter Four includes the presentation of the collected data. The researcher features a discussion of the qualitative teacher survey responses. Finally, the researcher synthesizes the student journal and secondary data.

Chapter Four: Results

This qualitative study aimed to examine the perceptions of elementary teachers regarding the influence academic breaks had on student engagement. The researcher investigated the differences, similarities, correlations, and reoccurring themes in teacher perceptions of breaks and student engagement according to survey responses to answer Research Question 1 (Kraus, 2005; Lazarus, 1883). Additionally, the researcher analyzed the impact the time of day and length of a break(s) has on student engagement and the beliefs teachers have regarding break timing and student engagement in the elementary school. To answer Research Question 2, the researcher conducted classroom observations at one of the elementary schools within the participating school district. The researcher approached the classroom observations to find reoccurring details, draw themes and conclusions from the two observed classrooms.

The researcher focused on the time of day and length of the break(s) while analyzing how the break(s) impacted student engagement through a researcher-created qualitative survey and classroom observations. As mentioned in Chapter Three, the researcher investigated, collected, and explored the differences, similarities, correlations, and reoccurring themes in teacher perceptions of breaks and student engagement according to all qualitative data (Kraus, 2005; Lazarus, 1883). Additionally, the researcher observed two elementary classrooms in the participating rural school district. The researcher aimed to provide practical guidance and empirical data to the participating school district through reviewing the teacher responses, analyzing the classroom observation data, and formulating a plan based on the results. Furthermore, participants

could directly benefit from this study's findings by implementing classroom and recess

practices based on the suggestions and results.

Ultimately, this study's results can provide educators and leaders with current

research and findings to better serve students. Chapter Four explains the detailed

qualitative results which emerged from the teacher survey data and classroom

observation data. The researcher used the data from the surveys to find commonalities

and themes within the survey responses. Five main themes emerged from the teacher

survey data analysis: (a) the necessity of scheduled breaks, (b) teacher response to student

needs, (c) student academic success, (d) student social and emotional health, and (e)

behavior. Each theme reflected responses from elementary teachers. Each teacher and

grade level had varying details in the responses, but the teachers shared many common

perceptions as a group.

The researcher used the data from the classroom observations and found three

themes: (a) engagement and classroom management, (b) supervision and student

engagement, and (c) student behavior. The three themes reflect the culmination of

classroom observation data collected from a first-grade and a third-grade classroom.

There are similarities in the two classroom observations, but many specific details vary

between the two classrooms observed. Finally, the researcher provides a thorough

analysis of the teacher survey responses and classroom observations in response to the

research questions.

Qualitative Results

The researcher examined the elementary school teacher's perceptions through an

open-ended survey. The researcher chose to examine a rural, Title-1 West-Central

Missouri school district's elementary schools. The researcher surveyed teachers from the two kindergarten through fifth-grade schools, and 38 elementary educators completed the survey**.**

Research Question One

What are elementary teacher perceptions regarding the influence breaks have on student engagement as it applies to timing, length, and frequency?

Survey Questions 1-3; 5-6

Through the open-ended survey, the teacher survey responses provided qualitative data for Research Question One. The data from Survey Questions 1-3 and 5-6 provided the following themes:

Theme 1: The Necessity of Scheduled Breaks.

Teacher responses revealed a common theme of the importance of scheduled breaks based on engagement patterns, student behaviors, and classroom performance. The teacher participant responses revealed a trend throughout the survey regarding the importance and necessity of scheduled breaks throughout the school day. In most cases, the scheduled breaks teachers referred to was recess. In the survey, 23 (60%) of the 38 responding elementary teachers mentioned that students "need" breaks scheduled during the school day. Teachers mention the engagement trajectory throughout the day where students seem to be "sharp" in the morning and "fatigued" in the afternoon; therefore, students seem to be "ready for a break by the time lunch and recess come around." Many comments demonstrated that recess is a necessary, scheduled break for students to release energy and take a break from academic tasks in the morning and afternoon. A teacher stated, "Afternoon breaks are a must for student engagement. It's a

time of day they tend to lose focus and need that time to get back on track." While

another participant stated, "Morning (recess) gets the students going and ready.

Afternoon (recess) helps keep them engaged as they get exhausted from the day."

Another teacher stated, "I've noticed that their ability to come back to learning is stronger

in the morning than the afternoon. Often in the afternoon, it's harder to get them focused

back on learning." Typical responses included that dispersed, scheduled academic breaks

throughout the day are visibly necessary for students, as there is an expectation for

students to be engaged, focused, and be on-task throughout the day.

In addition, teacher participants revealed that scheduled breaks positively impact

student behaviors in the classroom. The unified comments suggest that breaks decrease

unwanted or distracting behaviors in the classroom. Teacher survey responses included,

"I feel that providing breaks has a huge impact on increasing student engagement as well

as decreasing distracting behavior. Giving students that break allows them to reset and be

ready to work when it is time." The comments suggest that students need recess to be

fully engaged in the classroom while suppressing distracting behaviors.

The teacher survey participants emphasized the number of breaks; on the survey,

12 of the 38 responding teachers (31%) referred to the importance of recess and called

specific attention to the two types of breaks, recess and brain breaks. Teachers mentioned

the importance of scheduled breaks, or recess, dispersed throughout the day. The research

site follows a 4-day school week structure; therefore, school days are longer, and

elementary students have two scheduled recesses each school day, one 20-minute recess

in the morning and one 20-minute recess in the afternoon. The participants expressed that

younger students need to have both scheduled breaks. Typical responses included, "I

think two recesses is essential for elementary students, especially when it's a four-day school week and the days are longer." Referencing recess, another teacher stated, "My class has recess in the morning and afternoon, and it seems to work nice. They need the break in the morning and by the afternoon." Teachers referred to brain breaks as breaks not necessarily scheduled and more based on student needs. A teacher stated that brain breaks "should be quick and focused after a time of targeted instruction. They should happen throughout the day." Teachers expressed the need for multiple breaks throughout the day "Students need breaks throughout a day, just as adults need breaks throughout a workday. The younger the child, the more breaks they need."

The comments demonstrated teaches perceptions regarding the importance of the two types of breaks. The unified comments of elementary students needing multiple breaks raise the possibility that having two scheduled recesses daily could increase student engagement.

Theme 2: Teacher Response to Student Needs.

Teacher astuteness, decision-making, and response to student behavior and behavior patterns play a crucial role in student engagement. Teacher participants associated how teachers respond to student needs with breaks within the classroom to increase student engagement. Twenty-three (60%) of the 38 participants mentioned that teachers use their professional judgment to meet student needs with classroom-based breaks between recess times. Teacher-implemented, embedded classroom breaks can meet class and student needs based on the teachers' environmental awareness. One participant stated, "A teacher should be able to use their professional judgment to

determine when/how many breaks there are. Again, a 2-5-minute break is not going to alter the instructional time."

Teachers provide engaging materials and "read the room" through observing student behaviors and cues while facilitating learning. Teachers constantly gauge student engagement levels and provide the appropriate responses, including breaks, based on expertise and professional judgment. A participant stated, "Some days we need more breaks because of unwanted behaviors or focusing." Student engagement may vary, and students may react differently to specific activities and content; however, teachers can provide breaks based on the needs of the students. One teacher stated:

> I think that break amounts do not need to be consistent every day. I think a recess break is necessary and should be kept at a consistent time and length, but breaks need to be given when seen fit. If the class is focused and engaged in an activity, I do not think stopping for a break will improve the outcome. It can often get them off task, and they have a hard time refocusing. Other times, students need multiple breaks throughout the day. I find that transition times can be the best for breaks and between activities that are not always consistent, so I do not think the number of breaks should be set in stone. They should be based on class needs.

Another participant stated, "Providing breaks can decrease behavior if, again, they are scheduled or planned with purpose and intentionality. Students who lose focus or interest when a task goes on too long can cause disruption and misbehave." As the teachers mentioned, embedded classroom breaks from academic tasks do not have to be scheduled but meet the students' current, ever-changing needs.

Elementary teachers spend most of the school day with students in the classroom; therefore, teachers have a working relationship with the students. Teachers mentioned predictable student behavior patterns and engagement levels at specific times of the day; hence teachers incorporate embedded brain breaks into class time to meet the needs of the students. Typical responses included, "Students need to have at least a ten-minute break every 50 minutes. Usually, I will do this after instruction before independent work." Another teacher explicitly mentioned responding to student behavior and engagement patterns through contemplative practice breaks. Teachers mentioned the preference of contemplative practice to decrease distracting behavior, "positively impact student engagement," and meet student needs over a brain break that would increase the heart rate. A participant stated, "I am more of an advocate for relaxing or mindfulness breaks, and occasionally these help the class to settle in the afternoon." Another teacher found that:

> Allowing a break such as yoga or meditation where it is quiet and relaxing helps them to focus better than dance or game breaks. When the break gets them hyped up, it is hard to get them to settle down and refocus again. The breaks that increase the heart rate tend to increase distracting behaviors.

Congruently, some teachers found that the timing of breaks is crucial to meeting student needs. Teachers agreed that breaks could be disruptive to engaged students if taken at the wrong time, too frequently, or the wrong type of break. Teachers explained how breaks could assist students during the transition from subject to subject or from direct instruction to independent work. One teacher stated that "Some students are so focused that a break interrupts that concentration; however, some do need the breaks."

Teachers also agreed that students have a more difficult time staying engaged in the afternoon. Many teachers mentioned adjusting the type of instruction at specific times of the day to accommodate the predictable student engagement patterns. In a participant's words, "They begin to get tired/distracted/hungry sometimes about 50 minutes before lunch, but we persevere and try to make learning very active and engaging." Many comments included, "Allowing an afternoon recess sometimes feels necessary because students are so fatigued with academics at that point."

Teacher participants mentioned that there is a visible difference in student behavior before and after a break. Teachers can adjust and incorporate a break within the classroom to meet the needs of the students. A teacher stated, "I do feel that it greatly affects the increase in student engagement as well as decreasing distracting behaviors. I see the difference in the students. I know when they need a break by their behavior." Another teacher stated, "I also take brain breaks throughout the day when I can tell the kids are ready for one. Wiggle bottoms, getting touchy, etc." The participants' unified comments demonstrate that teachers accommodate students with breaks based on the needs of the students observed by the teachers. Teachers visibly notice a difference in student behavior after completing a break.

From the 38 teachers who responded to the survey, 15 (39 %) referred to the age or grade level of the student when asked their opinion regarding the number of breaks elementary students should have. The unified responses were within the theme of teachers respond to the student needs within each grade level and classroom at the elementary level. A teacher participant mentioned that the number of breaks depends on the grade level and stated, "The younger they are, the more breaks they need." While

another participant responded, "Age affects the number of breaks students need. So lower elementary need more than upper elementary." The comments demonstrated that teachers are aware of the capabilities and differences of students in the elementary grade levels as it pertains to responding to student needs with breaks. The teacher responses indicated that student break frequency varies based on the age and grade level of the students as teacher responses suggested and congruent to research (American Academy of Pediatrics, 2013), the number of breaks needed to decrease as student age increases. However, 15 of the 38 teachers (39%) agreed that breaks could be taken away from students on a Likert-type scale question of the teacher survey.

Comments from the responding elementary teachers indicated that teacher decision-making of teacher-implemented, embedded classroom breaks based on a student-centered approach. Teachers expressed an environmental awareness based on student behavior patterns, age, and even a situational or case-by-case approach to meet the student's needs. The current study results demonstrated that breaks inside the classroom and outside of the classroom serve an essential purpose and that elementary classrooms have space for students to take breaks within the classroom.

Theme 3: Student Success.

Teacher participants recognized breaks as a method to increase student success in the classroom. Teachers answered slightly differently. However, the participants referred to both recess and brain breaks as breaks that increased student success. Of the 38 teacher participants responding to the survey, 18 (47%) called attention to increased focus after a break, and 16 (42%) mentioned increased engagement in the classroom, while 2 (5%) mentioned that brain breaks do not help severe behaviors.

Many of the survey participants called attention to how breaks aid students' and teachers' recharge, "come back ready to the academic task refreshed," and ready to learn in the classroom after a break. The respondents agreed that after breaks, there is a shift of increased focus in the classroom. Teachers agreed that that most students work harder after breaks. Another teacher stated, "Engagement is a crucial factor in education and, giving breaks is responsible for a great portion of the teachers' overall success with the engagement in class." Teacher responses suggest that student breaks assist with students' overall academic success and productivity in the classroom.

Many participants indicated that breaks increase student concentration, suggesting that recess and brain breaks improve student cognition. Multiple teachers mentioned that breaks help students remain engaged and focus on schoolwork. Teachers observed that after breaks, students had increased interaction and learning in the classroom. A teacher mentioned that students require breaks, as "it is their time to process everything they have learned." Typical teacher responses included how breaks benefit students after breaks. Many teachers agreed that "students participate and engage more after brain breaks." A participant mentioned that breaks keep students "engaged and interested in what they are learning." While another teacher stated, "after we take our breaks, students can focus better. They are able to sit better in their seats and concentrate on work." Teachers recognized the importance breaks have on students and agreed that students need breaks to be entirely successful in the classroom.

Several participants compared student breaks to adult breaks. The teacher survey data indicated that adults need and benefit from breaks in the workplace, just as students need and benefit from breaks. The teachers mentioned increased focus and concentration

on schoolwork and during testing. A teacher stated that even the implementation of small, meaningful breaks "can be an extremely effective break and not take more than a few minutes, reaping huge rewards in engagement and focus." Another participant stated, "Like adults, students need a mental break, so they can regather their thoughts, so they can possibly concentrate more effectively." Most teachers agreed that student and adult focus and time-on-task improves after breaks. A teacher stated. "Just like adults, kids have a limited amount of time where they can maintain their focus/concentration without needing some little break." While another participant stated, "Breaks have a positive impact on student engagement and behavior. Just like adults need breaks, students need breaks to help stay focused and on task." Teacher's participants related adult breaks to student breaks. Participants mentioned that adults need breaks in the workplace to be more productive. Several participants indicated that providing opportunities for students to have a break from academics increases student engagement and concentration. Allowing time for student breaks during the school day, including recess and brain breaks, could increase student's academic success.

Teachers indicated that students had increased academic success in the classroom after a break. Teachers understood the importance of adult breaks at the workplace and applied that same idea to student breaks during the school day. Teachers mentioned that without frequent breaks throughout the day in elementary classrooms, student engagement and learning decrease. Participant responses demonstrated that student learning increases after breaks, as students feel refreshed, focused, and have increased concentration. Teacher responses demonstrated that excessively long breaks are more distracting for students but taking small breaks benefits student engagement. A teacher

stated, "quick, short breaks several times throughout the day has great benefits." Other

participants indicated that after breaks, student engagement increases. The comments

regarding student engagement and success in the classroom after breaks indicated that

teachers felt that elementary students benefit from frequent breaks throughout the day.

Results also suggested a possible relationship with the frequency of breaks needed to

ensure student success and the characteristics of lessons and tasks implemented

throughout the day. For instance, students may require more breaks during an intense test

compared to an interactive lesson. Overall, teachers agreed that student success and

engagement in the classroom increases after breaks.

Theme 4: Student Social and Emotional Health.

Teacher participants shared the impact breaks have on students' social and

emotional health. Two concepts emerged through the survey data: (a) how students view

or feel about school and (b) the importance of student relationships and social

interactions. Participants who felt that breaks impact how students feel about school

spoke of students being excited and looking forward to the breaks in the school day, and

as a result, suggesting that students are more likely to attend school. One participant

explained, "If they feel they are not just working the whole time, they will want to come

more." Teachers explained that students positively view school and "know school is not

boot camp." A teacher stated, "I think breaks often provide excitement and fun to the

school setting."

Similarly, teachers mentioned that breaks from academics prevent students from

feeling "burnt out." Teachers discussed that students appear to be the most relaxed during

breaks. Teachers have discovered through experience that students view recess as "the

most fun part of their day." Student willingness, positive attitude, and excitement characterized the teachers' opinions regarding the impact breaks have on how students feel about school.

Teachers also found breaks to have an impact on student relationships and social interactions. Teacher participants perceived breaks as a needed opportunity for students to have social time with peers outside of classwork. A participant said, "I believe this helps because it gives them time to socialize, get up, stretch and move. Even when we have breaks, such as recess, we are still teaching them how to problem solve and learn social skills." According to respondents, students enjoy the time away from schoolwork to form friendships and bonds with peers. Teachers agreed that breaks provide students time to play and socialize. A teacher stated, "breaks allow students the time for socialization and then be able to get back to work."

A participant stated, "I think breaks make school more enjoyable for students, and therefore I think it would have a positive impact on student attendance." The unified teacher comments of the favorable impact breaks have on student feelings, and the overall view of school raises the possibility that breaks could positively influence student attendance.   From the group of 38 elementary teacher survey participants, 23 teachers (60%) said that academic breaks positively impact student attendance when asked their perception regarding the influence breaks have on student attendance. A teacher stated, "I think breaks often provide excitement and fun to the school setting. I could see this encouraging students to come to school." While another participant stated, "I feel breaks help students with friendships which influences their attendance in a positive way."

Theme 5: Behavior.

Teachers reported the social and emotional health benefits of breaks to elementary students, including decreased unwanted behaviors. Fifteen (39%) of the 38 teachers specifically mentioned the favorable impact breaks have on unwanted behaviors in the classroom. Respondents felt that breaks allowed students to have a safe place to release energy, move around, play, and decrease distracting behavior.

Teacher responses revealed that breaks throughout the day impact student behavior in the classroom. A participant stated, "I absolutely feel that having breaks and moving bodies increases engagement and decreases behavior because the students can get their energy out and channel it towards the break instead of other students." The responses demonstrated how breaks away from classwork assist elementary students to learn and decrease unwanted behaviors. Teachers suggested that expected student behavior increased after breaks, and students look forward to or expect breaks. A respondent stated, "There are many students that a break is essential to their ability to learn, and absolutely takes away from behaviors by giving them a break." The survey results suggested that students do not have many opportunities to release energy outside of recess. Another teacher felt that breaks "decease distracting behavior in early childhood students as physical activity is essential for young learners."

Survey Question 4 and 7

Survey Questions 4 and 7 responses further review overall teacher perceptions regarding the impact breaks have on student engagement.
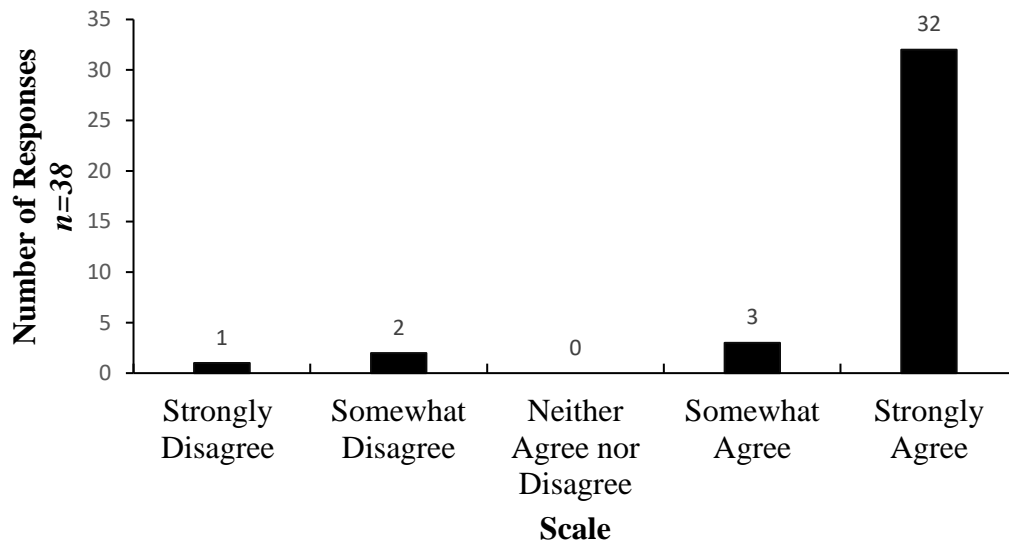
Survey Question 4.

The teacher participants rated various statements regarding student engagement in

the teacher survey. The participants shared their expert perceptions utilizing a five-point

Likert-type scale model in Survey Questions 4. A- I.

Survey Question 4.A.

Survey Question 4.A. states: Breaks are Important for Student Engagement. Of

the 38 responses, 32 strongly agreed, and three somewhat agreed, resulting in 92% of

participants agreeing that breaks are important for student engagement (see Figure 1).

While two teachers somewhat disagreed, and one strongly disagreed that breaks are

important for student engagement.

Figure 1

*SQ4.A) Breaks are Important for Student Engagement*

Note. This chart refers to Survey Question 4.A results regarding the importance of breaks,
according to total *N*=38 teacher participants.

Survey Question 4.B.

Survey Question 4.B. states: Breaks can be taken away from students: According to the survey, of the 38 teachers who responded, 18 teachers disagreed that breaks can be taken away from students (see Figure 2). Of the 18 responses, ten strongly disagree, and eight somewhat disagree. Five teachers neither agreed nor disagreed. In comparison, 15 teachers agreed that breaks could be taken away from students. Of the 15 responses, 13 somewhat agree, while two strongly agree.

Figure 2.

SQ4.B) Breaks Can be Taken Away from Students
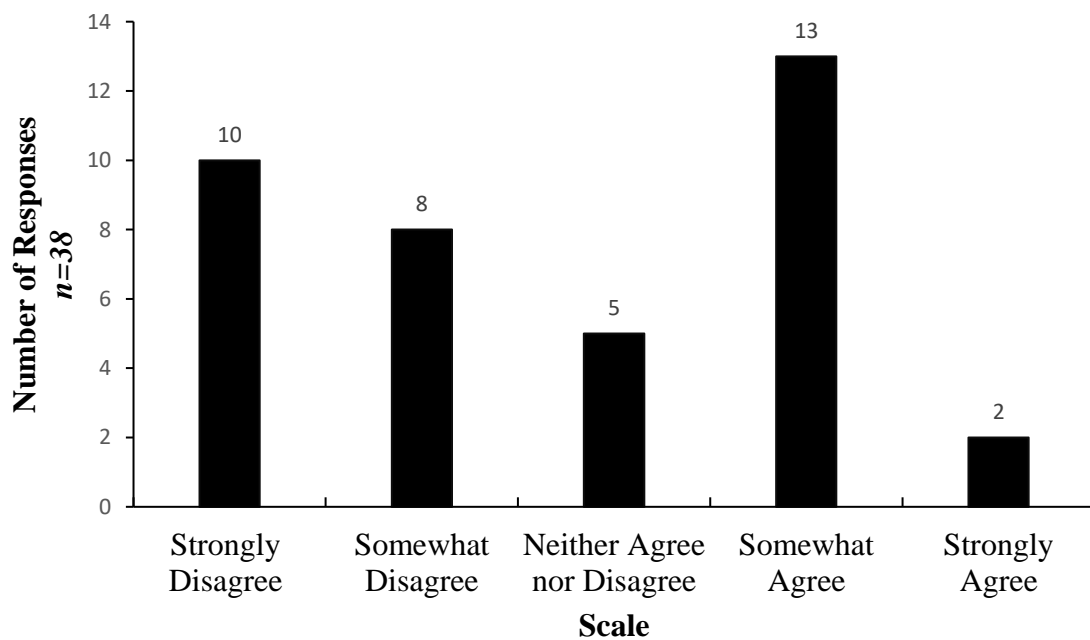
Note. This chart refers to Survey Question 4.B results regarding taking breaks away from elementary students, according to total *N*=38.

Survey Question 4.C.

Survey Question 4.C. states: Students want to participate in breaks. Ninety-seven

percent of teachers, 37 out of 38, felt that students want to participate in breaks (see

Figure 3). Of the 37 teachers who agreed that students want to participate in breaks, 27

strongly agreed, and ten somewhat agreed. While only one teacher disagreed that students

want to participate in breaks.

Figure 3.

SQ4.C) Students Want to Participate in Breaks
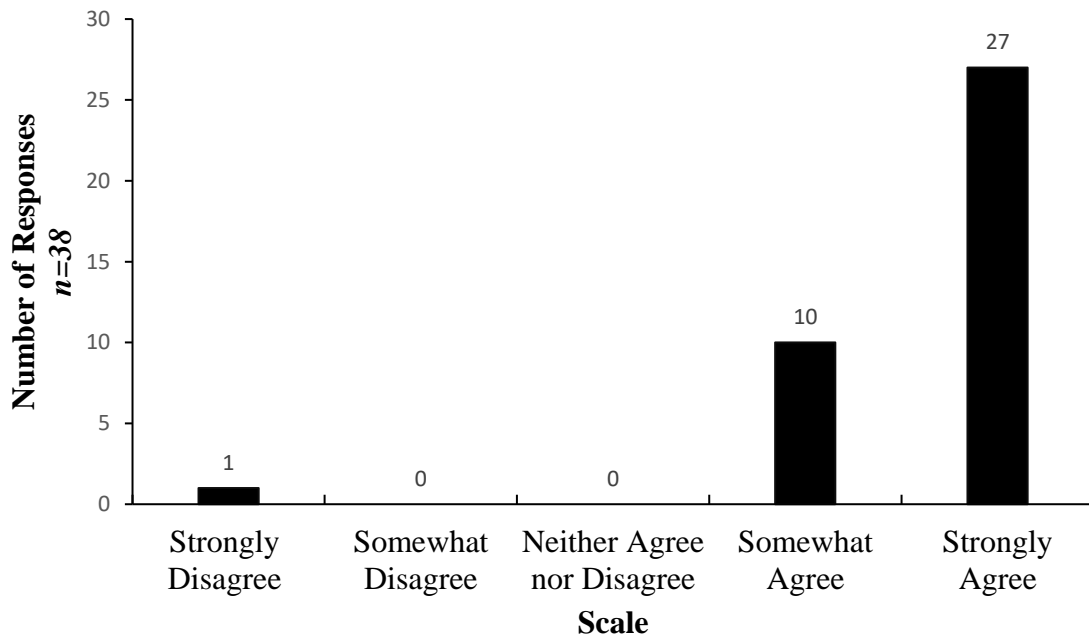
Note. This chart represents teacher perceptions regarding student willingness to take a
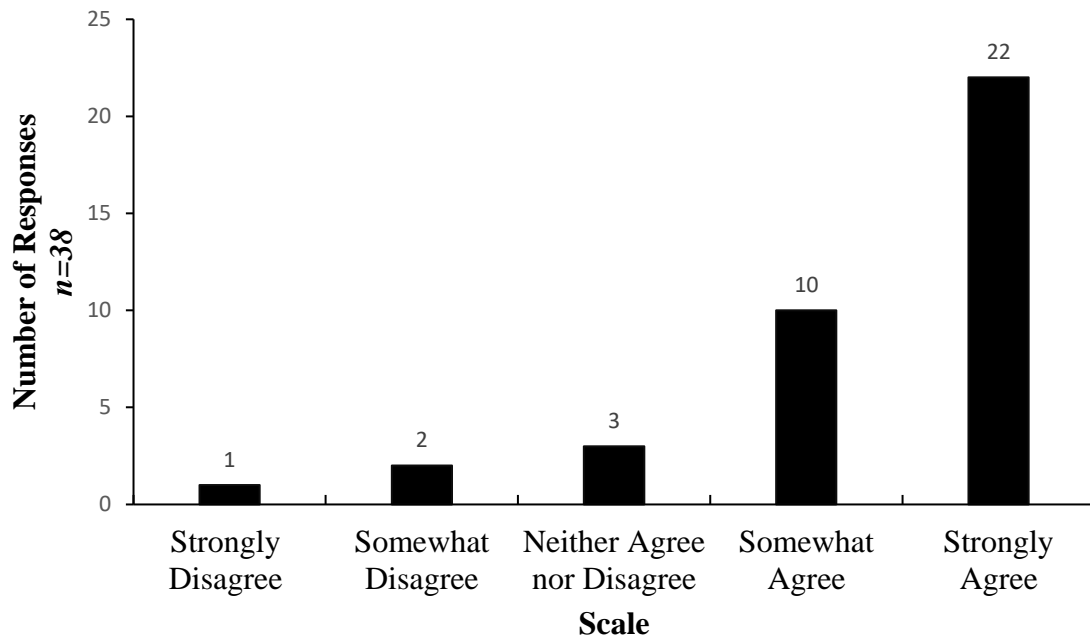break collected from Survey Question 4.C, according to total *N*=38 teacher participants.

Survey Question 4.D.

Survey Question 4.D. states: Student attention increases after a break. Most

participants agreed that student attention increases after a break. Eighty-four percent, or

32 out of 38 participants, expressed student attention increases after a break (see Figure 4). Three teachers neither agree nor disagree. Only two teachers disagreed, and one teacher strongly disagreed that student attention increases after a break.

Figure 4.

SQ4.D) Student Attention Increases after a Break

Note. This chart refers to Survey Question 4.D results regarding teacher perception on student attention after a break, according to total *N*=38 teacher participants.

Survey Question 4.E.

Survey Question 4.E. states: Students are less distracted after a break. According to the survey results, 30 of the 38 respondents felt that students are less distracted after a break (see Figure 5). Of the 30 responses, 12 strongly agreed, and 18 somewhat agreed. Five teachers were neutral, while three teachers somewhat disagreed with the survey question.
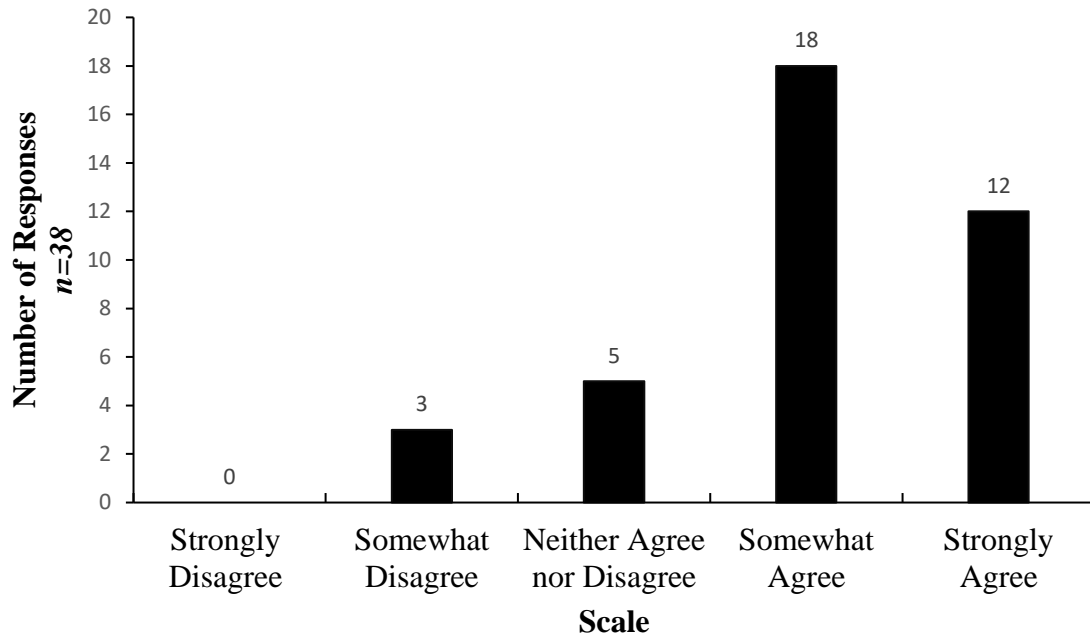
Figure 5.

SQ4.E) Students are Less Distracted after a Break

Note. This chart refers to Survey Question 4.E results regarding teacher perception on student distraction after a break, according to total *N*=38 teacher participants.

Survey Question 4.F.

Survey Question 4.F. states: Morning breaks positively impact student engagement. Seventy-four percent of teachers, 28 out of 38, felt that morning breaks positively impact student engagement (see Figure 6). Of the 28 respondents who agree, 13 strongly agreed, and 15 somewhat agreed. Six participants were neutral, while four somewhat disagree.

Figure 6.

SQ4.F) Morning Breaks Positively Impact Student Engagement
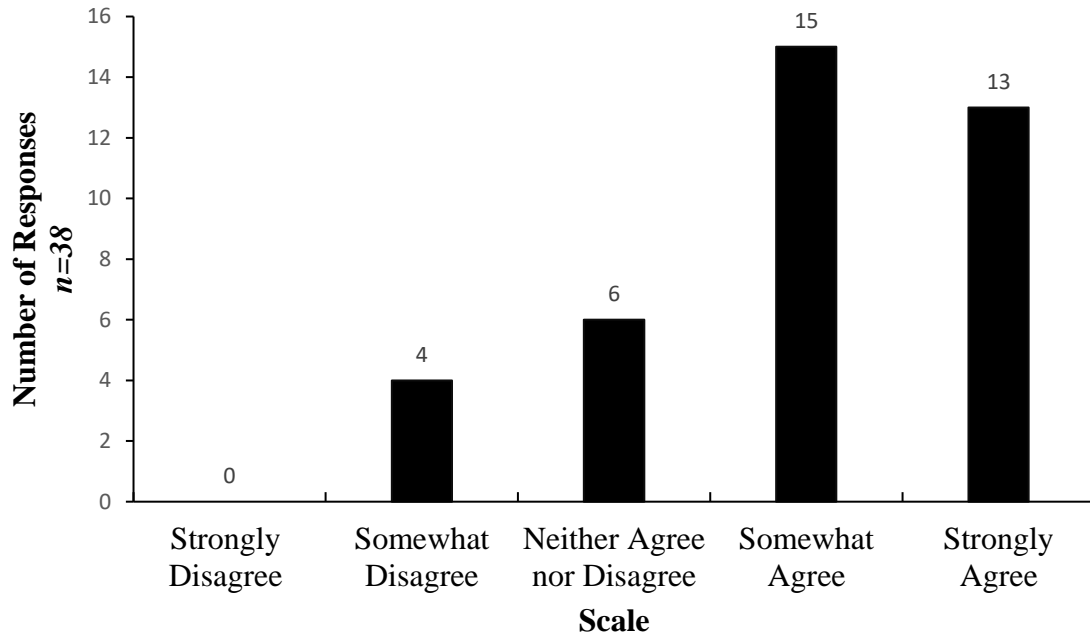
Note. This chart refers to Survey Question 4.F results regarding teacher perception on morning breaks and the positive impact on student engagement, according to total *N*=38 teacher participants.

Survey Question 4.G.

Survey Question 4.G. states: Afternoon breaks positively impact student engagement. Similarly, Seventy-six percent of teachers, 29 out of 28, felt that afternoon breaks positively impact student engagement (see Figure 7). Of the 29 respondents, 18 strongly agreed, and 11 somewhat agreed. Five participants were neutral, therefore, responded with neither agree nor disagree. Three teachers somewhat disagree, and one teacher strongly disagreed with the survey question.

Figure 7.

4.G) Afternoon Breaks Positively Impact Student Engagement
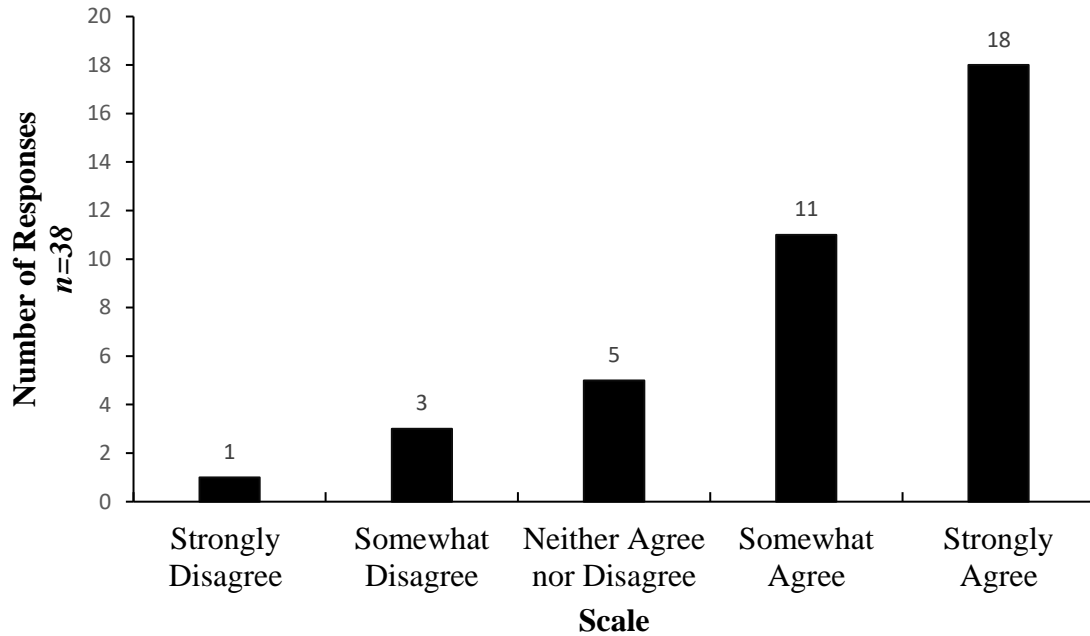
Note. This chart refers to Survey Question 4.G results regarding teacher perception on afternoon breaks and the positive impact on student engagement, according to total *N*=38 teacher participants.

Survey Question 4.H.

Survey Question 4.H. states: Having only one break positively impacts student engagement. Fifty-three percent, 20 out of 38 teachers, disagreed that having only one break positively impacts student engagement (see Figure 8). Nine teachers were neutral. Nine out of 38 teachers felt that having only one break positively impacts student engagement.

Figure 8.

4.H) Having Only One Break Positively Impacts Student Engagement
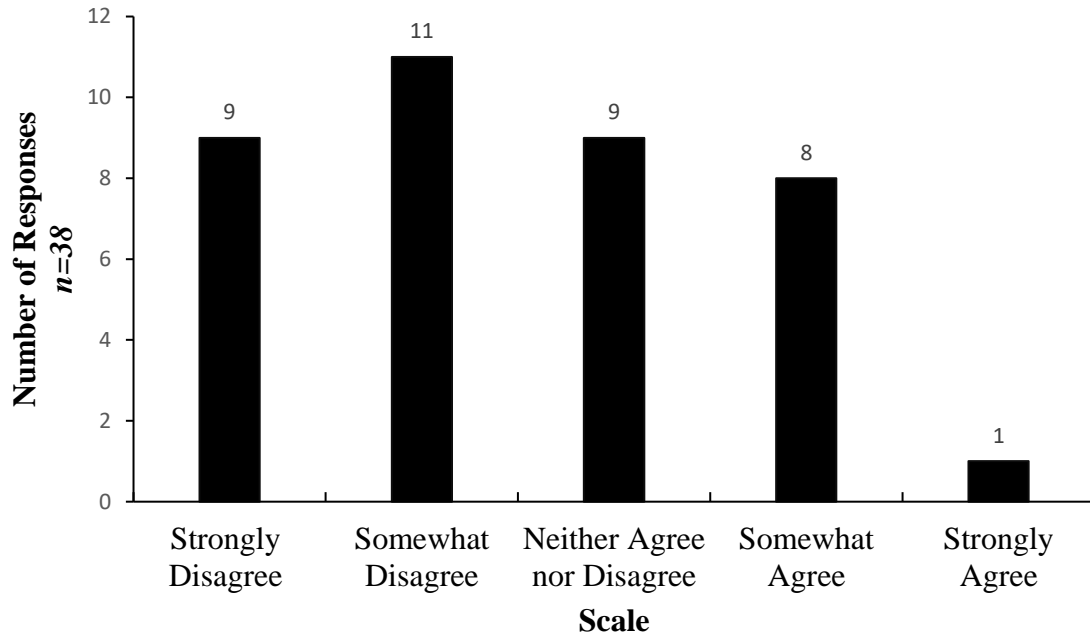
Note. This chart refers to Survey Question 4.H results regarding the positive impact only one break has on student engagement, according to total *N*=38 teacher participants.

Survey Question 4.I.

Survey Question 4.I. states: Having more than one break positively impacts student

engagement. Eighty-four percent, 32 out of 38 teachers, agreed that having more than one

break positively impacts student engagement (see Figure 9). Four teachers were neutral.

Two out of 38 teachers felt that having more than one break positively impacts student

engagement.

Figure 9.

4.I) Having More Than One Break Positively Impacts Student Engagement
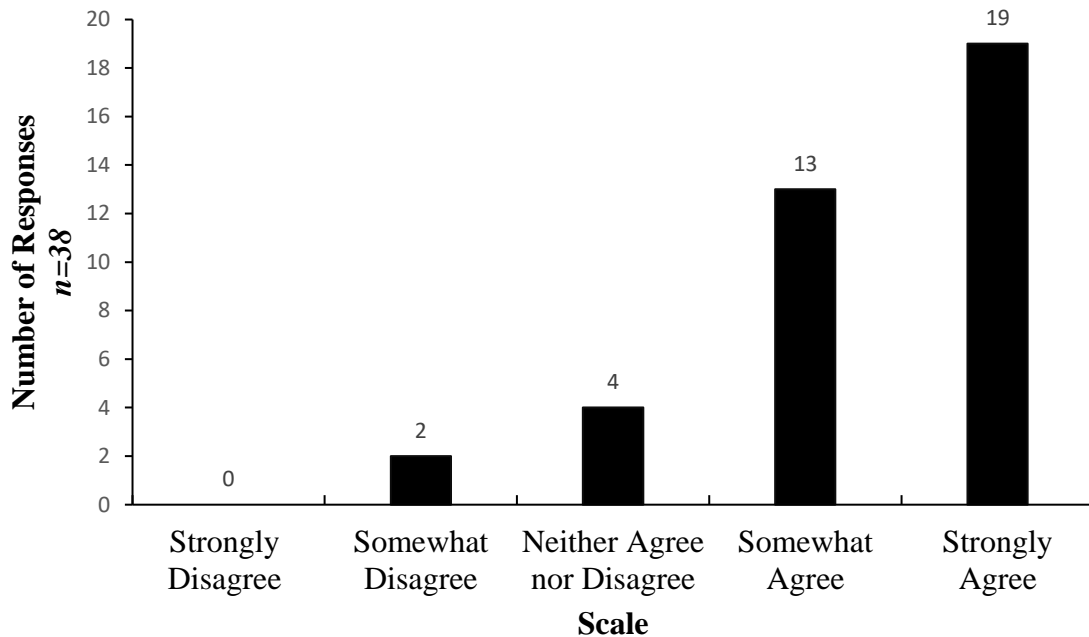
Note. This chart refers to Survey Question 4.I results regarding teacher perceptions of the positive impact of more than one break has on student engagement, according to total *N*=38 teacher participants.

Survey Question 7.

Survey Question 7 provides teacher responses from a multiple-choice question. The researcher provided the teacher responses to understand teacher perception regarding the number of breaks that provide higher student engagement. The survey question read, "Which of the following do you feel produces higher student engagement?" Response options included "At least one break" or "Two or more breaks." The results provided in Table 1 explain the outcome for survey question seven. Thirty-eight elementary teachers responded to this survey question. Teachers had the option to choose from "At least one break" or "Two or more breaks." As shown in Table 1, six (16%) teachers selected the

"one or more break" option, while 32 (84%) teachers selected "two or more breaks"

produce(s) higher student engagement. The researcher noted a vast difference in opinion

and included this specific survey response as a visual for the readers; most teachers felt

that two breaks a day might produce higher student engagement.

Table 1.

Survey Question 7: Which of the following do you feel produces higher student engagement?

Response	*n*	*%*	*V*	*SD*
At least one break	6	15.79%	0.13	0.36
Two or more breaks	32	84.21%		

Note. Teacher survey responses show the number of teacher participants, percentage,

variance, and standard deviation, according to total *N*=38 teacher participants.

Figure 10

Survey Question 7 illustrates the percentages of the outcome for Survey Question 7.

Research Question One Qualitative Data Graph:
Theme 1: The Necessity of Scheduled Breaks.

40.00%

60.00%

■ Percentage of teachers who mentioned the need for breaks
■ Percentage of teachers who did not mention the need for breaks
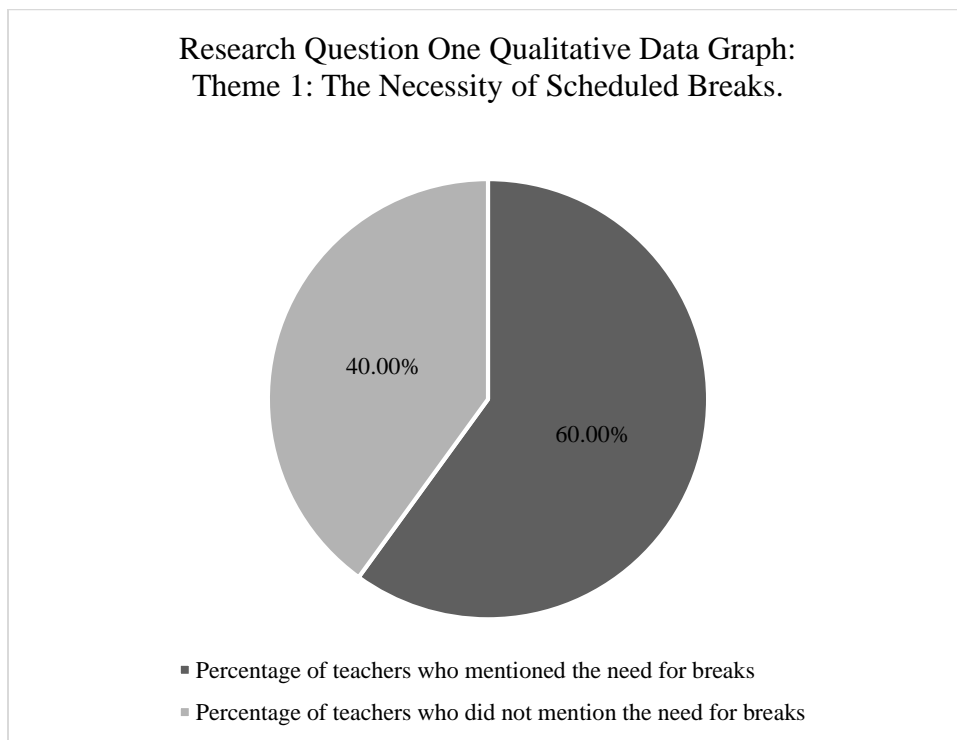
Note. Teacher Survey Question 7 results of participating elementary teacher perceptions regarding the number of breaks that produce higher student achievement, according to total *N*=38 teacher participants.

Research Question Two

How do the length, frequency, and timing of breaks impact student engagement based on observations?

Elementary Classroom Observations.

The researcher investigated the second research question by observing two classrooms in two different grade levels before a break, during, and after a break within the same elementary school. The researcher took notes during the observations throughout the study using a laptop, recording the movements, conversations, and any other occurrence during the observation. Often, observation notes were similar, indicating the elementary student groups shared many structures in the classroom. The researcher recorded and analyzed the data from the observations and found connections and patterns. The researcher coded the data by reading through the observation notes multiple times to gain familiarity and sort into the emerging themes. The researcher combined all the coded data and three themes emerged (Burkholder et al., 2020). The three themes included: (a) engagement and classroom management, (b) supervision and student engagement, and (c) student behavior.

Theme 1: Engagement and Classroom Management.

Throughout the classroom observations, the teachers were both in constant motion while indoors before the break. The teachers observed the students and responded appropriately to the classes' needs through effective pedagogical practices. It was evident that the teachers and students had mutual respect and strong relationships built.

Classroom management strategies included clear rules, expectations, procedures, positive student-teacher relationships, and practical consequences or discipline.

The teacher responses consisted of engagement and classroom management strategies before the recess break. To support the theme, the Researcher observed both teachers use various engagement strategies to gain the students' attention and keep the students engaged. For example, a teacher read a children's book aloud to the first-grade classroom. The teacher invited the students to silently "give a thumb wiggle if" to respond to various questions asked about the book. The students responded to the teacher using a finger wiggle, a silent strategy, but it invited students to engage with the teacher and connect with the text. Another teacher used another quiet strategy to gain the students' attention by whispering to the whole class. The teacher whispered directions of a math assignment to the class. The teachers both adjusted to manage the classroom and to ensure student engagement.

The teachers used various classroom management strategies to correct distracting behaviors or disengaged students. It was evident that teachers and students had positive relationships with mutual respect and established expectations. Both observed teachers used eye contact or a hand motion to specific students and student groups. When that was ineffective, the teachers redirected the student verbally. After using eye contact to gain a student's attention, a teacher had to ask a student to sit down so the student behind could see the book. The student quickly sat back down and re-engaged with the read-aloud. Another example includes a group of students being excited about a math assignment. As the teacher described what the students were going to do, a group of students was excited, sharing ideas and talking at their table. The teacher put a finger over her lip while making

eye contact with the excited group of students. That was ineffective, so the teacher said, "class, class," and the class responded, "yes, yes," making eye contact with the teacher.

During the classroom observations, the students became increasingly less engaged and more distracted as recess approached. Again, the teachers noticed and responded to specific distracting behaviors. One teacher addressed the whole class after noticing a few students were lying down on the floor. The teacher stated, "Are you sitting up tall? Do a body check." The students all sat up tall and quickly re-engaged with the activity. Another teacher addressed a specific student with an appropriate consequence to a behavior. The student was distracted, loudly playing with a necklace. The teacher told the student to set the necklace on the teacher's desk. The student quietly placed the necklace on the desk and returned to the activity with no complaints. The teachers have noticeably established expectations and norms in the classrooms and used classroom management strategies and engagement strategies to ensure student engagement before recess.

Directly before the break, the teachers used effective classroom management strategies to transition to recess. Both teachers set clear expectations and procedures, closed the current activity, and set the students up to transition to recess nicely, using a calm and quiet voice. One teacher whispered to the class to dismiss groups of students to line up at the door. Each group of students stood quietly and got in line at the door. Most students stood smiling, eager to go to recess.

After the break, students were more engaged and less distracted in each classroom. The teachers continued to use engagement and classroom management strategies consistently. The students needed fewer verbal and nonverbal reminders to stay on task and engaged. The students responded quickly to teacher directions, and worked quietly

and eagerly on the task at hand. After the recess break, one teacher directed students in a craft and writing activity. The teacher provided an example, expectations, and explanation of the activity on the class carpet before releasing the students to work independently at the tables. The teacher continued to gain the students' attention to provide tips throughout the activity.

The teachers both had clear expectations, effective engagement, and classroom management strategies in place throughout the observations. Students were increasingly off task as recess approached. The teacher adjusted and responded to the students' decreased engagement and distracting behaviors.

Theme 2: Supervision and Student Engagement.

The observations took place in two classrooms and two recess settings. The teachers each practiced effective supervision strategies during each observation. Teachers actively participated in supervision during each observation and adjusted supervision based on the student engagement, the activity, and the setting.

During the observations, the teachers walked around the classrooms in various patterns or a specific target destination in both classroom and recess settings. The teachers supervised and walked in a specific, deliberate pattern with a purpose inside the classroom and during recess. For example, as the teachers supervised in the classroom, the teacher walked in no specific pattern with no student needs to address. However, during the classroom and afternoon recess observations, if there was a student in need, the teachers could change the route to the student's proximity or the area requiring the teacher's attention. The teachers scanned the area while constantly moving and identifying student needs.

The teacher's supervision and proximity, and awareness affected student engagement. For example, during a classroom observation before recess, a teacher approached a distracted student. As the teacher walked closer to the student, the student re-engaged with the independent math work. In both classrooms and recess settings, the teachers constantly scanned the area while moving around the room. As students argued over taking turns at recess, a teacher approached, the arguing stopped without further teacher intervention. Students were visibly cognizant of the teachers' proximity in each environment and grade level. The students were visibly aware of the rules and expectations, but the teachers' vigilance to supervision gave the small reminder needed.

As teachers supervised, they scanned the room, reading the students' cues as they worked. The teachers used moments to facilitate teaching individuals or address the whole class with suggestions and tips along the way. For example, as students worked on a project, the teacher scanned and walked around the classroom supervising. The teacher noticed a student struggling with the independent activity and noticed multiple students had the same assignment. The teacher gained the class's attention, addressed the issue, and reminded them to take their time with the assignment. During a separate observation, another teacher noticed students were misspelling a specific word during an assignment. The teacher stated, "How do you spell know? Remember there are two kinds of 'knows.'" The teacher used each of the homophones in a sentence. The teacher asked if anybody would like to volunteer to help use the words in context and spell the appropriate word in the sentence. Both examples were small moments in the observations, but these teachable moments would have gone unnoticed if the teachers had not practiced effective supervision strategies.

Theme 3: Timing and Frequency of Breaks.

During the classroom and recess observations, the researcher noticed patterns in the students' behavior in relation to the timing and frequency of the breaks. The students displayed signs of engagement during each observation in each setting. However, there was a visible difference in student behaviors as the break approached and following the break.

The students eagerly responded to the teacher's cues, directions, and redirections before the break, especially redirection and close to the teacher. As a group, the students were undoubtedly excited to learn, share and generally had positive attitudes. However, as time for the break approached, there was an increase in the student movement, talking, and overall distractions, which caused a visible and audible decrease in student engagement. For example, students played with their face masks, engaged in off-topic conversations, wiggled in the chairs, and one student fell out of a chair., causing other students to become more distracted and less engaged. The mentioned distracting behaviors continued to amplify before the break. The students in both classrooms reacted appropriately to the teachers' proximity and verbal redirects, increasing as time grew closer to the break. The students all transitioned smoothly and quietly from the classroom to the hallways and the designated playgrounds.

During the outdoor recess break, students were happy. Most students immediately began running onto the playground, engaging in play. The playground constantly chattered with laughter, excited voices, and random squealing. Many students played various organized running games such as tag and football. The students took turns on the constantly occupied swing sets.

During the recess observations, most students engaged in play with peers. However, the third-grade teachers had specific students sitting on the sidewalk at recess. The students who were sitting out from recess independently engaged in books and unfinished classwork during the break. These students did not share the same excitement for recess as the students who were able to play.

As the time for recess approached, the students began to show signs of physical fatigue. Students began to be less excited and loud as their physical movement began to decrease. For example, many students sat down on the ground or on playground equipment and engaged in conversation. Many students chattered and lightly played on the playground until time to line up and go back to the classroom.

The student's behavior in the classroom changed after the break. The students seemed tired but relaxed and ready to learn. For example, many students sat down silently, leaning, resting, waiting for the teacher to begin the lesson. Most students made eye contact with the teacher as the teacher explained the next activity. The students listened intently to the teacher and began working independently with few interruptions. Overall, the students displayed on-task behaviors, focusing on independent work. The teachers complimented specific student's behavior and worked throughout the classroom observation after the break.

As aforementioned, research continuously indicates that physical movement positively impacts children's academic, social, and physical development. Taking this into account, the researchers' classroom observations in the field revealed that elementary students became increasingly off-task, distracting behaviors as recess drew closer, and displayed increased on-task behavior after a break.

Conclusion

In this chapter, the researcher revealed the results from the teacher survey and classroom observations. The researcher designed this qualitative study to understand elementary teacher's perceptions regarding the impact breaks have on student engagement. The study's data revealed overall the positive impact breaks implemented inside and outside of the classroom have on student engagement. However, several survey responses indicated teachers find it challenging to regain student attention in the afternoon, even with breaks. Most participants somewhat agreed or strongly agreed that breaks are essential for student engagement. Similarly, teacher survey responses indicated that having more than one break impacts student engagement and that students want to participate in a break and are less distracted after a break.

Chapter Four provided the themed results from the teacher survey and the classroom observations. The study examined teacher perceptions regarding the influence breaks have on student engagement. The qualitative data gathered through the information presented in Chapter Four assisted present the findings and conclusions in Chapter Five. In Chapter Five, the researcher includes a discussion of the findings. The researcher will reflect on the study and recommendations for further research. The research concludes with a summary of the study.

Chapter Five: Discussion and Reflection

This research added to the existing research regarding student breaks and student engagement while capturing the events in elementary classrooms and teachers' perceptions in rural elementary schools in the West-Central Missouri area. The researcher will provide a culmination of the study's results and a personal reflection of this qualitative study. Chapter Five also provides recommendations to the program, future research suggestions, and a conclusion.

Research Questions

1. What are elementary teacher perceptions regarding the influence breaks have on student engagement as it applies to timing, length, and frequency?

2. How do the length, frequency, and timing of breaks impact student engagement based on observations?

Findings

Two research questions guided this qualitative study. The results include data from teacher survey responses, classroom observations, and information presented in the literature review. The researcher analyzed elementary educator perceptions of how breaks influence student engagement from a qualitative survey. Additionally, the researcher observed elementary students before, during, and after a recess break and recorded and analyzed the observation notes. This section includes conclusions based on the study's results. Data from the survey and observations revealed educator perceptions of how breaks impact student engagement; the data suggested increased engagement behaviors after a break.

Research Question One.

What are elementary teacher perceptions regarding the influence breaks have on student engagement as it applies to timing, length, and frequency? The researcher found the contributing factors to student engagement and how breaks impact student engagement through perceptions of elementary teachers from the qualitative survey. Responses from elementary teachers fell under five main themes: (a) the necessity of scheduled breaks, (b) teacher response to student needs, (c) student academic success, (d) student social and emotional health, and (e) timing and frequency of breaks, but teachers did not reveal a specific time, length or frequency that is best for elementary students. However, the elementary teachers unanimously responded that dispersed, scheduled academic breaks are best for elementary students throughout the school day.

Eight-four (84%) percent of the teachers selected "two or more breaks" produce(s) higher student engagement, and Sixty percent (60%) of the 38 participants agreed that teachers should use their expertise to provide breaks between scheduled recess times. Furthermore, as previously mentioned, the research site follows a four-day school week program, with longer days than the traditional five-day school week. One participant stated, "A teacher should be able to use their professional judgment to determine when/how many breaks there are. Again, a 2-5-minute break is not going to alter the instructional time." Teacher participants emphasized that teachers must be cognizant of the students to provide the appropriate break based on student needs.

Teacher participants preferred contemplative practices over breaks that would drastically increase students' heart rates. Teachers agreed that breaks could be disruptive to engaged students if taken at the wrong time, too frequently, or the wrong type of break.

Teacher responses revealed a possible relationship between the frequency of breaks needed to ensure student success and the type of lesson. The teachers explained that taking a test might require more breaks than a classroom participating in an interactive activity. Although there are varying factors to the timing, length, and frequency of breaks, the elementary teacher participants agreed that there is an increase in student success and engagement after short breaks with physical activity from academics.

The qualitative data also suggests teacher effectiveness plays a crucial role in student engagement in many ways, including implementing appropriate classroom-based breaks at the appropriate time. Teachers indicated a significant change in student behavior after breaks. Teachers manage the classroom, addressing student needs, thus, setting the tone for student engagement. However, the established school and class schedule contribute to how teachers implement classroom-based breaks and recess while simultaneously implementing all other pieces to a functioning, well-managed classroom.

Research Question Two.

How do the length, frequency, and timing of breaks impact student engagement based on observations? The researcher observed first-grade and third-grade classrooms before, during, and after a break. Due to the timing of the observations and breaks, the researcher did not observe any classroom-based breaks. The researcher used the data from the classroom observations and found three themes: (a) engagement and classroom management, (b) supervision and student engagement, and (c) timing and frequency of breaks. A compilation of the two classrooms observation data generated the three themes through a thorough data analysis process (Burkholder et al., 2020; Creswell & Creswell, 2018). There were similarities in the two classroom observations, but many specific

details vary between the two classrooms observed. The differences included the grade level, classroom setup, classroom location, recess location, students, teachers, teaching styles, and daily schedule; however, the researcher found many parallels that assisted in forming the themes.

The researcher collected qualitative data from first-grade and third-grade observations from before, during, and after a break. The data collected from the observations revealed that students become increasingly distracted and less engaged as break time approaches and more engaged during and after the break. The culmination of the observation data suggested that students had an increase in distracting behaviors and a decrease in engaged behaviors before the break. The distracting and unengaged behaviors observed included fidgeting, talking, wiggling, laying down, and not working or paying attention to the academic task at hand. However, teachers implemented various pedagogical and engagement strategies to manage the classroom and maintain student engagement. For example, in a classroom-based observation, as students became loud, disrupting others, the teacher began to whisper directions to the students. The students responded quickly and appropriately to the change in the teacher's volume and began to whisper, suggesting that effective adjustment in classroom management strategies can assist in increasing or gaining student attention. However, there was a visible difference in the increase of distracting behaviors as the break approached. During the break, students were visibly and audibly happy. Most students engage in play throughout recess. Following the break, students showed signs of relaxation. Students were engaged and less distracted in the classrooms after the break. The observation of change in student behavior suggests the necessity of recess and breaks.

The data suggest that students respond to teachers' active supervision, adjusted supervision, and engagement strategies to increase student engagement. Overall, the observation findings suggested an increase in engagement and a decrease in distracting behaviors after a break. The observations of student behaviors indicated that more frequent short breaks between scheduled recess breaks could benefit student engagement stamina and decrease distracting behaviors.

Recommendations

The researcher initiated this qualitative study to understand the influence the length, frequency, and timing of breaks have on student engagement as it applies to timing, length, and frequency through teacher perceptions. In addition, the researcher conducted classroom observations to examine how the length, frequency, and timing of breaks impact student engagement. The results of this study offered valuable information and served as an incredible educational experience. However, the study is not perfect, and there are gaps. Additional data obtained from future research would support the information provided by the current study.

The first recommendation for future research would involve a case study with a brain break best practices professional development for educators. This study could involve educators and students from all grade levels, as all students can benefit from being active during academic breaks in the classroom. The educators and students would respond to a journal prompt to reflect on the implemented brain breaks before and after the professional development session. This study could compare the differences in classroom observation data, and teacher perceptions regarding the influence breaks have on student engagement as it applies to timing, length, and frequency.

A quantitative-based approach could be beneficial. Teachers currently implement many reading and math assessments but may not take breaks from instruction or academic work. For example, a future study could be with a local traditional five-day school week in the same grade level. Running this study in the same grade level could eliminate some limitations in the current study. The researcher's recommendation for future research would involve a quantitative study regarding the impact the implementation breaks have on reading and math student achievement. This study would require teacher and student support.

The researcher considered this study's findings to make recommendations to the research site educational leaders to discuss with the staff. The data could help the school create action plans and goals relating to research-based best practices for recess and classroom-based breaks. A possible task to complete with the staff could include a book study to encourage brain breaks and contemplative practices in the classroom (Stewart et al., 2004).

Research suggests that breaks, including recess, should not be withheld for academic or behavioral reasons (American Academy of Pediatrics, 2013; National Association for Sport and Physical Education, 2010; Ramstetter & Fink, 2019). Additionally, a greater understanding of the importance, developmentally appropriateness of recess, and the benefits of breaks will reflect in the classroom through student behavior and engagement (Jarrett, 2013; Pellegrini & Bohn-Gettler, 2014; Stapp & Karr, 2018). Contrary to arguments utilized by those who eliminate recess for students, findings of current research, including this study, indicate that recess positively impacts student engagement (Stapp & Karr, 2018).

The above recommendations would create an opportunity for students and teachers to reflect and share experiences regarding breaks, and the impact breaks have on student engagement. Teacher survey results and the observed student behaviors indicated the favorable impact student breaks could produce inside and outside the classroom. However, teachers indicated that students benefit from breaks throughout the day. Teachers could benefit from more information on better incorporating classroom-based breaks, such as brain breaks and contemplative practices throughout the day.

Personal Reflections

The researcher reflected on the study, considering research and personal thoughts while keeping in mind that this study was a learning experience educationally and personally. The researcher's reflections include changes to benefit data, with the ultimate goal of providing data to improve elementary student experience and success while providing best practices to educators. Additionally, the researcher provides personal reflections and growth throughout the research and experience.

First, the qualitative design of this study allowed the researcher to gather teacher perceptions, feelings, and opinions regarding the impact breaks have on elementary student engagement. It is the researcher's opinion that the study could have benefitted from more qualitative data from the elementary teachers. The study could have included follow-up teacher interviews or a teacher focus group. The current qualitative data from the survey provided the researcher with sufficient data, simultaneously sparking the researcher's curiosity.

This study allowed the researcher to recognize the complexity of the elementary teacher's role to gain student engagement. Schools, educational leaders, and teachers'

decisions have an extraordinary impact on students and the learning and play

environments. As Loebach and Cox (2020) found, "One key to producing play-rich

environments for children is understanding how environments can facilitate all forms of

developmentally supportive activities and interactions" (p. 2). It is vital to provide the

appropriate play and learning spaces for elementary students.

Teachers meet students' basic needs when students feel safe; furthermore,

students are more likely to put forth their best effort for teachers with a positive

relationship (Lenzi et al., 2017). Additionally, this research and prior research suggests

that breaks are an essential part of the school day where students break from academic,

cognitive tasks to play, create, move, and socialize, and without such breaks, students

show signs of mental fatigue (Abdelbary, 2017; Jensen, 2000; Loebach & Cox, 2020).

Furthermore, breaks provide an increased oxygen flow to the brain, stimulating brain

function (Abdelbary, 2017; Jensen, 2000; Ramstetter et al., 2010; Yogman et al., 2018).

Ultimately, teachers are responsible for recognizing and addressing student needs inside

and outside the classroom to provide the ideal learning environment, appropriate breaks,

interventions, and best practices to cultivate student engagement.

Finally, the researcher learned about student needs through this study, as well as

her personal beliefs. The study's elementary students expressed through body language,

attitude, and overall behavior when ready to break from the rigorous cognitive tasks

throughout the day. As teachers described, students need multiple breaks throughout the

day to fully engage in the academic tasks at hand. The researcher gained further

appreciation for elementary teachers, who put forth great effort to create and cultivate a

classroom environment for learning, engagement, and space for classroom breaks. This

was especially true at the research site, where school days start earlier and end later to compensate for the four-day-school-week.

 Limitations

The present study included limitations. The convenience sampling of the teacher participants was a limitation. This study was limited to certified regular education elementary teachers and students in the West-Central Missouri school district for a four-day school week. While all participants held an elementary teaching position within the same district, the participants each had varying experiences, levels of graduate education, grade-level expertise, students, and professional development that could impact the study's results. However, the participants had the option to decline the invitation to participate in the study.

The two rural elementary school teachers originally received a recruitment email with the survey. However, survey participation was low. As an initiative to gain more participants, the researcher presented the study at a professional development meeting. The teachers had devices and time to take the survey. Following the presentation of the study, nearly all of the elementary teachers completed the survey. Therefore, the survey presentation limits the study.

Finally, the classroom observations limited the study. The classroom observations took place in one elementary school in two locations, a first-grade classroom, and a third-grade classroom before, during, and after a recess break. Many attributes to the classes varied. For example, the grade level, students, classroom teacher, set up, daily schedule, maturity and expectations of students, and the outdoor recess location varied.

Conclusion

This study concludes an understanding of teacher perceptions of student breaks and the impact breaks have on student engagement. The researcher was able to examine the teacher and student participants' experiences through the qualitative methodology. In addition, the teacher survey results and classroom observations provided valuable content to understand better teacher perceptions and classroom occurrences regarding breaks and the impact breaks have on student engagement in elementary. Thus, the design of this qualitative study was in place to address two overarching research questions through teacher perceptions and classroom observations. Chapter One introduced the research problem statement and rationale. Chapter One also included the research questions and terms used throughout the study. Finally, the researcher presented an overview of the research limitations and the terms used throughout the qualitative study.

In Chapter Two, the researcher provided a thorough review of literature that explored the current practices, history of recess and breaks in education in the United States, as well as the theoretical framework of the study, contemplative practices, and the cognitive, social, and emotional benefits breaks can provide students, researchers and literature have emphasized that recess benefits children in the school day, including cognitive, social, physical development, and achievement scores (Jensen, 2005; Pellegrini & Bohn-Gettler, 2014; Piaget, 1991, 1951; Ramstetter & Fink, 2019). Schools have continually increased instructional time and decreased time in other areas, including recess, negatively impacting student achievement (American Academy of Pediatrics, 2013; Ramstetter et al., 2010). Although schools have decreased recess time, teacher pedagogical strategies have become more student-centered, including implementing

classroom-based brain breaks and contemplative practices through yoga, mindfulness activities, and meditation (Haynes, 2005; Kabat-Zinn, 1995; Lyons & DeLange, 2016; Sarath, 2006; Zajonk, 2016).

Chapter Three included an overview of the study's methodology. The researcher developed a qualitative survey that gained elementary teachers' perceptions, feelings, and opinions regarding the impact that breaks have on student engagement. The survey was sent and presented to 45 elementary educators within the research site. A total of 38 teachers responded and completed the survey. Additionally, the researcher collected qualitative data from a first grade and third grade through classroom observations before, during, and after recess.

Chapter Four presented an overview of the data collected, the instrument, and classroom observations utilized for data collection. The researcher collected, analyzed, and organized the survey and classroom observation data results according to the qualitative data (Creswell & Creswell, 2018; Hatchet, 2002). The researcher read through the survey data multiple times, finding patterns, commonalities, and differences, developing codes and common concepts. The common concepts were combined to form five over-arching themes. The researcher followed the same steps to analyze and form themes from the classroom observation data notes and experience.

Chapter Five summarized the research and the findings, the conclusion, implications, and recommendations for future research. Overall, the culmination of the research data analysis and literature suggests that breaks could impact student engagement, social and emotional health and development, student behavior, and overall academic success. Students benefit from breaks based inside and outside of the

classroom. Furthermore, based on the findings from this study, short and frequent breaks should be provided in the schedule or as students need throughout the day to see the most increase in student engagement. By providing breaks throughout the day to support the whole child, the school may see increased student engagement and overall performance in school.

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Appendix A

Elementary Teacher Survey

Welcome to the research study!

You are being asked to participate in a survey conducted by Sarah-Bo Kirchhoff at Lindenwood University. We are doing this study to learn more about the perception early elementary teachers and students have regarding the influence breaks from academics, such as brain breaks or recess, have on student engagement. If you chose to be part of this study, you would take an online survey by following the link below. It will take about 10 minutes to complete this survey. Your participation is voluntary. You may choose not to participate or withdraw at any time by simply not completing the survey or closing the browser window. There are no risks from participating in this project. We will not collect any information that may identify you. There are no direct benefits for you participating in this study.

 WHO CAN I CONTACT WITH QUESTIONS? If you have concerns or complaints about this project, please use the following contact information: Sarah-Bo Kirchhoff directly at 417-543-0663 or sek17950@gmail.com. Dr. Jackie Ramey at JRamey@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.

 By clicking the link below, I confirm that I have read this form and decided that I will participate in the project described above. I understand the purpose of the study, what I will be required to do, and the risks involved. I understand that I can discontinue participation at any time by closing the survey browser. My consent also indicates that I am at least 18 years of age. You can withdraw from this study at any time by simply closing the browser window. Please feel free to print a copy of this information sheet.

 *Please note that this survey will be best displayed on a laptop or desktop computer. Some features may be less compatible for use on a mobile device.

    a. I consent, begin the study (1)

    b. I do not consent, I do not wish to participate (2)

1. How long is your typical break from academics and what is your perception of the length breaks have on student engagement? (Breaks include but are not limited to: recess, brain breaks, and mindfulness activities.)

2. What is your perception regarding the influence breaks have on student attendance?

3. How do you feel providing breaks from academics impacts the increase of student engagement and decreases distracting behavior? Why do you feel that way?

4. Please rate the following statements by selecting your response using the scale below:

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
a) Breaks are important for student engagement					
b) Breaks can be taken away from students					

c) Students want to participate in breaks				
d) Student attention increases after a break				
e) Students are less distracted after a break				
f) Morning breaks positively impact student engagement				
g) Afternoon breaks positively impact student engagement				
h) Having only one break positively impacts student engagement				
i) Having more than one break positively impacts student engagement				

5. What is your opinion regarding the time of day your class has breaks and the

    impact it has on student engagement?

6. What is your opinion regarding the number of breaks in elementary?

7. Which of the following do you feel produces higher student engagement?
    1.   At least one break (1)
    2.   Two or more breaks (2)

8. To be entered into a drawing for a chance to win one of three $10 Amazon gift
    cards please provide your email address below.

Appendix B

Approval Letter of Lindenwood University Institutional Review Board

March 3, 2021.

RE: New Study Application
Study ID: IRB-21-96 - Student and Educator Perceptions of the Impact Breaks have on
Student Engagement

Dear Sarah Kirchhoff,

The study, *Student and Educator Perceptions of the Impact Breaks have on Student Engagement*, has been Approved.

Category: Expedited Category 7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

The submission was approved on March 3, 2021.

The expiration date for this study is March 2, 2022.

IRB Discussion
- This provisional approval letter is provided as a substitute for an Approval Letter generated by Cayuse IRB. Due to a technical error with this application, this Approval Letter is provided as confirmation of the approval of the study until this technical error is resolved. At this time, the official approval letter will be generated as contingencies to approval are designated as completed within Cayuse IRB.

Here are the findings:

- The IRB has determined that this study meets the Criteria for Approval at 45 CFR 46.111.

- 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.

- Consent will be obtained and documented as per 45 CFR 46.116 and 45 CFR 46.117.

- This approval includes a Waiver of Documentation of consent (45 CFR 46.117(c)(2)) as the research presents no more than minimal risk of harm to subjects and involves no procedures for which written consent is normally required outside of the research context.

- This study is approved in accord with 45 CFR 46.404, as the research presents no greater than minimal risk to the children and adequate provisions are made for soliciting the assent of the children and the permission of their parents or guardians. The signature from only one parent or legal guardian is required.

Sincerely,
Lindenwood University Institutional Review Board

Appendix C

School District Recruitment Email

My name is Bo Kirchhoff, and I am currently working on my dissertation through Lindenwood University. I am running a qualitative study over breaks (recess, brain breaks, etc.) in schools. I would love to work with you, your regular education teachers, and two regular education classrooms during my data collection process.

I am interested in understanding the perception and experiences regular education teachers have regarding breaks throughout the day, such as recess, brain breaks or mindfulness activities, and the impact on student engagement.

> Teachers who are interested in this study would participate in a Qualtrics survey through clicking on a link to the survey which I will provide.

> In this study, I will also observe two classrooms with different schedules to collect data based on my observations.

There are no risks to participating in this project. I will keep any sensitive or identifiable documents, names, locked and secured on the Lindenwood University server. All data and specimens will be kept in a secure location for up to three years.

Last, all teacher participants will be entered into a drawing for 3 Amazon gift cards.

Would you mind sending my survey out to all of your regular education teachers in your elementary schools?

If so, have attached the email script. Feel free to introduce the study in your email too.

Let me know if you are interested in this research opportunity, have further questions or concerns.

Respectfully,

Bo Kirchhoff

Appendix D

Teacher Recruitment Email

Regular Education Staff,

I am Sarah-Bo Kirchhoff and am in the doctoral program at Lindenwood University. I am running a study regarding teacher perceptions and experiences. You have the opportunity to win a $10 Amazon gift card through the participation of this study.

Survey Research Information Sheet

You are being asked to participate in a survey conducted by Sarah-Bo Kirchhoff at Lindenwood University. We are doing this study to learn more about the perception early elementary teachers have regarding the influence breaks from academics, such as brain breaks or recess, has on student engagement. If you chose to be part of this study, you would take an online survey by following the link below. It will take about 10 minutes to complete this survey. Your participation is voluntary. You may choose not to participate or withdraw at any time by simply not completing the survey or closing the browser window. There are no risks from participating in this project. We will not collect any information that may identify you. There are no direct benefits for you participating in this study.

WHO CAN I CONTACT WITH QUESTIONS?

If you have concerns or complaints about this project, please use the following contact information: Sarah-Bo Kirchhoff directly at 417-543-0663 or sek17950@gmail.com.Dr. Jackie Ramey at JRamey@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.

By clicking the link below, I confirm that I have read this form and decided that I will participate in the project described above. I understand the purpose of the study, what I will be required to do, and the risks involved. I understand that I can discontinue participation at any time by closing the survey browser. My consent also indicates that I am at least 18 years of age. You can withdraw from this study at any time by simply closing the browser window. Please feel free to print a copy of this information sheet.

Please consider taking my survey by following the link below:
Take the Survey
Or copy and paste this link to your browser:
https://lindenwood.az1.qualtrics.com/jfe/form/SV_1z8BWMOcQqnfy3c

Thank you for your time,
Sarah-Bo Kirchhof

Vitae

Sarah-Bo Kirchhoff was born in Springfield, Missouri, and grew up in Squires, Missouri. She graduated from Ava High School in 2009. Mrs. Kirchhoff attended the University of Central Missouri and earned a Bachelor of Science Degree in Early Childhood Education in 2013. Sarah-Bo completed her Master of Education in Educational Leadership in 2017. Mrs. Kirchhoff taught in the Warrensburg School District, until becoming a stay-at-home mother after having two babies. She currently resides in Warrensburg, Missouri with her husband, Logan, and children Jade and Dietrich. Sarah-Bo plans to graduate from Lindenwood University with a Doctorate in Educational Administration Fall 2021.