

**The Effects of Play-Based Learning on Behavior and Academic Progress in
the Kindergarten Classroom**

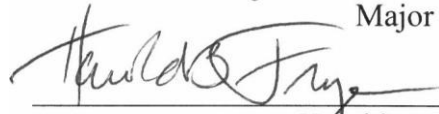
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Abstract

Play is an essential part of a child's ability to learn concepts and skills in the kindergarten classroom, which includes the cognitive, physical, emotional, and social aspects of development. The purpose of this study was to examine kindergarten teachers' perceptions of play-based learning, as well as negative student behaviors in their kindergarten classrooms and examine the impact of play-based learning on negative student behaviors. Another purpose was to analyze the percentage of kindergarten students with Behavior Intervention Plans (BIPs) as part of their Individualized Education Plan (IEP) before and after implementation of play-based learning, and the percentage of BIPs was also examined for differential impacts based on their school's Title I status. A further purpose was to determine how reading levels changed before and after the implementation of play-based learning as measured by the Rigby PM Benchmark Assessment and the assessment data was also examined for differential impacts based on their school's Title I status.

A quantitative research design was used for this study. The independent variables included the implementation of play-based learning (before and after) and type of school (Title I and Non-Title I). The dependent variables for the different research questions included the reading levels as determined by the Rigby PM Benchmark Assessment, the percentage of students with a BIP, and the kindergarten teachers' results from the Survey of Play-Based Learning in Kindergarten. The population for this study included teachers who taught kindergarten during the 2016-2017 and 2017-2018 school years in District Y. Student data was included in the analyzed sample if students were enrolled in kindergarten in District Y for the 2016-2017 school year, which was the school year

before the implementation of play-based learning. Student data was also included in the analysis if students were enrolled in kindergarten in District Y for the 2017-2018 school year, which was the school year after implementation of play-based learning.

Based on the findings of this study, it is recommended that District Y continue implementing play-based learning in the kindergarten classroom. Recommendations for future research include continuing the current study in District Y, replicating the study in other districts, replicating the study in the area of mathematics, and replicating the study to determine whether play-based learning is more beneficial at the beginning of the year or the end of the year.

Dedication

This dissertation is dedicated to the following people:

To the high school and college Erica Apollo, it took us a while to find out who we were meant to become, but WE did it!

To young people out there questioning their path, stay the course, learn from your mistakes, and reach out to others who will love you through all the ups and especially the downs.

To my parents, your never-ending love and support are always with me. I know there have been times when you could see my potential long before I could. Thank you for loving me even when I did not love myself.

To my sisters, I have and will always be one of three. You two are the best friends a girl could ask for and the fact that I call you sisters is just a bonus.

To all the educators in my life who have left a tremendous impact, and have molded me into the educator I am today: Dr. Julie Samuels, you are the one who got me excited about the possibility of becoming a teacher. Dr. Ruth Waggoner, thank you for seeing the leadership qualities in me long before I knew they were there. Dr. Ann Addison, I remember telling you I was going to work with you someday and I am so grateful for those years as an IRT but more importantly your friendship. Dr. Kathy Mickelson, your support through this process of dissertation work has been so appreciated, and the fact that you are my mother-in-law is just icing on the cake. Brandi Michaelis, you are the other half of the DAP Show, and I cannot thank you enough for all the encouraging notes and phone calls to see how I was doing on my doctoral journey. All of my colleagues from Cohort 12, I learned so much from you. Thank you Brett,

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To my daughter, Mae, I hope someday you understand why I could not always come to the farm with you and daddy. I wanted to honey...but hard things take hard work. To the little one growing right now, Mommy is so excited to meet you! It is fitting that I was pregnant with Mae and now you during this endeavor. I hope that this will inspire you both to find that thing in your life that you are passionate about and be willing to work hard to achieve your dreams. Being your mommy is the best thing in the whole world! I love you two so much!

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Chapter 1

Introduction

Promoting play in the classroom is crucial for the development of kindergarten students. Phillips and Scrinzi (2013) stated, “Play is when children actively explore their worlds, construct ideas they are beginning to understand, and create imaginary situations based on their real-world experiences” (p. 21). Although kindergarten students often start school at varying stages of development, states that have adopted Common Core State Standards have increased pressure to teach areas of math and reading at a quick pace. Kindergarten students are expected to know basic phonics, word recognition, and read beginner text by the end of the school year (Schwartz, 2015). With these high academic expectations in place, it is also essential to incorporate play into the learning of kindergarten students.

Play has been increasingly removed from the kindergarten classroom to make way for standards-based teaching because of the need to align expectations and practices in the elementary school setting. Graue (2011) explained, “the growing allocation of kindergarten time to academic content has firmly pushed play to the edges” (p. 15). This academically centered classroom set up is standard practice in most kindergarten classrooms. This expectation in the kindergarten classroom has resulted in a decrease in the amount of time for social-emotional development to be included less in the school day. The level of academic expectations for kindergarten students and the lack of time spent on social-emotional development has led to a higher incidence of negative behaviors in kindergarten classrooms. Negative behaviors in the kindergarten classroom include aggressive behavior (hitting and fighting), oppositional behavior (disobeying

rules and displaying anger), emotional behavior (yelling and screaming), attention problems (hyperactivity and daydreaming) and doing other activities (drawing and playing) (Gallagher, 2017). There are children in the early stages of learning who find it difficult to sit still and pay attention for a prolonged period. When the pressures of learning concepts like number sense or pre-reading skills are increased, disruptive behavior can become prevalent (Bilmes, 2012).

Background

Kindergarten is a grade level in which a child's foundation for learning is built. For some adults, kindergarten was a grade level in which one built with blocks, used glue, and colored pictures. It was a place to interact with other students, learning social and school rules: sit in a circle, stand in line, and share with friends. Kindergarten students are now expected to demonstrate pre-reading or reading skills and perform mathematical reasoning while maintaining the focus and attention to stay on task (Nelson, 2000). The heightened academic demands on kindergarten students, seem to have led to more widespread and varied negative behaviors in the classroom. While this is valuable anecdotal information, there is little empirical research on whether allowing students to have time for play-based learning in the kindergarten classroom decreases the incidence of negative behaviors.

District Y, a large suburban school district located in Northeast Kansas, agreed to participate in the current study. District Y serves approximately 29,029 students in kindergarten through twelfth grades housed at 35 elementary schools, nine middle schools, and five high schools. Almost twenty-eight percent of students in this district are economically disadvantaged, and approximately 12% of students have a disability

(KSDE, 2017). In the district, 11 of the elementary schools are Title I schools, according to requirements for Title I status and assistance. The Title I schools in District Y have a population of 50% or more qualifying for free and reduced lunch. District Y has 106 full-day kindergarten classrooms in which play-based learning was incorporated into the daily schedule for the 2017-2018 school year. Kindergarten teachers were provided professional development led by district-level leaders with a focus on developmentally appropriate practice and play-based learning before the start of the 2017-2018 school year. In September of 2017, the teachers were provided a follow-up training to dialogue with one another about how play-based learning was being implemented in their kindergarten classrooms. District-level leaders provided on-going training, which included district professional learning sessions, sample implementation documents, and information about play-based learning.

Statement of the Problem

District Y identified the occurrences of negative student behaviors in kindergarten classrooms as an area of concern. Through the years, there has been a growing need for assistance in the kindergarten classroom due to these negative student behaviors. District Y elementary principals expressed a need to focus more on developing the whole child with the kindergarten level reflecting a gradual change from looking like pre-school at the beginning of the year to more like first grade toward the end of the kindergarten year. A primary task for District Y was to examine whether the decision to have kindergarten students spend time in play would deter negative behaviors in the classroom. As District Y continues to review early childhood programming in the kindergarten classroom,

district-level leaders need to know the academic and behavioral impacts that play-based learning has on student behaviors.

Purpose of the Study

The first purpose of this causal comparative quantitative study was to examine kindergarten teachers' perceptions of play-based learning, as well as the negative student behaviors occurring in their kindergarten classrooms. The second purpose of this study was to examine the impact of play-based learning on kindergarten teachers' perceptions of any changes in negative student behaviors. The third purpose was to analyze the percentage of kindergarten students with Behavior Intervention Plans (BIP) as part of their Individualized Education Plan (IEP) before and after the implementation of play-based learning, and the percentage of BIPs was also examined for differential impacts based on their school's Title I status. The fourth purpose of this study was to determine how reading levels changed before and after the implementation of play-based learning. This change was measured using the Rigby PM Benchmark Assessment at the end of the 2016-2017 and 2017-2018 school years. Further, the change in reading level as measured by Rigby PM Benchmark Assessment was also examined for differential impacts based on their school's Title I status.

Significance of the Study

According to Lunenburg and Irby (2008), "the significance of the study is your argument that the study makes a significant contribution to the field" (p. 117). The results of this study could be significant due to the presentation of evidence for informing curriculum and policy decisions for District Y; whether to continue or discontinue the integration of play-based learning in the kindergarten classroom. Research referencing

play-based learning in the kindergarten classroom regarding the importance of developmentally appropriate practice was gathered and used in the current study. Exploring teacher perceptions of play-based learning and behavior in the kindergarten classroom may provide a source of valuable information for educational leaders. This study could prove important to the field of education because of its valuable insight into the effect that play-based learning could have on behavior and academic progress in the kindergarten classroom. School districts could use the results of the current study to evaluate whether the implementation of play-based learning could improve behavior and have an impact on the academic progress of their kindergarten students.

Delimitations

According to Lunenburg and Irby (2008), “delimitations are self-imposed boundaries set by the researcher on the purpose and scope of the study. Studies in the social and behavioral sciences typically have many variables that could be affected by circumstances of time, location, populations, or environment” (p.134). The following delimitations were in place for this study.

1. Data were collected from one suburban school district in the state of Kansas.
2. The participants were those individuals who taught kindergarten within District Y along with data already collected in the district for kindergarten students.
3. The Rigby PM Benchmark Assessment data was used as the measure for kindergarten reading level.
4. The Survey of Play-Based Learning in Kindergarten focused on the perceptions of kindergarten teachers regarding negative behaviors after the implementation of play-based learning in District Y.

5. The study was delimited to teachers' perceptions of student behavior, as measured by the administered survey, before and after the adoption of play-based learning.
6. The Survey of Play-Based Learning in Kindergarten data were collected after the 2017-2018 school year.

Assumptions

Lunenburg and Irby (2008) defined assumptions as “postulates premises, and propositions that are accepted as operational for purposes of the research” (p. 135). This study made the following assumptions.

1. The Rigby PM Benchmark Assessment data of students enrolled in kindergarten before and after implementation of play-based learning received from District Y's research office was complete and accurate.
2. The frequency of behavioral intervention plans of students with an IEP and the total number of students who were enrolled in kindergarten before and after implementation of play-based learning received from District Y's research office was complete and accurate.
3. Staff administering the Rigby PM Benchmark Assessment did so with fidelity.
4. The suburban school district's report of Title I and non-Title I schools was accurate.
5. Testing conditions were similar for all students who completed the Rigby Benchmark Assessment.
6. Special Education reports were accurate for students with behavior intervention plans as part of their Individualized Education Plan.

7. The participating Kindergarten teachers understood the survey questions, reflected, and responded honestly.
8. The survey included all the questions necessary to understand teachers' perceptions of play-based learning and behavior in the kindergarten classroom.

Research Questions

According to Creswell (2014), "research questions inquire about the relationships among variables that the investigator seeks to know" (p. 143). The research questions that guided this study were:

RQ1. To what extent is there a difference in kindergarten teachers' perceptions of student behavior as measured by the Survey of Play-Based Learning in Kindergarten, before and after the implementation of play-based learning?

RQ2. To what extent is there a difference in the percentage of kindergarten students with a Behavior Intervention Plan (BIP) as part of their Individualized Education Plan (IEP) before and after the implementation of play-based learning, and is the change in the percentage of BIPs differentially impacted based on their school's Title I status?

RQ3. To what extent is there a difference in kindergarten students' reading levels as measured by the Rigby PM Benchmark Assessment before and after the implementation of play-based learning, and is the change in reading level differentially impacted based on their school's Title I status?

Definition of Terms

Lunenburg and Irby (2008) stated that critical terms in a study should be defined, and the definitions should come from a “professional reference source” (p. 119). The following terms are defined for this study:

Behavior Intervention Plan (BIP). A behavior intervention plan as part of an IEP is a plan that is designed to teach and reward positive behaviors. The BIP can help prevent or stop negative behaviors in school. The BIP is based on the results of the Functional Behavior Assessment (Tucker, 2014).

Developmentally Appropriate Practice (DAP). Developmentally appropriate practices are instructional applications that vary with and adapt to the age, experience, interests, and abilities of individual children within a given age range (Phillips & Scrinzi, 2013).

Didactic Kindergarten. Didactic kindergarten programs focus on core subjects, such as reading and math (Frost, Wortham, & Reifel, 2008).

Functional Behavior Assessment (FBA). A functional behavior assessment is an approach to figuring out why a child acts a certain way. The assessment uses a variety of techniques to understand why a student is displaying inappropriate behaviors (Morin, 2014).

Guided Play. Guided play is when a child is purposely influenced by adults during the play session (Hoorn, Nourot, Scales, & Alward, 2015).

Individualized Education Program (IEP). An IEP is an education plan developed for a student if a determination is made that a child has a disability and needs special education and related services (U.S. Department of Education, 2018).

Intrinsic Motivation. Intrinsic motivation is the drive that comes from inside an individual rather than from any external or outside rewards, such as money or grades (Hoorn et al., 2015).

Negative Behaviors. Negative behaviors can be actions such as temper tantrums, physical aggression toward other children or the teacher, and throwing items (Gallagher, 2017).

Play-based learning. Play-based learning pertains to activities that allow children to explore, and at the same time are intrinsically motivating, engaging, and have an overall learning purpose (Chervenak, 2011).

Self-Regulation. Self-regulation is the ability to focus attention and manage one's emotions and behaviors according to the demands of the situation. The self-regulatory abilities that children gradually develop affect their interaction with people around them and influence their learning in school (Phillips & Scrinzi, 2013).

Title I. Title I refers to a portion of the ESEA Act, which provides financial assistance to local education agencies and schools with high percentages of children from low-income families (US Department of Education, 2018).

Organization of the Study

This study is divided into five chapters. The background, statement of the problem, and the purpose and significance of the study were provided in Chapter 1. Delimitations of the study, assumptions, research questions, and definitions of terms were also provided. In Chapter 2, the literature review addresses kindergarten in the United States, student behaviors in kindergarten, play-based learning, and Title I designated schools. Chapter 3 contains the methodology of the study. This includes the research

design, selection of participants, measurement instruments, data collection procedures, methods for data analysis, the researcher's role, and limitations of the study. Chapter 4 presents the results of the study. Chapter 5 includes a discussion of the findings, implications for action, and a conclusion of the research study.

Chapter 2

Review of the Literature

Kindergarten began in the 1830s when Friedrich Froebel introduced a program for the youngest learners between the ages of three and seven to improve their mental, social, and emotional capabilities, to engage in independent and creative pursuits (Shapiro, 1983). According to Chervenak (2011), “Froebel founded the concept of kindergarten on the basis that children are instinctively very active creatures that have the need for incessant movement and creativity. The behavior of movement and play was to be cherished and strongly encouraged” (p. 8). Froebel (1902) viewed kindergarten as the natural next step after being in the home from birth. The family was where the child learned first and then transitioned into the kindergarten classroom, which would become their extended family. Additionally, the students would grow a garden. The gardens served many purposes. One purpose was for the children to enjoy planting and growing the garden. Another purpose was so the children could see they were a part of the greater school community. Lastly, the children would see the correlation between the development and growth of the plants and themselves (Chervenak, 2011). Froebel (1902) states

A child that plays thoroughly, with self-active determination, perseveringly until physical fatigue forbids, will surely be a thorough, determined man capable of self-sacrifice for the promotion of the welfare of himself and others. Is not the most beautiful expression of child life at this time a playing child? A child wholly absorbed in his play? A child that has fallen asleep while so absorbed? (p. 2)

Froebel created the kindergarten model with the belief that all students should be treated as individuals who are developing at their level, at their own time (Chervenak, 2011).

Kindergarten was conceived to transition students upon entry into the educational system.

The kindergarten movement progressed rapidly in other areas around the world. Free kindergartens were not common in the United States until the 1870s. The groups that supported free kindergartens in the United States were clubs, wealthy individuals, corporations, and religious organizations (Nawrotzki, 2009). Even with this push for formalized education in the United States, the first kindergarten program within the state school system was not established until the 1930s (Watras, 2012).

The goals and purposes of kindergarten have changed over time. At its beginning, kindergarten was where children developed as a whole child with self-directed play. Lee, Burkam, Ready, Honigman, and Meisels (2006) wrote, “early formal academic instruction was then viewed as detrimental to the development of young children” (p. 167). Over the past decades, there has been a change from a play-based curriculum to a curriculum focusing on the formal teaching of academic skills. The current focus is on test scores, standards, and academic preparation (Bassok, Latham, & Rorem, 2016).

The kindergarten program has been established, but the way each program is taught differs from state to state and classroom to classroom. There is much debate among different groups of people about whether there should be a stronger focus on academics or social learning. The concern is that academic content might hinder other types of learning, which would support the development of social skills and promote

physical and mental health. These areas are predictors of a child's long term outcomes (Bassok et al., 2016).

Kindergarten in the United States

The earliest kindergarten to open in the United States was in Watertown, Wisconsin during the year 1856, founded by Schurz. Schurz opened this school for the German immigrant community (Shapiro, 1983). Peabody began to take notice and started the first American English-language kindergarten in Boston in 1860 (Passe, 2010). Passe explained that the primary focus “was not so much to teach reading and writing but to develop overall cognitive and social-emotional skills, which were the beginning of the whole child approach” (p.43). The kindergarten movement began to spread, and additional kindergartens were established in the United States. However, these were opened as private schools serving mostly the middle-class children, which were based on the model created by Froebel, the founder of kindergarten. In 1870, the first free kindergartens began to open in the United States. By 1880, there were dozens of free kindergartens, which were mostly in large cities (Nawrotzki, 2009).

In 1878, Douglas Wiggins headed the Silver Street Kindergarten, the first free kindergarten in California. Wiggins was known for leading the kindergarten movement and the practice of separating students by age (Nawrotzki, 2009). At the start of World War I, most of the kindergartens were private. By 1914, there were many immigrants from Europe moving to urban cities in the U.S, and as a result of this growth, many private kindergarten schools were incorporated into the public school systems (Cooper, Allen, Patall, & Dent, 2010).

During World War II, there were fewer kindergarten teachers available and the half-day model became more common. Even with the shortened time, the focus began to shift toward academic learning (Cooper et al., 2010). Cooper et al. (2010) explained this academic push became even more prevalent during the Cold War era when “global competition with our ideological adversaries led to a national desire for the acceleration of academic knowledge acquisition throughout the school years” (p.37). Lee et al. (2006) reported that research concerning the cognitive growth in infants and young children promote the growing importance of quality early education to the middle class. Dombkowski (2001) wrote that kindergarten was said to be the beginning of a child’s academic life, but somewhere things shifted.

This may be explained partly by the growing conviction that children of the late twentieth century underwent many experiences vicariously and seemed ‘ready’ much earlier than their counterparts in previous decades. Some parents believed that the old kindergarten work was being accomplished in the modern pre-school, making kindergarten the place to start academic training. (p. 540)

From the Froebel beginnings to the early 2000s, kindergarten experienced a more focused curriculum, and the teaching moved from a play-based curriculum to more formal teachings of discrete skills (Lee et al., 2006).

The historical accounts indicate the pull between an academic focus of kindergarten and the developmental approach are not new (Dombkowski, 2001). Bassok et al. (2016) explained:

A common narrative is that the accountability pressures, particularly from the federal No Child Left Behind Act, have led to changes in the early grades.

Although NCLB did not require testing for children under third grade, some have argued that the intense pressures that principals and teachers felt about their students' performance on high stakes assessments led to an 'accountability shove down' and 'educationalization of early care and education.' (p. 2)

The United States is now in the post No Child Left Behind Act (NCLB) era.

Kindergarten through second-grade teachers felt pressure to prepare their students for the assessments they would face in the later years of elementary school. The reduction of recess and play in the classroom were the leading areas that were cut to include a greater academic focus (Booher-Jennings, 2005).

Academic Focus in Kindergarten

Kindergarten is included in the elementary education continuum of academic learning, which means that content area standards must be achieved to ensure that students have reached academic achievement in the specific content areas and the students are prepared for the learning of academic skills in other grade levels (Pyle & Luce-Kapler, 2014). Didactic kindergarten programs tend to focus on core subjects, such as reading and math, science, and social studies (Frost, Wortham, & Reifel, 2008). In this type of kindergarten environment, there is a significant portion of the day spent in reading and math instruction due to an emphasis on meeting the state and local standards. This need to meet standards and expectations is one reason didactic kindergarten or scripted programs are instituted by educational leaders (Graue, 2009). Some teachers and school administrators believe that the sooner kids learn to read independently, write, and learn mathematics, the more successful they will be through their formal schooling (Bassok, Lathem, & Rorem, 2016).

Implementation of state standards along with more children attending pre-k has facilitated the change toward an academic focus. Miller and Almon (2009) explained “the emphasis has become content-oriented, skill-based instruction and learning that teachers assess using conventional measures. Worksheets or other paper and pencil teacher-made tests have become customary for determining what specific skills and knowledge children have acquired” (p. 21). The Common Core standards in kindergarten describe a range of skills that children are expected to demonstrate by the end of kindergarten. The literacy standards include benchmarks such as the recognition of letters, both upper and lower case, the knowledge of print concepts (reading from left to right, and from the end of one line to the beginning of the next), and retelling key details about a story with guidance and support (National Governors Association Center for Best Practices, 2010). Pondiscio (2015) reported, “there is no suggestion in the Common Core that children should meet these standards as independent readers during or at the end of kindergarten” (p. 2). The focus of state standards at the kindergarten level is to safeguard that students enter first grade ready to attain the standards and skills ahead of them. Some of these skills include letter and sound recognition, high-frequency word knowledge, and knowing that words are collections of the letter sounds. All of this is in the service of helping children understand how print represents language (Pondiscio, 2015). Moving further from just print knowledge and pre-reading skills is the concern that if students do not learn how to read upon entry into kindergarten, they will be even further behind with they reach upper elementary grades and that concern increases when looking at socio-economic background (Reardon, 2011).

The kindergarten classroom serves as a place where students learn the social and academic skills they need to know in order to interact with one another and become familiar with the routines of the school environment (Burkham, LeGerfo, Ready, & Lee, 2007). Kindergarten students learn the language and vocabulary of early writing and reading, foundational mathematics, science, and social studies.

Student Behaviors in Kindergarten

A typical five-year-old demonstrates self-regulation, plays well with others, contributes to the classroom environment and follows the expectations set by the teacher (Bilmes, 2012). Phillips and Scrinzi (2013) stated:

Self-regulation is the ability to focus attention and manage one's emotions and behaviors according to the demands of the situation. The self-regulatory abilities that children gradually develop or fail to develop powerfully affect their interaction with people around them and influence their learning and school success (p. 39).

Some children come to school and struggle through the day academically as well as socially and emotionally.

There have been changes in kindergarten practice over the past twenty years. Kindergarten students are spending more time being instructed and assessed in mathematics and literacy than they are spending time learning through play and exploration (Miller & Almon, 2009). Miller and Almon (2009) explained:

Such practices are contributing to high levels of frustration, stress, and anger in kindergartners, sometimes resulting in extreme behavior problems. At the same time that we have increased academic pressure in children's lives through

inappropriate standards, we have managed to undermine their primary tool for dealing with stress- freely chosen, child-directed, intrinsically motivated play.

(p.15)

Behaviors in the kindergarten classroom are significant because a child's behavior in the early years of their academic life are important aspects of schooling and can affect later development (Gallagher, 2014). Bilmes (2012) stated, "ten percent of kindergarteners show behavior problems or disrupt their class. This number triples for at-risk children. Moreover, children with self-control problems rarely succeed academically" (p. 32). Gallagher (2017) explained, "behavior problems in kindergarten include aggressive behavior toward others (hitting, fighting), oppositional and emotional behavior (emotional outbursts, disobeying rules), and attention problems (trouble paying attention, not finishing tasks)" (p. 2). There are stressed out kindergarten students who are displaying behavior problems, which include rage and aggression, and expulsion from their classrooms and school. Students in early grades, which include kindergarten are increasingly behaving in ways that pose a threat to themselves and others (Miller & Almon, 2009).

Kindergarten students are unique, yet follow similar patterns of development. During the kindergarten year, children are developing at various levels: socially, emotionally, physically, and academically. In order to grow in all areas of child development, a child should be in a safe and nurturing environment with strong relationships among adults and peers. These characteristics should be the foundation for all classroom experiences (Berk, 2006). Bilmes (2012) shared that children "need a supportive environment, multiple activities, and sufficient practice to internalize skills

like how to develop relationships and how to resist the urge to grab something they want” (p. 32). A teacher can help early learners develop four essential skills: positive relationships, belonging to a class or group, regulating himself or herself, and adapting behaviors to meet classroom expectations (Bilmes, 2012). It is vital for kindergarten teachers to understand that there may be many causes that lead a student to become frustrated in the classroom or feel overstimulated and the stress in the classroom might be more than some kindergarten children can handle (Washington State Department of Education, 2016). Some of these students will need interventions embedded in their day to be successful in the classroom. A Functional Behavior Assessment (FBA) can be used for students with behavioral problems in a school setting. The assessment identifies specific target behaviors, the purpose of the behaviors, and what factors are interfering with the student’s educational progress. The teacher or Individualized Education Program (IEP) team seeks to determine the purpose of the problem behavior and work toward finding a solution. This process leads to the development of a Behavior Intervention Plan (BIP) to teach acceptable alternative behaviors. A BIP can help replace negative behaviors with more positive ones by teaching and reinforcing those positive behaviors (Morin, 2014). Negative behavior, which happens in the classroom, can occur in situations that are not related to a child’s attention issues. The behaviors can be due to distractions, academic pressure, and the size of the classroom (Tucker, 2014). Miller and Almon (2009) explained:

Kindergarteners are now under great pressure to meet inappropriate expectations, including academic standards that until now were reserved for first grade. At the same time, they are being denied the benefits of play, a major stress reliever. This

double burden, many experts believe, is contributing to a rise in anger and aggression in young children, reflected in increasing reports of severe behavior problems. Given the high rates of psychiatric disturbances among children today, it is critically important that early education practices promote physical and emotional health and not exacerbate illness. (p. 11)

Play-Based Learning

Play is a time when children can act on their interests, create explorations, and discover new ideas. In early childhood settings, play can be spontaneous, guided or teacher directed. These types of play occur along a continuum that moves from child initiated to teacher initiated. When children are engaged in play activity with their peers, observers notice a child's unwillingness to be distracted (Ray & Smith, 2010). Intrinsic motivation is the desire to engage in an activity that begins within the child (Hoorn et al., 2015). Hoorn et al. (2015) explained, "when children are actively engaged and intrinsically motivated, they demonstrate their abilities to use language to communicate with others, solve problems, draw, run and climb, and so on" (p. 6). Samuelsson and Carlsson (2008) wrote this about play:

Play, as well as learning, are natural components of children's everyday lives.

When children are asked what they like to do best, the answers are unanimous: to play. On the other hand, education for children is, on the whole organized to promote learning rather than play. (p. 623)

Phillips and Scrinzi (2013) shared, "because of the powerful impact of play in children's lives; it is an effective way for teachers to address specific educational goals" (p.21). Play-based learning can provide an appropriate environment for a child's growth,

development, and learning. Play-based learning is based on the traditional kindergarten, which focused on the whole child and the dependence on play for teaching and guiding a child during development. Play-based learning activities allow children to explore, at the same time are intrinsically motivating, engaging and have an overall learning purpose (Chervenak, 2011). Phillips and Scrinzi (2013) stated, “when kindergarteners engage in meaningful, play-based experiences such as investigations, dramatizations, constructions, and projects, they apply and practice new knowledge and skills in natural, relevant ways” (p. 22).

Developmentally appropriate practice involves teachers meeting young children where they are, both as individuals and as part of a group; and helping each child meet challenging and achievable learning goals (Phillips & Scrinzi, 2013). Heroman and Copple (2006) stated, “when teachers know what kindergarten children are like developmentally, it means they are familiar with the typical social and emotional, physical, cognitive, and language characteristics of children at this age” (p. 61).

According to the Kansas State Department of Education (2017), “high-quality kindergarten programming hinges on fostering children’s development and learning in all domains of early learning” (p. 7). These domains of early learning are the focus of play-based instruction and help to improve skills in thinking, socialization, language, and problem-solving (Heroman & Copple, 2006). Play-based learning provides the integrated context essential to support the growth of the whole child. Children experience a variety of significant changes in all areas of development during kindergarten (Phillips & Scrinzi, 2013). Phillips and Scrinzi (2013) stated, “kindergarteners’ brains are especially responsive to stimulation during this highly sensitive developmental period, making this

an opportune time for learning” (p.14). Giving children the chance to play helps them internalize information, as well as build knowledge and make the new learning relatable to their lives. Play also helps them interact with their peers and learn how to solve problems and cope with things that occur in their environment. Hoorn et al. (2015) wrote, “play is essential for optimal development and learning in young children. The match between the characteristics of play and the characteristics of the young child provides a synergy that drives development as no teacher-directed activity can” (p.4). The activity of play in the kindergarten classroom is critical to the early learning needs of students and the teacher’s role in this play-centered learning is key to the success of its implementation (Hoorn et al., 2015). Play-centered learning supports students in many areas of self-regulation and emotional development. According to Miller and Almon (2009), the twelve key types of play-centered learning are:

- Large-motor play: Children love to climb, run, slide, swing, jump, and engage in every type of movement possible. Such play develops coordination, balance, and a sense of one’s body in the space around it.
- Small-motor play: Play with small toys and activities like stringing beads, playing with puzzles, and sorting objects into types develop dexterity.
- Mastery play: Children often repeat an action in play and persevere until they master it, such as making dozens of “birthday packages” to learn to tie bows, or playing on a balance beam to become a “circus performer.”
- Rules-based play: Kindergarteners and grade-school children enjoy the challenge of making up their own rules and the social negotiation involved in adapting the rules for each play situation.

- Construction play: Building houses, ships, forts, and other structures in a basic form of play that requires skill and imagination.
- Make-believe play: This broad category incorporates many other play types and is rich with language, problem-solving, and imagination. It frequently begins with “Let us pretend” and goes on to include anything children might have experienced or imagined.
- Symbolic play: Children take an object at hand and convert it into the toy or prop they need through a fluid process of fantasy or imagination.
- Language play: Children develop mastery by playing with words, rhymes, verses, and songs they make up or change. They tell stories and dramatize them. They are fascinated by foreign languages, especially when they are presented playfully in story, verse, or song.
- Playing with the arts: Children integrate all forms of art into their play, using whatever materials are at hand to draw, model, create music, perform puppet shows, and so on. They explore the arts and use them to express their feelings and ideas.
- Sensory play: Most children enjoy playing with dirt, sand, mud, water, and other materials with different textures, sounds, and smells. Such play develops the senses.
- Rough-and-Tumble play: This fundamental form of play is found in animals as well as human children. Animals know how to play roughly without injury by rounding their body gestures and not aiming for dominance. Children can be helped to do the same if their play becomes too aggressive.

- Risk-taking play: Children extend their abilities through risky play and learn to master challenging environments. They generally know how far they can go without actually hurting themselves. (p. 55)

It is crucial to educate kindergarten teachers, not only about the importance of play-centered learning but also about the types of play. This knowledge and understanding of play are crucial to the implementation in the kindergarten classroom. The development of a kindergarten student requires a merge of teaching styles from preschool to the primary grades that move from highly structured and less structured instruction, experiences that are teacher and student-led, and time for purposeful play. At the kindergarten level, students tend to think abstractly but need concrete experiences, they need to follow directions, but they also need to explore on their own, and they can think complexly but sometimes need things communicated in a simplistic manner (Kostelnik, Soderman, & Whiren, 2011). Capacities such as problem-solving, communication, collaboration, innovation, and creative thinking are developed through child-initiated and child-directed play (Miller & Almon, 2009).

Kindergarten Students Emotional Development

The ability to feel or experience a wide range of emotions and the capacity a student has to manage or regulate their emotions and their expression is referred to as emotional development (Hoorn et al., 2015). The social and emotional development of children between the ages of 5 and 7 are as important as learning the basics. Not all children learn the same things in the same way. Due to these differences, teachers need to vary instruction and give children opportunities to differentiate learning. Children need hands-on experiences so that they can discover things on their own (Kostelnik,

Soderman, & Whiren, 2011). Play-based learning offers a non-threatening setting for children to engage in social and emotional development. Copple and Bredekamp (2009) explained:

All the domains of development and learning – physical, social and emotional, and cognitive – are important, and they are closely interrelated. Children’s development and learning in one domain influence and are influenced by what takes place in other domains. Children are thinking, moving, feeling and interacting with human beings. To teach them well involves considering and fostering their development and learning in all domains. (p. 11)

According to Miller and Almon (2009), “Given the high rates of mental illness and/or aggressive behavior among young children today, it is critically important that early education practices promote physical and emotional health and not exacerbate illness” (p. 49). When a child enters kindergarten, they should begin to know and be able to utilize a variety of self-regulation strategies; however, most children continue to need support from adults to be successful. Children also become more skilled in working with their classmates. They can utilize cooperative and solitary play while still needing modeling of sustained, complex play (Phillips & Scrinzi, 2013). Through play, a child learns how to appropriately express his or her emotions with classroom peers as well as interacting with others in the school. In turn, social play allows children to learn how to understand others and to understand cues in the school environment (Graue, 2009).

Title I

According to the Elementary and Secondary Education Act (2018), the “purpose of this title is to provide all children significant opportunity to receive a fair, equitable,

and high-quality education, and to close educational achievement gaps” (p. 8). The Every Student Succeeds Act (ESSA) was passed in December of 2015 by both the United States Senate and House of Representatives and was signed by the President. The ESSA leaves most of the Elementary and Secondary Education Act (ESEA) law, which was signed into law in 1965 intact. The ESEA has since appropriated funds to low-income schools in accordance with Title I. The United States Department of Education (2018) outlines the following ways that states can use the funds distributed by the Federal government:

1. Ensuring that high-quality academic assessments, accountability systems, teacher preparation and training curriculum, and instructional materials are aligned with challenging State academic standards so that students, teachers, parents, and administrators can measure progress against common expectations for student achievement;
2. Meeting the educational needs of low-achieving children in our Nation’s highest poverty schools, limited English proficient children, migratory children, children with disabilities, Indian children, neglected or delinquent children, and young children in need of reading assistance;
3. Closing the achievement gap between high- and low-performing children, especially the achievement gap between minority and non-minority students, and between disadvantaged children and their more advantaged peers;
4. Holding schools, local educational agencies, and States accountable for improving the academic achievement of all students, and identifying and turning around low-performing schools that have failed to provide a high-quality education to their

students, while providing alternatives to students in such schools to enable the students to receive a high-quality education;

5. Distributing and targeting resources sufficiently to make a difference to local educational agencies and schools where needs are greatest;
6. Improving and strengthening accountability, teaching, and learning by using State assessment systems designed to ensure that students are meeting challenging State academic achievement and content standards and increasing achievement overall, but especially for the disadvantaged;
7. Providing greater decision-making authority and flexibility to schools and teachers in exchange for greater responsibility for student performance;
8. Providing children with an enriched and accelerated educational program, including the use of school-wide programs or additional services that increase the amount of quality instructional time;
9. Promoting school-wide reform and ensuring the access of children to effective, scientifically based instructional strategies and challenging academic content;
10. Significantly elevating the quality of instruction by providing staff in participating schools with substantial opportunities for professional development;
11. Coordinating services under all parts of this title with each other, with other educational services, and, to the extent feasible, with other agencies providing services to youth, children, and families; and
12. Affording parents substantial and meaningful opportunities to participate in the education of their children. (p.1)

In Kansas, where District Y is located, schools can either receive school-wide assistance if more than 40% of the students qualify for free or reduced lunch or targeted assistance if less than 40% of the students qualify for free or reduced lunch (Kansas Department of Education, 2018). The schools used in this study that met Title I criteria all received school-wide assistance. The Kansas Department of Education (2018) explained:

The purpose of a schoolwide program is a comprehensive reform strategy designed to upgrade the entire educational program in a Title I school; its primary goal is to ensure that all students, particularly those who are low-achieving, demonstrate proficient and advanced levels of achievement on State academic achievement standards. (p. 1)

Play is vital for the overall development of all children. The socioeconomic stress on families living in poverty often leads to parents not having the energy, skills or time to play with their children. This information permits school districts to incorporate play in the school day. School leaders often were under the assumption that they were doing what was right by having a strict learning environment in the school setting but they failed to see that students raised in poverty need support emotionally, socially, and educationally (Jensen, 2013).

Summary

The history of kindergarten in the United States from the 1880s until the present was presented in Chapter 2. In addition to the historical information shared, a full description of present-day kindergarten in the United States was offered, which contained a description of the current standards-based focus and the behaviors occurring in the kindergarten classroom. Current studies and information about play-based learning and

its effect on behavior and academic progress in the kindergarten classroom were discussed. Information was shared about the Federal and State regulations of Title I funding. The need for play of students living in poverty was discussed. Chapter 3 includes a description of the methodology used for this study, the research design, selection of participants, measurement, and data collection procedures. In addition, Chapter 3 includes the data analysis, the hypothesis testing for the study, and the limitations of the study.

Chapter 3

Methods

The first purpose of this study was to examine kindergarten teachers' perceptions of play-based learning, as well as negative student behavior in their kindergarten classrooms. The second purpose of this study was to examine the impact of play-based learning on negative student behaviors. The third purpose was to analyze the percentage of kindergarten students with Behavior Intervention Plans (BIP) as part of their Individualized Education Plan (IEP) before and after the implementation of play-based learning, and the percentage of BIPs was also examined for differential impacts based on the school's Title I status. The fourth purpose of this study was to determine how reading levels changed before and after the implementation of play-based learning. This change was measured using the Rigby PM Benchmark Assessment at the end of the 2016-2017 and 2017-2018 school years. Further, the change in reading level as measured using the Rigby PM Benchmark Assessment was also examined for differential impacts based on the school's Title I status. This chapter includes a description of the research design, selection of participants, measurement instruments, data collection procedures, data analysis, hypothesis testing, and limitations of the current study.

Research Design

A causal comparative quantitative research design was used to investigate the hypotheses associated with each research question posed for the current study. Creswell (2014) states "one type of non-experimental quantitative research is causal-comparative research in which the investigator compares two or more groups in terms of a cause (or independent variable) that has already happened" (p. 12). The independent variables

used for this study included the implementation of play-based learning (before and after) and the type of school in which the kindergarten classrooms were located (Title I or Non-Title I). The dependent variables for the different research questions included the reading levels as determined by the Rigby PM Benchmark Assessment, the percentage of students with a Behavior Intervention Plan (BIP), and the kindergarten teachers' results from the Survey of Play-Based Learning in Kindergarten.

Selection of Participants

Criterion sampling was used in the selection of teacher participants. Lunenburg and Irby (2008) defined criterion sampling as “selecting participants who meet some criterion” (p. 176). Teachers who taught kindergarten during the 2016-2017 and 2017-2018 school years from District Y were recruited via email to participate in the survey. District Y's Teachervue database provided potential participant emails.

Purposive sampling techniques were also used in this study. Lunenburg and Irby (2008) defined purposive sampling as “selecting a sample based on the researcher's experience or knowledge of the group to be sampled” (p. 175). A student was included in the sample if the student was enrolled in kindergarten for the 2016-2017 school year, which was the school year before the implementation of play-based learning. A student was also included in the sample if the student was enrolled in kindergarten after implementation, which would include the 2017-2018 school year.

Measurement

The instrument used to measure reading levels of kindergarten students was the Rigby PM Benchmark assessment. The Rigby PM Benchmark, according to Nelley and Smith (2007), is an “assessment which identifies a student's independent and

instructional reading levels in order to match the student with an appropriately leveled text. Miscue analysis of the running record will determine the child's level of strategy use and self-monitoring skills" (p.1). The levels of the Rigby PM Benchmark assessment are criterion-referenced based on the following factors: high-frequency words, sentence construction, meaning and logic, and the Fry Readability Formula (Nelley & Smith, 2007). As a student builds on their literacy skills, it is necessary to determine the level at which a student can read with independence, as well as the level where there is a challenge in their reading. The Rigby PM Benchmark assessment is administered individually by the kindergarten teacher to each student. This assessment measures word accuracy and comprehension. As students read a passage aloud, the teacher assesses and takes notes of general proficiency and any mistakes or miscues made by the student. The scoring materials include a printed text of the passage, which the student reads. This text is printed so the teacher can code the reading based on the student's word accuracy during the reading of the text. Word accuracy is scored by finding the percentage of words read correctly divided by the total number of words in the passage. Basic comprehension is measured through a series of questions that the student answers orally without referring back to the passage. Student comprehension was calculated by counting the total number of correct responses divided by the total number of questions.

The Survey of Play-Based Learning in Kindergarten was used to gather an overview of teachers' perceptions regarding play-based learning in the kindergarten classroom. Permission was obtained to use and modify the survey from Chervenak (2011), who designed the instrument and had it reviewed for content validity (see Appendix A). The modified survey consisted of 26 questions, eighteen of which were

multiple choice; seven utilized a 4-point Likert-type scale of strongly agree to strongly disagree, and one question was open-ended. Specific survey questions that were used to help answer the research questions for this study included the level of importance play has on learning, the impact play-based learning has had on behavior in the classroom, and the value of the amount of time spent on play-based learning. See Appendix B for the complete survey.

Data Collection Procedures

The researcher submitted a request to conduct the study to the Baker University Institutional Review Board (IRB), and approval was granted on May 8, 2018 (see Appendix C). A research proposal form was submitted to the Director of Assessment and Research in District Y to conduct research. The completed research proposal and letter were electronically mailed to the Director of Assessment and Research. After review, the Director of Assessment and Research granted permission to conduct the study on May 17, 2018 (see Appendix D).

District Y's assessment department supplied a data set that included Rigby PM Benchmark assessment data for kindergarten students from the 2016-2017 school year and the 2017-2018 school year. Identities of the students were protected by assigning random student numbers. Information including the school year and the school name were included in each data set. An additional data set included the total enrollment of the kindergarten classes and the frequency of kindergarten students that had a Behavior Intervention Plan (BIP) as part of their Individual Education Plan (IEP) from the 2016-2017 school year and 2017-2018 school year. The data were stored in an electronic Excel spreadsheet that was provided by District Y on May 25, 2018. The spreadsheet was

arranged in columns representing school placement and reading level for each kindergarten student. The number of kindergarten students with BIPs as part of their IEP was provided electronically on June 7, 2018.

A total of 83 kindergarten teachers taught kindergarten in District Y during the 2016-2017 and 2017-2018 school years and received the recruitment email to participate in the survey (see Appendix E). The survey was administered over the Internet through an email link to Google Forms. The email explained that responses would remain anonymous and no individual results would be released. There was no risk involved to any participant who chose to respond to the survey. The survey was open for a three-week window, and the participants were sent a reminder email at the halfway point of the survey window. The response rate for the survey was 43 out of 83 kindergarten teachers or almost 52%.

Data Analysis and Hypothesis Testing

After all data were collected, it was organized in a Microsoft Excel spreadsheet and was inspected for importation into IBM® SPSS® Statistics Faculty Pack 25 for Windows. The following research questions, hypotheses, and description of the analysis used to test individual hypotheses were used for the current study. Additionally, information regarding the variables and level of significance for each analysis is provided.

RQ1. To what extent is there a difference in kindergarten teachers' perceptions of student behavior as measured by the Survey of Play-Based Learning in Kindergarten, before and after the implementation of play-based learning?

H1. There is a difference in kindergarten teachers' perceptions of student behavior as measured by the survey of play-based learning in kindergarten, before and after the implementation of play-based learning.

A chi-square test of independence was conducted to address RQ1 and analyze the relationship between two categorical variables. A frequency table was constructed for the two categorical variables: times a negative behavior occurred and the year of the occurrence (2016-2017 or 2017-2018). The observed frequencies were compared to those expected by chance. The level of significance was set at .05.

RQ2. To what extent is there a difference in the percentage of kindergarten students with a Behavior Intervention Plan (BIP) as part of their Individualized Education Plan (IEP) before and after the implementation of play-based learning, and is the change in the percentage of BIPs differentially impacted based on their school's Title I status?

H2. There is a difference in the percentage of kindergarten students with BIPs as part of their IEPs before and after the implementation of play-based learning.

H3. Title I status differentially impacted the percentage of BIPs as part of their IEPs before and after implementation of play-based learning.

A two-factor analysis of variance (ANOVA) was conducted to test H2 and H3. This allows the effects of two independent variables on the dependent variable to be tested separately but can also test the effect of the combination or interaction of the independent variables on the dependent variable. For H2, the categorical factor used to group the dependent variable, percentage of BIPs, was the implementation of play-based learning (before or after). For H3, the categorical factor used to group the dependent variable, percentage of BIPs, was the implementation of play-based learning (before or

after) and school's Title I status (Title I or Non-Title I). The level of significance was set at .05. Tukey HSD post hoc comparisons will be conducted as a follow-up to a significant omnibus *F*-statistic for the ANOVA for the interaction effect.

RQ3. To what extent is there a difference in kindergarten students' reading levels as measured by the Rigby PM Benchmark Assessment before and after the implementation of play-based learning, and is the change in reading level differentially impacted based on their school's Title I status?

H4. There is a difference in kindergarten student reading levels as measured by the Rigby PM Benchmark Assessment before and after the implementation of play-based learning.

H5. Title I status differentially impacted the reading levels before and after the implementation of play-based learning.

A two-factor analysis of variance (ANOVA) was conducted to test H4 and H5. This allows the effects of two independent variables on the dependent variable to be tested separately but can also test the effect of the combination or interaction of the independent variables on the dependent variable. The dependent variable of reading levels was measured by the Rigby PM Benchmark assessment. The independent categorical variables used to group the Rigby reading scores were the implementation of play-based learning (before or after) for H4, and school's Title I status (Title I or Non-Title I) for H5. The level of significance was set at .05. Tukey HSD post hoc comparisons will be conducted as a follow-up to a significant omnibus *F*-statistic for the ANOVA for the interaction effect.

Limitations

According to Lunenburg and Irby (2008), “Limitations are factors that may have an effect on the interpretation of the findings or the generalizability of the results.

Limitations are not under the control of the researcher” (p. 131). Limitations of this study included:

1. Prior educational opportunities some kindergarten students may have received or experienced was not addressed.
2. Professional development kindergarten teachers received to implement play-based learning was not addressed.
3. Instructional methods, classroom and school climate, and teachers’ attitudes may vary from school to school in District Y.
4. Any additional support provided at Title I schools was not addressed.
5. Student reading levels may be impacted by many factors including language, ability, support at home, and prior school experience.
6. The testing environment used for administering the Rigby PM Benchmark Assessment may vary from school to school in District Y.
7. Behavior Intervention Plans (BIPs) as part of a student’s Individualized Education Plan (IEP) may vary from school to school in District Y.

Summary

This study utilized a causal-comparative quantitative research design that compares two or more events that have already happened (Creswell, 2014). Chapter 3 included the research design, selection of participants, measurements used, data

collection procedures, data analysis and hypothesis testing, and the limitations of the study. Chapter 4 contains the results of the data analysis.

Chapter 4

Results

The first purpose of this causal-comparative quantitative study was to examine kindergarten teachers' perceptions of play-based learning, as well as negative student behavior in their kindergarten classrooms. The second purpose of this study was to examine the impact of play-based learning on negative student behaviors. The third purpose was to analyze the percentage of kindergarten students with Behavior Intervention Plans (BIP) as part of their Individualized Education Plan (IEP) before and after the implementation of play-based learning, and the percentage of BIPs was also examined for differential impacts based on their school's Title I status. The fourth purpose of this study was to determine how reading levels changed before and after the implementation of play-based learning. This change was measured using the Rigby PM Benchmark Assessment at the end of the 2016-2017 and 2017-2018 school years. Further, the change in reading level as measured using the Rigby PM Benchmark Assessment was also examined for differential impacts based on their school's Title I status. An explanation of the descriptive statistics and the results of the data analysis for each hypothesis associated with its research question are included in Chapter 4.

Descriptive Statistics

There were three sample groups of participants for this research study. The first sample group of this study was 43 kindergarten teachers in District Y who completed the survey. The survey participants consisted of 65.1% teachers who taught in Non-Title I classrooms and 34.9% teachers who taught in Title I classrooms. The second sample group of this study included 2,022 kindergarten students enrolled in District Y during the

2016-2017 school year, which was considered the year before implementation. The third sample group of this study included 1,996 kindergarten students enrolled in District Y during the 2017-2018 school year, which was the year after implementation.

Hypothesis Testing

Data from the Google Forms survey and data from District Y were downloaded and imported into IBM® SPSS® Statistics Faculty Pack 25 for Windows. The analysis of the data focused on three research questions. Each research question is delineated below with its corresponding hypotheses and results of the statistical analysis procedures conducted.

RQ1. To what extent is there a difference in kindergarten teachers' perceptions of student behavior as measured by the Survey of Play-Based Learning in Kindergarten, before and after the implementation of play-based learning?

H1. There is a difference in kindergarten teachers' perceptions of student behavior as measured by the Survey of Play-Based Learning in Kindergarten, before and after the implementation of play-based learning.

Kindergarten teacher response data for the two survey items regarding number of times per week teachers observed negative behaviors at the end of each school year, before and after the implementation of play-based learning, were statistically compared. A chi-square test of independence was conducted to test H1 using survey data for survey Question 7 (How many times per week did you observe a negative behavior in the last quarter of kindergarten during the 2016-2017 school year?) and Question 16 (How many times per week did you observe a negative behavior in the last quarter of kindergarten during the 2017-2018 school year?). The observed frequencies were compared to those

expected by chance. The level of significance was set at .05. The results of the chi-square of independence indicated there was not a statistically significant difference between the counts and expected counts [$\chi^2(6) = 3.240, p = 0.778$], of teacher reports of times per week they observed a negative behavior in the last quarter of kindergarten during the 2016-2017 compared to the 2017-2018 school year. See Table 1 for the observed and expected frequencies with Question 7 responses for 2016-2017 in the first row for each category and Question 16 responses for 2017-2018 in the subsequent rows.

Table 1

*Observed Frequencies and Expected Frequencies Disaggregated by the Times per Week**Negative Behavior Occurred*

2016-2017	2017-2018	f_{observed}	f_{expected}
0 Times		0	0.0
	0 times	0	0.0
	1-4 times	0	0.0
	5-9 times	0	0.0
	10+ times	0	0.0
1-4 times		24	24.0
	0 times	3	1.7
	1-4 times	12	12.8
	5-9 times	5	5.6
	10+ times	4	3.9
5-9 times		9	9.0
	0 times	0	0.6
	1-4 times	6	4.8
	5-9 times	2	2.1
	10+ times	1	1.5
10+ times		10	10.0
	0 times	0	0.7
	1-4 times	5	5.3
	5-9 times	3	2.3
	10+ times	2	1.6

A second chi-square test of independence was conducted to test H1 using the teacher survey data for survey Question 8 (How many students displayed negative behavior in the last quarter of kindergarten during the 2016-2017 school year?) and

Question 17 (How many students displayed negative behavior in the last quarter of kindergarten during the 2017-18 school year?). The observed frequencies for each school year were compared to those expected by chance. The level of significance was set at .05. The results of the chi-square test of independence indicated there was not a statistically significant difference between the frequencies and expected frequencies [$\chi^2(9) = 16.200, p = 0.063$] of teachers reporting the number of students they observed displaying negative behavior in the last quarter of kindergarten during the 2016-2017 compared to the 2017-2018 school year. H1 was not supported. However, this difference did approach significance as the resulting p -value was only slightly higher than the set level of significance with alpha of .05. See Table 2 for the observed and expected frequencies with Question 8 responses for 2017-2018 in the first row for each category and Question 17 responses for 2017-2018 in the subsequent rows.

Table 2

*Frequencies and Expected Frequencies Disaggregated by Number of Students Displayed
a Negative Behavior*

2016-2017	2017-2018	f_{observed}	f_{expected}
0 students		1	1.0
	0 students	1	0.1
	1-2 students	0	0.6
	3-4 students	0	0.3
	5+ students	0	0.1
1-2 students		24	24.0
	0 students	3	2.2
	1-2 students	15	13.4
	3-4 students	4	6.7
	5+ students	2	1.7
3-4 students		10	10.0
	0 students	0	0.9
	1-2 students	5	5.6
	3-4 students	5	2.8
	5+ students	1	1.5
5+ students		8	8.0
	0 students	0	0.7
	1-2 students	4	4.5
	3-4 students	3	2.2
	5+ students	1	0.6

RQ2. To what extent is there a difference in the percentage of kindergarten students with a Behavior Intervention Plan (BIP) as part of their Individualized Education

Plan (IEP) before and after the implementation of play-based learning, and is the change in the percentage of BIPs differentially impacted based on their school's Title I status?

H2. There is a difference in the percentage of kindergarten students with BIPs as part of their IEPs before and after the implementation of play-based learning.

The results of the two-factor ANOVA main effect for the percentage of BIPs comparing the year before and the year after implementation of play-based learning used to test H2 indicated the difference between the means was not statistically significant [$F(1, 66 = .000, p = 0.646)$]. The mean percentage of BIPs in kindergarten classes was not different based on the implementation of play-based learning. H2 was not supported. See Table 3 for the means and standard deviations for the analysis.

Table 3

Descriptive Statistics for the Mean Percentage of BIPs in Kindergarten Classes by School Type

School Type	School Year	<i>M</i>	<i>SD</i>	<i>n</i>
Non-Title I	2016-2017	1.47	2.46	24
	2017-2018	1.68	2.20	24
Total		1.57	2.31	48
Title I	2016-2017	2.01	3.79	11
	2017-2018	1.12	1.78	11
Total		1.57	2.93	22
All	2016-2017	1.64	2.90	35
	2017-2018	1.50	2.07	35
Total		1.57	2.50	70

H3. Title I status differentially impacted the percentage of BIPs as part of their IEPs before and after implementation of play-based learning

The results of the two-factor ANOVA interaction effect for the differential impact of the school type (Title I and Non-Title I) on the mean percentage of BIPs comparing the year before and the year after implementation of play-based learning used to test H3 indicated the interaction of the independent variables on the dependent variable was not statistically significant [$F(1, 66) = .000, p = 0.407$]. The patterns displayed by the mean percentages of BIPs in kindergarten classes from 2016-2017 to 2017-2018 were not different based on the interaction of Title I status and implementation of play-based learning. H3 was not supported. See Table 3 for the means and standard deviations for the analysis.

With the BIP data not showing statistical differences but displaying trends, it was important to do additional data analysis to show the different patterns of the BIP percentage means before and after the implementation of play-based learning for the Non-Title I schools, which increased slightly, and the Title I schools, which decreased. There does seem to be an interaction. There was not enough power to detect a statistically significant interaction because the number of schools was too minimal once divided into the school year and Title I status. See Figure 1 for the estimated marginal means of BIP percentages.

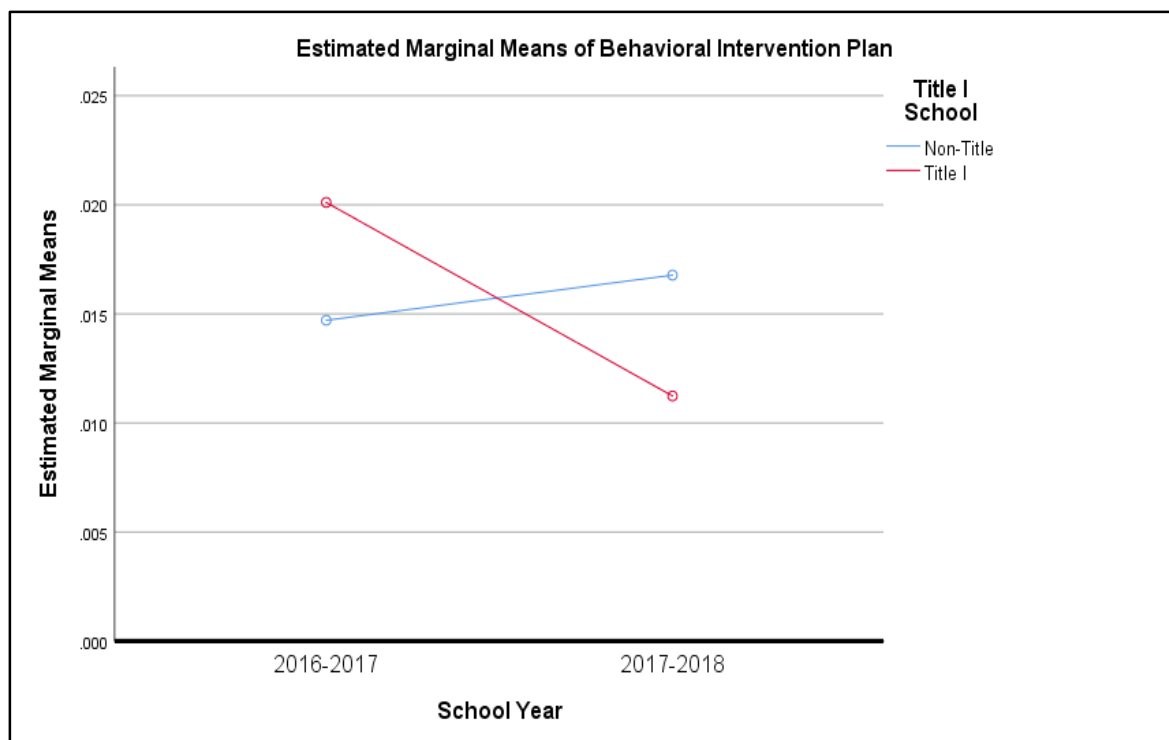


Figure 1. Estimated Marginal Means of Behavioral Intervention Plans

RQ3. To what extent is there a difference in kindergarten students' reading levels as measured by the Rigby PM Benchmark Assessment before and after the implementation of play-based learning, and is the change in reading level differentially impacted based on their school's Title I status?

H4. There is a difference in kindergarten student reading levels as measured by the Rigby PM Benchmark Assessment before and after the implementation of play-based learning.

The results of the two-factor ANOVA main effect for the end-of-year Rigby reading scores comparing the year before and the year after implementation of play-based learning used to test H4 indicated the difference between the means was not statistically significant [$F(1, 4009) = 0.548, p = 0.594$]. Student reading levels as measured by the Rigby PM Benchmark assessment were not different from 2016-2017 to 2017-2018

based on the implementation of play-based learning. H4 was not supported. See Table 4 for the means and standard deviations for the analysis.

Table 4

Descriptive Statistics for the Mean Year-End Rigby Levels by School Year

School Year	<i>n</i>	<i>M</i>	<i>SD</i>
2016-2017	2018	7.89	5.945
2017-2018	1995	8.13	5.976
Total	4013	8.10	5.961

H5. Title I status differentially impacted the reading levels before and after the implementation of play-based learning.

The results of the two-factor ANOVA interaction effect for the differential impact of the school type (Title I and Non-Title I) on the mean Rigby reading levels comparing the year before and the year after implementation of play-based learning used to test H5 indicated a statistically significant interaction of the independent variables on the dependent variable which led to a difference in the means [$F(1, 4009) = 16.143, p < .001$]. Student reading levels as measured by the Rigby PM Benchmark assessment displayed different patterns for Title I schools with the mean moderately increasing from 2016-2017 to 2017-2018, than the patterns for non-Title I schools with the mean reading level slightly decreasing after the implementation of play-based learning. H5 was supported. The effect size for the interaction effect of the two-factor ANOVA, as indexed by partial eta squared (.024), indicated that 2.4% of the variability in reading levels can be explained by the interaction between the independent variables of Title I status and implementation of play-based learning. According to Cohen (1988), this is a

small to moderate effect. See Table 5 for the means and standard deviation for this analysis.

Table 5

Descriptive Statistics for the Mean Year-End Rigby Reading Levels by Title I Status & School Year

School Type	School Year	<i>n</i>	<i>M</i>	<i>SD</i>
Non-Title	2016-2017	1455	8.69	5.929
	2017-2018	1428	8.48	5.854
Total		2883	8.59	5.892
Title	2016-2017	563	5.80	5.461
	2017-2018	567	7.24	6.191
Total		1130	6.52	5.880
All	2016-2017	2018	7.89	5.945
	2017-2018	1995	8.13	5.976
Total		4013	8.01	5.961

Post hoc pairwise comparisons were conducted to determine, which means were different. The Tukey's HSD indicated the mean for reading levels of non-Title I schools in 2016-2017 ($M = 8.69$) was significantly higher ($p = .012$) than the 2017-2018 mean for reading levels of Title I schools ($M = 5.80$). The patterns of the mean Rigby reading levels were different between years based on whether the school was designated Title I or not (see Table 5). Non-Title I schools' mean Rigby reading levels decreased slightly from 2016-2017 ($M = 8.69$) to 2017-2018 ($M = 8.48$), but Title I schools' mean Rigby reading levels rendered a sizeable increase from 2016-2017 ($M = 5.80$) to 2017-2018 ($M = 7.24$).

Additional Analyses

The additional data point to analyze was the data from RQ1 and the Survey of Play-Based Learning in Kindergarten. The following information was collected with the questions asked in the survey, which were answered by 43 kindergarten teachers in District Y. Table 6 includes the frequencies and percentages for the range selected representing the number of students the kindergarten teachers had in their classrooms during the 2016-2017 and 2017-2018 school years. In 2016-2017 and 2017-2018 the class size range with the highest percentage was 15-19 students with 47% (n = 20) and 56% (n = 24) of teachers, respectively, and the next highest range for both years was 20-24 students with 44% (n = 19) of teachers choosing this class size range in 2016-2017 and 37% (n = 16) in 2017-2018.

Table 6

Frequencies and Percentages for Total Students in the Kindergarten Classroom

School Year	Frequency Ranges	<i>n</i>	%
2016-2017	Less than 14	3	7.0
	15-19 Students	20	46.5
	20-24 Students	19	44.2
	More than 25	1	2.3
2017-2018	Less than 14	1	2.3
	15-19 Students	24	55.8
	20-24 Students	16	37.2
	More than 25	2	4.7

Table 7 includes the frequencies and percentages for the number of boys and girls the kindergarten teachers had enrolled in their classrooms during the 2016-2017 and 2017-2018 school years. In 2016-2017 and 2017-2018 the range for the number of boys in the class with the highest percentage was 9-12 boys with 58% ($n = 25$) and 56% ($n = 24$), respectively; and the range for the number of girls in the class with the highest percentage was 9-12 girls with 47% ($n = 20$) and 67% ($n = 29$), respectively. The next highest range reported by teachers for both years was 4-8 boys with 26% ($n = 11$) and 35% ($n = 15$), respectively; and 4-8 girls with 42% ($n = 18$) and 28% ($n = 12$).

Table 7

Frequencies and Percentages for Total Number of Boys and Girls in the Kindergarten Classroom

School Year	Gender	Frequency Ranges	<i>n</i>	%
2016-2017	Boys	4-8	11	25.6
		9-12	25	58.1
		13-17	7	16.3
	Girls	4-8	18	41.8
		9-12	20	46.5
		13-17	5	11.6
2017-2018	Boys	4-8	15	34.9
		9-12	24	55.8
		13-17	4	9.3
	Girls	4-8	12	27.9
		9-12	29	67.4
		13-17	2	4.7

Table 8 includes the frequencies and percentages for the response ranges representing number of times per week the kindergarten teachers observed negative behavior in the first quarter of kindergarten during the 2016-2017 and 2017-2018 school years. In 2016-2017 and 2017-2018, the range with the highest percentage was 10 + negative behaviors 54% ($n = 23$) both years. For 2016-2017 the next highest response range was 5-9 times with 28% ($n = 12$), but in 2017-2018 the next highest response range for the frequency per week of observing a negative behavior during the first quarter was 1-4 times per week with a 28% ($n = 12$) of responding teachers. This does show a shift

toward fewer negative behaviors per week by students during the first quarter of the school year after the implementation of play-based learning.

Table 8

Frequencies and Percentages for How Many Times per Week the Teacher Observed a Negative Behavior in the First Quarter of Kindergarten

School Year	Frequency Ranges	<i>n</i>	%
2016-2017	1-4 Times	8	18.6
	5-9 Times	12	27.9
	10 + Times	23	53.5
2017-2018	1-4 Times	12	27.9
	5-9 Times	8	18.6
	10 + Times	23	53.5

Table 9 includes the frequencies and percentages for the number of students who displayed negative behaviors in the first quarter of kindergarten during the 2016-2017 and 2017-2018 school years. In 2016-2017, the highest percentage of students who displayed a negative behavior in the first quarter of kindergarten was 3-4 students at 37% ($n = 16$). In 2017-2018, the highest percentage of students who displayed a negative behavior in the first quarter of kindergarten was 1-2 students at 37% ($n = 16$).

Table 9

Frequencies and Percentages for How Many Students Displayed Negative Behavior in the First Quarter of Kindergarten

School Year	Frequency Ranges	<i>n</i>	%
2016-2017	0 Students	0	0.0
	1-2 Students	13	30.2
	3-4 Students	16	37.2
	5 + Students	14	32.6
2017-2018	0 Students	2	4.7
	1-2 Students	16	37.2
	3-4 Students	10	23.2
	5 + Students	15	34.9

Table 10 includes the frequencies and percentages of when the majority of negative behavior observed occurred in the first quarter of the 2016-2017 and 2017-2018 school years. In 2016-2017, the highest percentage of negative behaviors occurred during transitions between activities at 40% ($n = 17$). The next highest was during whole group activities at 30% ($n = 13$). In 2017-2018, the highest percentage of negative behaviors occurred during whole group activities at 33% ($n = 14$). The next highest was during transitions between activities at 30% ($n = 13$).

Table 10

Frequencies and Percentages for When the Majority of the Negative Behaviors Observed Occurred in the First Quarter of Kindergarten

School Year	Type of Activity	<i>n</i>	%
2016-2017	Individual Seat Time	5	11.6
	Small Group Activities	8	18.6
	Transitions Between Activities	17	39.6
	Whole Group Activities	13	30.2
2017-2018	Individual Seat Time	7	16.3
	Small Group Activities	9	20.9
	Transitions Between Activities	13	30.2
	Whole Group Activities	14	32.6

Table 11 includes the frequencies and percentages of when the majority of negative behavior observed occurred in the last quarter of the 2016-2017 and 2017-2018 school years. In 2016-2017, during the last quarter of kindergarten, the highest percentage of negative behaviors occurred during transitions between activities at 40% ($n = 17$). The next highest was during whole group activities at 23% ($n = 10$). In 2017-2018, the highest percentage of negative behaviors occurred during transitions between activities at 42% ($n = 18$). The next highest percentage was during individual seat time at 21% ($n = 9$).

Table 11

Frequencies and Percentages for When the Majority of the Negative Behaviors Observed Occurred in the Last Quarter of Kindergarten

School Year	Type of Activity	<i>n</i>	%
2016-2017	Individual Seat Time	8	18.6
	Small Group Activities	8	18.6
	Transitions Between Activities	17	39.6
	Whole Group Activities	10	23.3
2017-2018	Individual Seat Time	9	20.9
	Small Group Activities	8	18.6
	Transitions Between Activities	18	41.9
	Whole Group Activities	8	18.6

Table 12 includes the frequencies and percentages of how the kindergarten teachers believed the implementation of play-based learning had positively impacted student behavior in the classroom. Kindergarten teachers responded with 69.8% ($n = 30$) of them strongly agreeing and 27.9% ($n = 12$) agreeing that the implementation of play-based learning had a positive impact on student behavior in the classroom. Only 3% ($n = 1$) of responding kindergarten teachers disagreed that play-based learning had positively impacted student behavior.

Table 12

Frequencies and Percentages for the Belief that the Implementation of Play-Based Learning Had Positively Impacted Student Behavior

Response Category	<i>n</i>	%
Strongly Agree	30	69.8
Agree	12	27.9
Disagree	1	2.3
Strongly Disagree	0	0.0

Table 13 includes the frequencies and percentages of how the kindergarten teachers believed the implementation of play-based learning had positively impacted student learning in the classroom. Kindergarten teachers responded with 55.8% ($n = 24$) strongly agreeing and 37.2% ($n = 16$) agreeing that the implementation of play-based learning had a positive impact on student learning in the classroom. Only 7% ($n = 3$) disagreed that play-based learning had a positive impact on student learning.

Table 13

Frequencies and Percentages for the Belief that the Implementation of Play-Based Learning Had Positively Impacted Student Learning

Response Category	<i>n</i>	%
Strongly Agree	24	55.8
Agree	16	37.2
Disagree	3	7.0
Strongly Disagree	0	0.0

Table 14 includes the frequencies and percentages of how the kindergarten teachers felt about the amount of time spent per day in play-based learning during the first quarter of 2017. The time spent, which consisted of 45 minutes every morning and 45 minutes every afternoon, was adequate for the instructional practice to positively impact student behavior. Kindergarten teachers responded with 55.8% (n = 24) of them strongly agreeing and 37.2% (n = 16) agreeing that the time spent in play-based learning during the first quarter was adequate for the instructional practice to positively impact student behavior. Approximately 5% (n = 2) of responding teachers disagreed and 2.3% (n = 1) strongly disagreed that 45 minutes every morning and 45 minutes every afternoon of play-based learning was adequate during the first quarter.

Table 14

Frequencies and Percentages for the Amount of Time Spent per Day in Play-Based Learning during the First Quarter of 2017

Response Category	<i>n</i>	%
Strongly Agree	24	55.8
Agree	16	37.2
Disagree	2	4.7
Strongly Disagree	1	2.3

Table 15 includes the frequencies and percentages of how the kindergarten teachers felt about the amount of time spent per day in play-based learning during the fourth quarter of 2017. The time spent, which consisted of 15-20 minutes per day, was adequate for the instructional practice to positively impact student behavior. Kindergarten teachers responded with 25.6% (n = 11) strongly agreeing and 41.9% (n = 18) agreeing that the time spent in play-based learning during the fourth quarter was

adequate for the instructional practice to positively impact student behavior. Almost 21% (n = 9) of responding kindergarten teachers disagreed and 11.6% (n = 5) strongly disagreed that 15-20 minutes per day of play-based learning was adequate during the fourth quarter.

Table 15

Frequencies and Percentages for the Amount of Time Spent per Day in Play-Based Learning during the Last Quarter of 2018

Response Category	<i>n</i>	%
Strongly Agree	11	25.6
Agree	18	41.9
Disagree	9	20.9
Strongly Disagree	5	11.6

Table 16 includes the frequencies and percentages of how the kindergarten teachers believed it was important for all kindergarten students to learn through play-based activities. Kindergarten teachers responded with 83.7% (n = 36) strongly agreeing that it is important for all kindergarten students to learn through play-based activities, and 16.3 % (n = 7) of them agreed. No teachers responded that they disagreed or strongly disagreed with this statement.

Table 16

Frequencies and Percentages for the Belief that it is Important for All Kindergarten Students to Learn Through Play-Based Activities

Response Category	<i>n</i>	%
Strongly Agree	36	83.7
Agree	7	16.3
Disagree	0	0.0
Strongly Disagree	0	0.0

Table 17 includes the frequencies and percentages of how important kindergarten teachers believed it was for kindergarten boys to learn through play-based activities. Kindergarten teachers responded with 86% ($n = 37$) strongly agreeing it is important for kindergarten boys to learn through play-based activities, and 14 % ($n = 6$) of them agreed. No teachers responded that they disagreed or strongly disagreed with this statement.

Table 17

Frequencies and Percentages for the Belief that it is Important for Kindergarten BOYS to Learn Through Play-Based Activities

Response Category	<i>n</i>	%
Strongly Agree	37	86.0
Agree	6	14.0
Disagree	0	0.0
Strongly Disagree	0	0.0

Table 18 includes the frequencies and percentages of how important kindergarten teachers believed it was for kindergarten girls to learn through play-based activities.

Kindergarten teachers responded with 81.4% (n = 35) strongly agreeing that it is important for kindergarten girls to learn through play-based activities, and 18.6 % (n = 8) agreed. No teachers responded that they disagreed or strongly disagreed with this statement.

Table 18

Frequencies and Percentages for the Belief that it is Important for Kindergarten GIRLS to Learn Through Play-Based Activities

Response Category	<i>n</i>	%
Strongly Agree	35	81.4
Agree	8	18.6
Disagree	0	0.0
Strongly Disagree	0	0.0

Question 26 was open-ended and allowed the teachers to make any additional comments regarding play-based learning during the 2017-18 school year. The individual comments were separated by categories and analyzed for emerging themes within the qualitative data. This question had 21 responses out of 43 kindergarten teachers (a 49% response rate), and it brought about two positive themes and four negative themes. The positive themes included a focus on social-emotional learning and getting to know their students and the ability to focus on student behavior needs. Ten out of 21 kindergarten teachers (47.6%) responded that play-based learning was a success for the social and emotional well-being of kindergarten students. One participant stated, “We had more opportunities to grow socially because of the new play based learning time allotment. It

was also a great way for the kids to try out new targeted social skills. Play-based learning is so much more developmentally appropriate for our kindergarten students. It has been a very positive change!” Three out of 21 kindergarten teachers (14.3%) responded that play-based learning allowed the kindergarten teachers to get to know their students and focus on student needs. Another participant stated, “Play-based learning was so beneficial for my classroom. It allowed me to get to know the students and tackle their needs (and strengths) with a very hands-on approach.”

The negative themes included less time needed in play-based learning in first quarter, more time in play-based learning in the fourth quarter, the need to transition to higher academics earlier in the school year, limited space to implement play-based learning in the kindergarten classroom, and the difficulty in comparing two different classes (2016-2017 to 2017-2018). One out of 21 kindergarten teachers (4.8%) responded that there was too much time allotted for play-based learning during the first quarter. The participant responded, “90 minutes a day in play was way too much for my students at the beginning of the year.” Three out of 21 kindergarten teachers (14.3%) responded that there was not enough time allotted for play-based learning during the fourth quarter. A participant responded, “I think the time at the end of the year should be increased. The learning activities should just be a higher academic activity. The majority of our standards could be taught using a play-based model instead of different models.” One out of 21 kindergarten teachers (4.8%) responded that they had a hard time transitioning their kindergarten students to the guided reading structure while the play was occurring. The participant stated, “I feel the hardest component of play based

kindergarten was transitioning to guided reading. First quarter they really looked for my support, so they really needed assistance to learn independently!”

Two out of 21 kindergarten teachers (9.5%) responded that the space they had to implement play-based learning was too minimal to create a positive learning environment for their students. A participant responded, “There was such a limited space, my room is so small. Too many students, excessive amounts of boys. Students didn’t transition well into academic centers at all. Everything was play all year long, work was not taken seriously, it was very difficult to pull small groups due to excessive noise. Class size is a HUGE issue. There needs to be a district standard on class size.” One out of 21 kindergarten teachers (4.8%) responded that it was hard to compare the two sets of kindergarten classes (2016-2017 and 2017-2018). The participant stated, “It is really hard to compare two different class years. The behaviors are so different each year.”

Summary

The results of statistical analyses for each of the three research questions and their associated hypotheses were presented in Chapter 4. The results of the chi-square tests of independence, two-factor ANOVAs, and additional analyses in the form of survey descriptives were presented. Chapter 5 will provide a summary of the study, including discussion of major findings of these results, connections to the relevant literature, implications of those findings, and recommendations for further research.

Chapter 5

Interpretation and Recommendations

This causal-comparative quantitative study was conducted to examine the effects of play-based learning on behavior and academic progress in the kindergarten classroom. The overview of the problem, the purpose statement and research questions, the review of methodology, and the major findings related to the research were included in Chapter 5. Additionally, this chapter presents the findings related to previous research literature. Finally, Chapter 5 provides implications for action, recommendations for future research, and concluding remarks.

Study Summary

The following section provides a summary of the quantitative study that was conducted to examine the effects of play-based learning on behavior and academic progress in the kindergarten classroom. This section begins with an overview of the problem and includes the purpose of the study and the research questions. A review of the methodology and the major findings of the research study conclude the section.

Overview of the problem. School districts across the United States see kindergarten as a place for children to learn and grow. According to the Washington State Department of Education (2016), “It is not the job of the child to be ready for kindergarten, but it is the responsibility of the system to be prepared to welcome and respond to each child in an intentional and appropriate way” (p. 3). Kindergarten students begin school at varying stages of development. The kindergarten year of a child’s development is a year of tremendous growth (Berk, 2006). Understanding how a kindergarten student learns is crucial to creating a responsive classroom environment that

encourages and supports learning. Children learn by talking, exploring, creating, and making meaning of the world around them (Heroman & Copple, 2014).

Along with kindergarten being a grade level where students need to play and explore, there are increasing academic expectations placed on kindergarteners to know basic phonics, word recognition, and read beginner text by the end of the school year (Schwartz, 2015). Across the United States, the primary focus of kindergarten has been on academics, which means play has been increasingly removed from classrooms. The level of academic expectations and the lack of time spent focusing on social development has led to a higher incidence of negative student behavior in the kindergarten classroom. A primary task for District Y was to examine whether the decision to have kindergarten students spend time in play would deter negative behaviors in the classroom. As District Y continues to review early childhood programming in the kindergarten classroom, district-level leaders need to know the academic and behavioral impacts that play-based learning has on student behaviors.

Purpose statement and research questions. The first purpose of this study was to examine kindergarten teachers' perceptions of play-based learning, as well as negative student behavior in their kindergarten classrooms. The second purpose of this study was to examine the impact of play-based learning on negative student behaviors. The third purpose was to analyze the percentage of kindergarten students with Behavior Intervention Plans (BIP) as part of their Individualized Education Plan (IEP) before and after the implementation of play-based learning, and the percentage of BIPs was also examined for differential impacts based on their school's Title I status. The fourth purpose of this study was to determine how reading levels changed before and after the

implementation of play-based learning. This change was measured using the Rigby PM Benchmark Assessment at the end of the 2016-2017 and 2017-2018 school years.

Further, the change in reading level using the Rigby PM Benchmark Assessment was also examined for differential impacts based on their school's Title I status. To guide this study, three research questions were developed and five hypotheses were tested.

Review of the methodology. A causal-comparative quantitative research design was used to investigate the hypotheses associated with each research question posed for the current study. The research study was conducted in a large suburban school district located in Northeast Kansas consisting of 35 elementary schools. Criterion sampling was used in the selection of teacher participants. Data was collected by surveying kindergarten teachers who taught kindergarten during the 2016-2017 and 2017-2018 school years in District Y. The Survey of Play-Based Learning in Kindergarten was completed by 43 kindergarten teachers using Google Forms. Purposive sampling was also employed for the study. A student was included in the sample if the student was enrolled in kindergarten for the 2016-2017 school year, which was the year before implementation of play-based learning. A student was also included in the sample if the student was enrolled in kindergarten after implementation, which would include the 2017-2018 school year. A chi-square test of independence and two-factor ANOVAs were used to test the hypotheses. The survey results were analyzed, and the descriptive statistics were compared for similarities and differences.

Major findings. Results related to the research questions revealed that there was not a statistically significant difference in kindergarten teachers' perceptions of student behavior in the kindergarten classroom, before and after implementation of play-based

learning. Kindergarten teachers did not report the hypothesized differences in student behaviors from the year before and after implementation of play-based learning.

Question 19 asked the participants to rate their level of agreement with the statement, I believe the implementation of play-based learning has positively impacted student behavior in the classroom. Seventy percent of the kindergarten teachers responded that they Strongly Agreed, 28% Agreed, 2% Disagreed, and 0% Strongly Disagreed. The data indicated, over 97% of kindergarten teachers surveyed felt that play-based learning had positively impacted student behavior in the classroom.

There was not a statistically significant difference in the percentage of BIPs as a part of the students' IEPs, before and after implementation of play-based learning. There was also not a statistically significant interaction between the schools' Title I status and the percentage of BIPs before and after implementation of play-based learning. The BIP data did not show statistical differences but displayed trends that were indicative of a slight increase in BIPs at Non-Title I schools and a decrease in BIPs at Title I schools. The percentage of BIPs at Non-Title I were at 70% (n = 21) and 85% (n = 22) respectively. This shows that there was not a statistically significant interaction between the school years at the Non-Title I schools. This data does, however, show that the percentage of BIPs increased slightly at the Non-Title I schools after the implementation of play-based learning.

The percentage of BIPs at Title I schools were 30% (n = 9) and 15.4% (n = 4) respectively. This shows that there was not a statistically significant interaction between the academic year at Title I schools. This data does, however, show that the percentage of BIPs decreased slightly at the Title I schools after the implementation of play-based

learning, which was the opposite pattern than at the Non-Title I schools. However, due to the minimal number of schools once divided by school year and Title I status, there was not enough power to render the interaction statistically significant.

There was not a statistically significant difference in kindergarten students' reading level as measured by the Rigby PM Benchmark Assessment before and after implementation of play-based learning. The reading level did not decrease or increase enough to be statistically significant. There was a statistically significant interaction detected between schools' Title I status and the student reading levels before and after implementation of play-based learning. Student reading levels at Non-Title I schools tended to be higher than the mean levels at Title I schools. During the 2016-2017 school year Title I schools had a Rigby level mean of 5.8, and in 2017-2018 the mean increased to 7.24. At Non-Title I schools in 2016-2017 the Rigby level mean was 8.69, and in 2017-2018 the mean decreased to 8.48.

Findings Related to the Literature

This section examines this study's findings as they relate to the literature regarding the effect of play-based learning on behavior and academic progress in the kindergarten classroom. Previous research has been conducted to examine play in the kindergarten classroom (Chervenak, 2011; Ray & Smith, 2010). Chervenak (2011) found that "81% of the participants rated the value of play-based learning in a kindergarten classroom as important or very important" (p. 46). Additionally, Ray and Smith (2010) found that educators reported kindergarten has become less of an environment for creativity, free exploration, and play, and more of a structured environment with rigorous standards to prepare children for future academic success. This academic focus has

educators concerned about the goals of kindergarten and the need to teach the whole child. Although the data analysis did not show a statistically significant difference with regard to teacher perceptions of student behaviors in the kindergarten classroom, this study does support the claim, as 97.7% of teachers from District Y strongly agreed or agreed that the implementation of play-based learning had positively impacted student behavior in the classroom.

Ray and Smith (2010) found that children's behavior patterns contributed to the social atmosphere in the kindergarten classroom. Additionally, Rudasil and Konold (2008) found that students with greater self-control at the beginning of kindergarten were rated by their teachers to be more cooperative and had a higher level of self-control. These skills also contribute to following classroom rules and expectations. Behavior concerns such as aggression are positively associated with less focused attention, which may lead to lower classroom performance. Through social classroom activities, kindergarten students can learn to communicate effectively and manage their emotions (Ray & Smith, 2010). Although the data analyses from the current study did not indicate a statistically significant difference in the percentage of BIPs between the year before and after implementation of play-based learning, the percentages of BIPs did not increase as a result of play-based learning.

The current study did not indicate a statistically significant difference in reading levels before and after implementation of play-based learning. Research by Lynch (2015) explained:

Teachers expressed a need to achieve academic goals that conflicted with play-based teaching. Many teachers reported feeling pressure to adopt a more

academic curriculum in kindergarten, resulting in a loss of play in classes. This finding holds true even when teachers possess positive beliefs about play-based learning. (p.360)

The current study did not see any major decreases in reading level with the implementation of play-based learning. Other research has indicated the difference in reading levels between students of high-economic backgrounds, and low socio-economic backgrounds to exist in the United States (Reardon, 2011). The current research results in District Y indicated that student reading levels at Non-Title I schools were higher on average than Title I schools. For Title I schools the reading levels increased and the percentage of BIPs decreased, and these differences were larger than the small decrease in reading levels and increase in percentage of BIPs at Non-Title I schools. The interactions (different in Title I and Non-Title I schools, although not statistically significant), seem to suggest that play-based learning does help with behavior and learning in Title I schools, and does not impede the learning in Non-Title I schools. Teachers in Title I and Non-Title I schools report play-based learning has been helpful in the kindergarten classroom.

Conclusions

This section includes conclusions from the current study addressing the effect of play-based learning on student behavior and academic progress in the kindergarten classroom. Implications for action and recommendations for future research are included. This section closes with concluding remarks.

Implications for action. The findings of the current study provide implications for action about the implementation of play-based learning in the kindergarten classroom. The findings of the causal-comparative quantitative study reveal that kindergarten

teachers feel that play-based learning has made an impact on student behavior in the kindergarten classroom. The other findings reveal that there is not enough change or impact when looking at the years before and after implementation of play-based learning to be significant; therefore, the researcher recommends that the district continue implementing play-based learning in the kindergarten classroom and reassess when there is more longitudinal data.

Because of the trends gathered from this study with regard to behavior in the kindergarten classroom, it is crucial that district leaders in school districts across the United States look at the learning that is occurring in the kindergarten setting. School districts must look at the kindergarten classrooms and have an understanding of what is occurring behaviorally with their youngest students. If negative behaviors are being displayed across the district by kindergarten students, play-based learning could benefit as a systemic change in programming. This systemic change should occur at the district, building, and classroom levels.

Professional development and building kindergarten teachers' capacity to know and understand what play-based learning is and what it looks like is crucial to the success of the implementation. This includes on-going professional development to ensure that the play is not staying stagnant and increasing in complexity through the school year. Kindergarten teachers must be aware of the practice of play-based learning and how to implement it in the kindergarten classroom. This type of learning is not just students playing on the rug. Play-based learning is intentional instruction that occurs playfully. Teachers must understand the strategies and supports to offer kindergarten students while

they are participating in play and understand when to add in more rigorous and academic focuses.

Recommendations for future research. The following recommendations represent the areas in which the researcher has identified the possibility of further research. The first recommendation is to continue analyzing the data from District Y. Although the current study did not find many statistically significant differences, there were trends to show there were slight differences in BIPs and Rigby reading levels before and after implementation of play-based learning. Further exploration is needed into the differences in reading level between Title I and Non-Title I schools before and after implementation of play-based learning. Therefore, the researcher recommends further research in the current school district.

The current study did not focus on the area of mathematics. The second recommendation is to replicate this study in the area of math. The same patterns could occur for math. However, there seems to be less research available in this area; most of the research available centers around literacy.

The third recommendation is to replicate this study and see whether play-based learning is more beneficial at the beginning of the year or at the end of the year and if that is significant at Title I or Non-Title I schools. Also looking at whether it may be more beneficial at the beginning of the year for Non-Title I schools and all year for Title I schools.

The fourth recommendation is to replicate this study in other districts. The current study did not find many statistically significant differences in the data analyzed, but other districts may not yield the same results. Replicating this study with more data

might provide statistical power enough to detect significant differences. Therefore, the researcher recommends the replication of this study in other districts.

The final recommendation for future study is to include an observational component to the study. Professional development helps teachers to gain and improve their knowledge and skills to teach their content or grade level. When the teachers leave the professional development session, it is the hope that they take their knowledge and embed that learning into their practice. With adding an observational component, the researcher would be able to see what is occurring during play-based learning.

Concluding remarks. The results of the current study contributed to the body of work completed by earlier researchers relating to the implementation of play-based learning. The data indicated there was not a statistically significant difference in kindergarten teachers' perceptions of student behavior before and after the implementation of play-based learning, but the survey results did indicate that kindergarten teachers felt the implementation of play-based learning did have a positive impact on student behavior in the kindergarten classroom. Additionally, there was not a statistically significant difference in the number of BIPs before and after the implementation of play-based learning however there was a slight increase in BIPs at Non-Title I schools and a decrease in BIPs at Title I schools. The number of schools was too minimal once divided by school year and Title I status. Finally, there was not a statistically significant difference in kindergarten students' reading level before and after the implementation of play-based learning. The only group where there was a statistically significant difference was Title I schools when the reading level was being analyzed. During the 2016-2017 school year Title I schools had a Rigby level mean of

5.8, and in 2017-2018 the mean increased to 7.24. At Non-Title I schools in 2016-2017 the Rigby level mean was 8.69, and in 2017-2018 the mean decreased to 8.48. The results of this study can provide data that can assist district leaders in making decisions related to implementing play-based learning in their kindergarten classrooms.

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Appendices

Appendix A: Approval for Survey Use

Erica Mickelson

From: Rachel Chervenak <chervenakr@fremontschools.net>
Sent: Sunday, October 29, 2017 8:29 AM
To: Erica Mickelson
Subject: Play in Kindergarten Survey

Hi Erica!

Yes, you can use my survey and adjust it however you wish. It's nice to know someone has looked at that my thesis haha.

Best wishes on your dissertation.

--

Rachel Chervenak

Stamm Elementary
4th Grade Math

CONFIDENTIALITY NOTICE: This email message, including any attachments, is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution is prohibited. If you have received this communication in error, please notify the sender immediately by replying to the message and deleting it from your computer.

Appendix B: Survey Instrument

Survey of Play-Based Learning in Kindergarten

The purpose of this survey is to gather information from kindergarten teachers regarding their opinions of play-based learning, as well as their classroom experiences before and after implementing the practice. Your responses will be kept confidential, and cannot be traced back to you. Please answer each item as honestly and accurately as possible. Thank you very much for your participation!

For completion of this survey please use the following definition of play-based learning and major behavior:

- Play-Based Learning: Activities that allow children to explore and at the same time are intrinsically motivating, engaging and have an overall learning purpose.
- Negative Behavior: Behaviors such as temper tantrums (i.e. screaming, rolling on the floor), physical aggression towards other children or the teacher (i.e. hitting pinching, kicking), and throwing items.

For the following questions please remember back to your 2016-2017 (last year's) class, and select the response that best describes your 2016-17 kindergarten class.

1. My 2016-17 kindergarten class had _____ total students.
 - a. Less than 14
 - b. 15-19
 - c. 20-24
 - d. More than 25
2. My 2016-17 kindergarten class consisted of _____ boys and _____ girls.
 - a. Would suggest a drop-down number range like 1-20 for number of boys
 - b. Would suggest a drop-down number range like 1-20 for number of girls
3. Did you teach kindergarten at a Title I school during the 2016-2017 year?
 - a. Yes
 - b. No
4. How many times per week did you observe a negative behavior in the **FIRST QUARTER** of kindergarten during the 2016-17 school year?
 - a. 0 times
 - b. 1-4 times
 - c. 5-9 times
 - d. 10 +

5. How many students displayed negative behavior in the **FIRST QUARTER** of kindergarten during the 2016-17 school year?
 - a. 0 students
 - b. 1-2 students
 - c. 3-4 students
 - d. 5 +

6. The majority of negative behavior observed in the **FIRST QUARTER** of the 2016-17 school year occurred during:
 - a. Individual seat time
 - b. Small group activities
 - c. Whole group activities
 - d. Transitions between activities

7. How many times per week did you observe a negative behavior in the **LAST QUARTER** of kindergarten during the 2016-17 school year?
 - a. 0 times
 - b. 1-4 times
 - c. 5-9 times
 - d. 10 +

8. How many students displayed negative behavior in **LAST QUARTER** of kindergarten during the 2016-17 school year?
 - a. 0 students
 - b. 1-2 students
 - c. 3-4 students
 - d. 5 +

9. The majority of negative behavior observed in the **LAST QUARTER** of the 2016-17 school year occurred during:
 - a. Individual seat time
 - b. Small group activities
 - c. Whole group activities
 - d. Transitions between activities

For the following questions please think of your 2017-2018 (this year's) class, and select the response that best describes your 2017-18 kindergarten class.

10. My 2017-18 kindergarten class had _____ total students.
 - a. Less than 14
 - b. 15-19
 - c. 20-24
 - d. More than 25

11. My 2017-18 kindergarten class consisted of _____ boys and _____ girls.
 - a. Would suggest a drop-down number range like 1-20 for number of boys
 - b. Would suggest a drop-down number range like 1-20 for number of girls

12. Did you teach kindergarten at a Title I school during the 2017-18 year?
 - a. Yes
 - b. No

13. How many times per week did you observe a negative behavior in the **FIRST QUARTER** of kindergarten during the 2017-18 school year?
 - a. 0 times
 - b. 1-4 times
 - c. 5-9 times
 - d. 10 +

14. How many students displayed negative behavior in the **FIRST QUARTER** of kindergarten during the 2017-18 school year?
 - a. 0 students
 - b. 1-2 students
 - c. 3-4 students
 - d. 5 +

15. The majority of negative behavior observed in the **FIRST QUARTER** of the 2017-18 school year occurred during:
 - a. Individual seat time
 - b. Small group activities
 - c. Whole group activities
 - d. Transitions between activities
 - e. Play-based learning time

16. How many times per week did you observe a negative behavior in the **LAST QUARTER** of kindergarten during the 2017-18 school year?
 - a. 0 times
 - b. 1-4 times
 - c. 5-9 times
 - d. 10 +

17. How many students displayed negative behavior in the **LAST QUARTER** of kindergarten during the 2017-18 school year?
 - a. 0 students
 - b. 1-2 students
 - c. 3-4 students
 - d. 5 +

18. The majority of negative behaviors observed in the **LAST QUARTER** of the 2017-18 school year occurred during:
- Individual seat time
 - Small group activities
 - Whole group activities
 - Transitions between activities
 - Play-based learning time

For the following items please select the response that best describes your perspective of play-based learning and its impact on your 2017-18 class of kindergarten students.

19. I believe the implementation of play-based learning has positively impacted student **BEHAVIOR** in the classroom.
- Strongly Agree
 - Agree
 - Disagree
 - Strongly Disagree
20. I believe the implementation of play-based learning has positively impacted student **LEARNING** in the classroom.
- Strongly Agree
 - Agree
 - Disagree
 - Strongly Disagree
21. The amount of time spent per day in play-based learning during the **First Quarter** of 2017 (45 minutes every morning and 45 minutes every afternoon) was adequate for the instructional practice to positively impact student behavior.
- Strongly Agree
 - Agree
 - Disagree
 - Strongly Disagree
22. The amount of time spent per day in play-based learning during the **Fourth Quarter** of 2018 (15-20 minutes per day) was adequate for the instructional practice to positively impact student behavior.
- Strongly Agree
 - Agree
 - Disagree
 - Strongly Disagree

23. I believe it is important for **ALL** kindergarten students to learn through play-based activities.
- Strongly Agree
 - Agree
 - Disagree
 - Strongly Disagree
24. I believe that it is important for kindergarten **BOYS** to learn through play-based activities.
- Strongly Agree
 - Agree
 - Disagree
 - Strongly Disagree
25. I believe that it is important for kindergarten **GIRLS** to learn through play-based activities.
- Strongly Agree
 - Agree
 - Disagree
 - Strongly Disagree

Please provide any additional comments regarding your experience with play-based learning during the 2017-18 school year or the impact you believe it had on your kindergarten students.

Appendix C: Baker IRB Approval



Baker University Institutional Review Board

May 8th, 2018

Dear Erica Mickelson and Sharon Zoellner,

The Baker University IRB has reviewed your project application and approved this project under Expedited Status Review. As described, the project complies with all the requirements and policies established by the University for protection of human subjects in research. Unless renewed, approval lapses one year after approval date.

Please be aware of the following:

1. Any significant change in the research protocol as described should be reviewed by this Committee prior to altering the project.
2. Notify the IRB about any new investigators not named in original application.
3. When signed consent documents are required, the primary investigator must retain the signed consent documents of the research activity.
4. If this is a funded project, keep a copy of this approval letter with your proposal/grant file.
5. If the results of the research are used to prepare papers for publication or oral presentation at professional conferences, manuscripts or abstracts are requested for IRB as part of the project record.

Please inform this Committee or myself when this project is terminated or completed. As noted above, you must also provide IRB with an annual status report and receive approval for maintaining your status. If you have any questions, please contact me at npoell@bakeru.edu or 785.594.4582.

Sincerely,

Nathan Poell, MA
Chair, Baker University IRB

Baker University IRB Committee
Scott Crenshaw
Jamin Perry, PhD
Susan Rogers, PhD
Joe Watson, PhD

Appendix D: School District Approval for Research



May 17, 2018

Dear Erica:

I am pleased to inform you that your request to do research in the [REDACTED] with Kindergarten-age student data has been approved. We do have a copy of your application and a copy of your IRB from Baker.

In any of your work, please do not make any reference to the [REDACTED] or any specific school— please reference [REDACTED] as a “large suburban district in the mid-west” or a school as a “suburban school in the state of Kansas”— or some other reference name of your choice, but do not use the [REDACTED] name or any school names. Additionally, please do not use any student or staff identifying information.

Your study of the teacher-perceived differences in kindergarten student behavior when play-based strategies are implemented is of great interest to the district, so when your research is completed, we would love to see your results.

Good luck with your research, Erica!

Sincerely,



Director of Assessment and Research



Appendix E: Recruitment Email to Participate in Survey

Dear Kindergarten Teachers,

As you all know, my name is Erica Mickelson and I am a doctoral student at Baker University School of Education located in Overland Park, Kansas. For my doctoral dissertation, I am completing a research study to determine the effect of play-based learning on behavior and academic progress in the kindergarten classroom.

To gather data for my research study, I am asking each kindergarten teacher to complete a survey via Google Forms titled "Play-Based Learning Survey." This survey will take approximately 20 minutes to complete, and there are no right or wrong responses.

By completing this survey, you are willingly consenting to be a part of this study. Data from this survey will be used for the sole purpose of this study and will not be reported or recorded in any other way. No data from the survey will become part of an individual's permanent record that could be made available to a supervisor, teacher, or employer. Individual names will not be recorded or reported in the results of this study. All information is confidential, and no individual respondent will be identified when results are published. Participation in full or in part is completely voluntary, and you have the option of not answering any question or discontinuing participation at any time without penalty or loss. If you would like the opportunity to obtain a copy of the results of this survey, please send me an email to ericamickelson14@gmail.com

Protections for Participants: Baker University supports the practice of protecting the human subjects participating in a research study. Participation in completing the survey is asked, although it is strictly voluntary. Your name will not be identified in any way with the research findings. By responding to this survey, you acknowledge and consent to the use of your input in this study.

If you have any additional questions about your rights as a research participant, you may contact Erica Mickelson at ericamickelson14@gmail.com or Dr. Sharon Zoellner at Sharon.Zoellner@bakeru.edu. Thank you for taking the time to share your thoughts and experiences and thank you for your participation!

To start the survey, please click on the following link below.

With great appreciation,

Erica Mickelson